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The Challenge of Replicability

Toward a New Paradigm
for Urban Shelter
in Developing Countries


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During the decade of the 1970s, the problem of urban growth in developing countries received more international attention than ever before. The urbanization process was gradually integrated into a general analysis of development problems which focused on the problems of distribution of the benefits of economic growth, as well as simply the process of growth itself. Disparities between urban and rural areas as well as the importance of urban centres and the productivity of the national economy all became issues of importance in development strategy. Increasing attention on the urban sector eventually led the World Bank to initiate a programme of urban lending in 1972, at the request of member governments. Similar concerns were reflected in the United Nations' decision to hold a conference on human settlements in Vancouver in 1976, where many of the issues on human settlements, including shelter provision, planning, and development of urban centres were considered.

An increasing focus of attention to the urbanization process was the problem of urban shelter. By the early 1970s, many countries, and virtually all of the international agencies operating in the development field, had become discouraged with conventional approaches to the provision of urban shelter. Individual housing projects in many countries had been largely irrelevant to the growing needs of the urban poor. Most housing solutions appeared to be too expensive for the public purse, and their standards implied costs beyond the intended beneficiaries' capacity to pay. While there were many economic and financial criticisms leveled at shelter programmes, there was also an important critique from the architectural point of view which argued that many projects were imposed from above, with a form of architecture which was coercive and did not respond to the cultural needs and priorities of the intended users. Models from developed countries simply did not work in dense, poor cities, such as Calcutta, Cairo, Jakarta, Lagos, or Manila.

One approach, which addressed many of these critiques and seemed to offer a viable alternative, involved what is now termed the "sites and services" concept, embodied in the writings of John Turner, who highlighted the fact that substantial amounts of housing were being created in developing countries outside of the public domain. Most housing was built by private individuals and/or groups without the benefit of public housing finance, frequently in violation of building codes and on land whose tenure arrangements were haphazard and often illegal. The housing process in developing countries was not effectively controlled by public
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authorities. The energy and vitality of this process was considered to be an asset by John Turner, Charles Abrams, William Mangin, and many others who argued that the next step in improving housing in these countries was not to impose new controls and regulations, but rather to lift barriers to the housing process. This lifting of barriers involved obstacles such as restrictive building codes, zoning regulations, and service networks which were not linked with housing developments. Most importantly, occupants of housing required tenure if they were to be encouraged to further invest in improving their housing.

A complementary approach to the sites and services notion was "slum improvement," or "upgrading," which implied that rather than knocking down the houses of the poor, even if they were not durable or sanitary, they should be improved in situ. This approach involved the introduction of infrastructure networks, such as roads, water supply, electricity, and sanitation, into frequently dense settlements. Infrastructure improvements would then be complemented by loans to residents to improve the housing structures themselves. This approach was considered a much less disruptive approach to substandard housing.

The above approaches also reflected a continuing discussion about the relative roles of the public and private sectors in the process of housing in developing countries. The project prototypes suggested above implied that governments should do what people could not do for themselves, that is, provide infrastructure networks. Housing construction or improvement is a private matter whose design and finance need not involve the public sector.

The acceptance of this approach is reflected in more than seventy-three projects in this sector financed by the World Bank over the past decade, and others financed by bilateral and multilateral donors. In addition, many projects initiated by governments themselves suggested that these ideas offered a compelling alternative to the conventional solutions of the sixties and earlier. Many of the projects were intended to serve as demonstrations, i.e., projects that would illustrate the possibility of the model of progressive development whereby housing would be improved slowly over time in response to the capacity of individual households. It was argued that households could build or finance their own house and pay for the services provided, and the funds recovered could flow back into a revolving fund and permit projects to be replicated, thereby increasing the scale of projects and housing programmes.

While the developments of the 1970s should not be underestimated because they represented a radical departure from the past, it is apparent that they had some severe limitations. Their primary limitation was the fact that they remained very small in relation to the scale of the demand for housing in most of the cities in which they occurred. While projects offered considerable benefits to thousands of households, and frequently more than what had been provided before by governments, and certainly at lower cost, these beneficiary households typically represented only a small proportion of the total number of households in need of improved shelter. By the end of the seventies, it was evident that the notion of replicability could no longer mean doing more of the same thing, but rather it had to involve seeking ways to increase the scale in the provision of housing whether through public or private sector efforts or some combination of the two.
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It is within this context that this paper will examine in somewhat more detail some of the experiences of the 1970s, both to demonstrate their accomplishments as well as to identify areas which were not addressed during the period of innovation in project design. The paper briefly reviews the experience of the 1970s, with particular attention to the experience of the World Bank in assisting the efforts of governments in this sector. In addition to providing information on project experience, the paper examines areas which are essential in efforts to address the scale of future demand for shelter. In a final section, the elements of what might be called a new paradigm in the provision of housing are presented. It should be emphasized that this article represents thinking in process about the components of a broader paradigm in addressing the housing problem in developing countries.

Approaches to Shelter in the 1970s

The experience of some fifty governments in the housing field in the 1970s can be characterized by an increasing concern for the need to provide shelter at low cost to a rapidly-growing urban population. Countries on all continents, at all levels of income, regardless of the pace of urban growth or the capacity of their institutions to provide urban shelter, found themselves focusing on the so-called "low-income housing" problem. Terms such as habitat economique or très economique suggested continuing efforts by housing designers in francophone countries to reduce costs and to seek cheaper solutions. Countries pressed ahead in efforts to identify new building materials which might offer cheaper alternatives to materials often used in conventional housing. Institutions were created in many countries to generate revenue which could be provided to the housing sector. All of these efforts, however, fitted within a general perception in development thinking that governments had other more pressing priorities, i.e., the rural sector, which became the generally accepted priority in the international development community.

This view of urban shelter was reinforced by the view that the subsidized nature of public housing during the 1960s had demonstrated that few governments had the financial resources to adequately provide shelter for their urban populations. Even where financial resources were available, it was also evident that public institutions themselves did not have the technical capacity to deliver the various components of housing, including the packaging of land, provision of infrastructure, the organization of mortgage financing, and the complementary services necessary for integrated urban communities. Even countries which were aggressive in their provision of housing, for example, the Ivory Coast in the 1960s and early 1970s, were never able to provide more than 10 per cent of the annual demand for urban shelter. While governments (e.g., India) also financed substantial numbers of units, they found that the public sector share of the formal housing construction remained surprisingly small. Thus, it became increasingly clear that solutions which did not rely on the public sector offered a more promising prospect for future shelter.

It is within this context that the World Bank initiated its urban lending programme in June 1972, with the approval by its Board of Directors of a first urban project. The sites and services project in Senegal involved some 14,000 plots in the capital city of Dakar and an additional 1,600 plots in the secondary city of Thies. The initiation of World Bank
lending in this sector was deliberately experimental; it was intended to involve a high degree of learning by doing, i.e., to seek to identify solutions or alternative approaches to shelter provision which did not rely heavily on the public purse, and which mobilized private savings and at the same time addressed the shelter needs of the city as a whole. These were not intended to be housing projects but rather "urban projects"; they represent a step toward the development of an urban perspective by the governments involved. The lending programme itself was intended to be modest; it has not exceeded 4 per cent of total annual lending and is small in relation to lending for agriculture, energy, or industry. Nevertheless, it was considered important for productivity and welfare.

The initiation of an urban lending programme by the World Bank was largely in response to the request of a number of governments. Many governments representing countries as different as Botswana and India sought assistance in this sector, claiming that their cities were too large, their shelter problems were "bottomless pits," and that they would soon be bankrupt if they provided conventional housing to the urban population. Other issues such as urban transport, urban employment, and social services were also areas of concern. In response to a wide variety of requests for assistance, four lending strategies were identified during the 1970s. These included urban shelter projects, urban transport projects, "integrated" urban projects, and finally, regional development projects. These strategies were intended to assist governments in moving towards a broader perspective on the urban sector as a whole, permitting the management of urban investment in efficient ways and at the same time recognizing that cities would continue to grow at rapid rates in the foreseeable future. Through the period from 1972 to 1982, the World Bank lent more than $2 billion to some thirty-six governments, financing sixty-two urban projects within the four types mentioned above. These projects were located in the countries of the major developing regions. The selection of projects reflected government priorities, ability, and willingness to develop new solutions to their pressing problems. The projects provided direct benefits to some 11 million people, about 70 per cent of them poor. The average economic rate of return was about 20 per cent.

This article will focus on two of the four project types, and on the urban shelter and integrated urban projects, which included shelter components.

Over the past decade some thirty-six urban shelter projects were initiated. In most cases the projects involved both the provision of new shelter units through sites and services schemes and the upgrading or improvement of existing units through "slum improvement" projects. In the case of sites and services, estimates were made of the demand for housing at various income levels. Analysis was undertaken of existing shelter provision in their respective cities, and appropriate income groups who did not have access to conventional housing were identified. Starting from the incomes of these households, infrastructure standards and costs were developed which assumed that the households would be responsible for paying the full, non-subsidized cost of the units over time. Thus, income became the primary parameter within which the architects, engineers, and housing specialists were put to work. It was assumed that while the initial shelter unit might be quite modest, it would be progres-
sively improved over time, depending on the priorities, preferences, and capacity to invest of individual households. While most of these units initially assumed owner-occupancy, the concept gradually evolved to include rooms within individual units which could be used to generate rental income. By the end of the 1970s, many of these projects included a wide variety of plot types, for example in Madras, where there are ten-plot sizes and different levels of service and construction. It was nevertheless assumed that in most cases the households themselves would be responsible for the design, finance, and construction of individual shelter units. Projects often included building loans whereby households could either borrow money from a housing finance institution, such as the Tanzania Housing Bank or the Federal Mortgage Bank of Nigeria, or materials for the construction of their houses, as in Lusaka, Zambia.

An important part of the Bank’s urban lending programme was also its evaluation, which was initiated in the early 1970s. A collaborative programme between the World Bank and the International Development Research Centre of Canada (IDRC) to evaluate some four projects in El Salvador, Philippines, Senegal, and Zambia, resulted in rigorous evaluation studies which demonstrate that the progressive development model indeed works on the ground, i.e., people succeed in building their houses over time. Less rigorous evaluation of other projects has confirmed the finding that households in general have been quite effective in building housing in the sites and services plots, indeed frequently investing at a level higher than what their monthly incomes might suggest. This has led to the conclusion that income is frequently a poor proxy for wealth and that expectations about household efforts in housing investment may often underestimate the willingness of low-income households to invest in housing.

The approach to slum improvement responded to the fact that governments throughout the 1960s frequently used the bulldozer as a major policy instrument in an effort to eradicate what was considered a visual and social blight on the urban environment. This solution, however, came to be recognized as socially disruptive and financially expensive, with the net result being the destruction of the housing stock at a time when the major objective was to increase it. This situation led to the design of slum improvement programmes in many cities throughout the world. Most notable among these is the Kampung Improvement Programme in Jakarta. The Indonesian Government developed an efficient approach to introducing infrastructure, primarily drainage and water supply, into neighbourhoods which faced severe sanitation problems. These improvements have proven to be very low-cost, in the order of $38 per household, and contrast sharply to other housing solutions which cost many thousands of dollars per unit.

Other approaches to slum improvement occurred in environments as diverse as Lusaka, Zambia, where a Bank-assisted project in some seven slum neighbourhoods in the Lusaka area, managed, with extensive community participation, to design and implement significant improvements in infrastructure. These improvements have been followed by increased investment in housing as well. Other examples include bustee (slum) improvements in Calcutta, slum improvement programmes in Madras, and upgrading of the Tondo area of Manila. In the latter case, streets were realigned through a reblocking system, where some durable houses were actually lifted and relocated in order to permit the introduction of infrastructure networks.
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While both the sites and services and slum improvement approaches represent promising alternatives to solutions in the 1960s, their implementation has not been without problems. Issues such as land acquisition, staffing of public agencies, coordination among the various institutions, and frequently the construction process itself, have all proven to be bottlenecks in this process. As with most development projects, there have been delays resulting from shortages of trained staff and the difficulties associated with public agencies seeking to provide infrastructure and community services for private households. Achieving cost recovery through the collection of monthly charges, an important project objective, has been fraught with problems. In the sites and services schemes, even though households are largely self-selected, and therefore should be prepared to pay, experience has demonstrated that the payment of mortgage charges declines if project areas are not sufficiently maintained and if there is no adequate follow-through in support of complementary services, such as schools, clinics, and markets. In slum improvement schemes, cost recovery has also been troublesome, as many households lived in the neighbourhoods prior to the introduction of improvements and consequently, find little incentive at this point to pay additional charges.

Another limitation of both of these project approaches is the fact that there has been some leakage of middle-income households into project areas. While the projects were designed primarily for low-income residents, there continues to be a housing problem for middle-income households as well. As a result, there has been some pressure on the poor either to sell their houses to middle-income people or simply to compete, at some disadvantage, for the small number of plots which are available in individual projects. In some improvement schemes the increased monthly charges resulted in increased rents which have also created pressures on the poor to either leave the neighbourhood (as in Africa) or to crowd into the same room (as in Indonesia). Both of these phenomena largely result from the fact that housing remains a scarce commodity within urban areas and point to the need for increasing the scale and supply of shelter of all types, both for owner-occupancy and rental, in as short a time frame as possible.

One of the lessons from these projects has been the need to view project approaches within the urban context as a whole. Urban shelter requires complementary urban services, such as water, sanitation, roads, drainage, as well as related social services and transport. Technical solutions for site-specific activities need to be linked to existing infrastructure networks. Policies governing the financial management of these services must be coordinated across activities and institutions. These concerns necessarily direct attention to the institutional framework for urban services, and particularly, to the importance of effective local government.

While most of these projects may be considered successful and have achieved their physical objectives, and represent as well significant policy changes in some thirty-five countries, there are nevertheless, other areas of concern. During the 1970s, these areas were not perceived as priorities in initial efforts to focus on policy changes, such as affordable standards and cost recovery, and to orient public sector schemes towards the urban poor. These include training of personnel in developing countries, promotion and development of the construction and
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building materials industry, encouragement of community participation in neighborhood development and self-initiative, the development of housing finance institutions beyond the conventional type, and the exchange of information and technology in this sector around the world. These areas, discussed below, are essential to increasing the scale of activity in the shelter sector.

Training. While there is a general consensus that training of personnel in developing countries in disciplines involved in the shelter field should be a priority activity, relatively little attention is given to this by the international development community. Efforts sponsored by the United Nations, the World Bank's Economic Development Institute, and various national training institutions have not really approached the scale required to significantly increase the number of actors in this field. Training is either focused on classical training in disciplines, such as architecture or engineering, or has not dealt with the more operational aspects of shelter provision, including land packaging and surveying, construction financing, and community organization. This problem is particularly acute because, given the shortages of staff in this area, it is evident in many countries -- Nigeria and Kenya are two examples -- that trained personnel in urban-related disciplines have left their public sector jobs to work in private firms where their skills are better remunerated. As a result, the growth and capacity in these skills is occurring much more quickly in the private than in the public sector. Furthermore, it is unlikely that the public sector will be able to effectively compete with the private sector salaries for some time to come.

Building Materials. The promotion of the building materials industry is clearly an area of high priority. In many countries the high cost of materials, such as cement, wood, nails, and other essential items, makes housing prohibitively expensive for the poor. Building codes, which have traditionally insisted on the use of high-cost materials, have effectively excluded large proportions of the population from so-called "legal" housing. There is an urgent need to develop other kinds of materials to make advances in shelter provision technology, at costs which are truly affordable to the poor. Throughout the 1970s, despite numerous advances in the provision of prefabricated housing in the industrialized countries, there were almost no cases where these solutions were affordable to the poor in the third world. This tremendous gap requires redress; designers and constructors of shelter must become increasingly involved in the search for other kinds of solutions.

Community Participation. In the rush to design and initiate demonstration projects intended to illustrate the alternative policies and solutions, less attention was devoted to the issue of community participation. While it was understood that households would be directly involved in the construction of shelter units, insufficient effort was devoted to the encouragement of households and communities to design their own improvement programmes. This lack of community involvement, frequently reflected in a "top-down" public works-oriented programme, has had negative consequences in the relatively low level of neighbourhood commitment in some projects. This is manifested in problems of cost recovery and maintenance, and in some cases, the lack of social community in the neighbourhoods. Where projects did devote attention to community participation, these programmes have proven to be very vital, and other kinds of improvements have followed. While attention to policy questions

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during the 1970s was certainly required, it is nonetheless clear that insufficient effort was directed towards community participation. It is essential to increase the number of actors in the shelter delivery process in cities in developing countries, and this can only be achieved by having the neighbourhoods themselves involved in a direct way in all stages of the design, construction, and operation of improvements. Recent studies of the Water Users Associations in the Philippines, or of the credit unions in some African cities, suggest that there is a tremendous untapped potential in this field.

Technology. Another aspect of particular importance is the exchange of information and technology itself. Much valuable experience gained during the 1970s needs to be communicated around the world to neighbourhoods, agencies, and individuals facing the problem of how to provide shelter to large numbers of low-income households. Many project experiences offer direct solutions which can be applied elsewhere. Demonstration projects in countries such as Senegal or Mali have attracted wide attention in francophone West Africa. Projects in Kenya, Zambia, and Botswana have attracted attention in Eastern Africa. Projects in Madras have attracted individuals from other parts of India and South Asia to see how solutions can work on a large scale. And at the global level, the Vancouver Conference and its follow-up was intended to further disseminate useful experience. It is nonetheless clear that information exchange and the establishment of networks of groups and individuals must be a priority in the 1980s.

Housing Finance. An additional element to be included is attention to housing finance. Most of the projects described above involve the flow of funds from an external donor, such as the World Bank, to a public agency in developing countries and the lending of those funds to individuals for housing construction, frequently through an intermediary such as a housing bank or a housing corporation. Aside from project finance, relatively less attention has been given to the role of housing finance in the country as a whole and its impact on housing markets. Issues such as the availability of credit for housing construction, how the housing finance system itself relates to the national financial system, the mobilization of savings at the household level, and the macroeconomic effects of housing finance are important issues that have to be better understood. It is evident that conventional housing institutions which are frequently lending at low interest rates for long periods of time, for example, 7 or 8 per cent interest for twenty-five years, are in sharp contrast to the informal housing finance market where interest rates are frequently much higher for shorter periods, thereby demonstrating the high demand for credit and the low-income households' ability to pay. All of these questions have to be addressed in a coherent framework which identifies which actions, public and private, can improve the availability of finance for housing.

All of the above elements are obviously important for increasing the scale of housing: training provides the manpower; housing finance provides the cash; building materials provide the bricks and other materials; and information and technology provide the know-how. Many of the barriers to housing delivery systems, such as restrictive building codes and the bias of public institutions towards high-cost solutions, were brought down during the 1970s. In that sense, the 1970s made a very important contribution to the shelter sector. At the same time, it is
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clear that better policy and fewer barriers may be necessary but not sufficient conditions for a significant increase in shelter provision. It is therefore important that the above areas be given attention, because ultimately it is these elements which will determine whether a sufficient supply of shelter will be created.

Towards a New Paradigm

Given the rapid rate of population growth and the demand for shelter, it is evident that the ultimate objective in housing must be to generate a sufficient supply to meet the demands of a growing population. While the projects mentioned above represent significant achievements, they do not respond to the issue of scale. Replicating such projects as they currently stand will not be sufficient to meet the effective demands for housing. What is essential is to multiply the number of actors in housing delivery so that, in a real sense, the housing process is taken over by its ultimate users, with many new forms of housing and organizations for the provision of housing being created during the 1980s. In policy terms, the issue is how to create a framework which enables the multiplication of housing delivery systems and assists in the mobilization of resources for housing, yet at the same time does not dominate and control it. Centralization of this sector is likely to inhibit the innovative types of organizations which might be developed.

In addressing the central issue of scale, one must be constantly reminded of the fact that more than 90 per cent of the shelter generated each year throughout the world does not involve public agencies. It is a private matter, with private households, neighbourhood organizations, and construction enterprises providing valuable goods. This implies an evolving division of labour between the public and private sectors so that the public sector will perform essential roles and functions, such as providing infrastructure, and the private sector, defined as all the possible nonpublic actors, including individuals, neighbourhood groups, credit unions, or construction enterprises, and in its various forms will continue to develop new ways to provide housing.

While increased emphasis must be placed on activities not under the control of the public sector, it is nonetheless also important that governments at all levels become increasingly efficient in the provision, operation, and maintenance of infrastructure services. The importance of trunk infrastructure cannot be underestimated. Without such networks, it will be impossible to bring services to newly-urbanized land. The administrative and financial management of these services is a matter of great importance. In order to complement the proposed view of replicability as the multiplication of housing delivery systems, it will also be necessary to achieve administrative and financial replicability in the sense that public institutions must themselves also become capable of managing increasingly large infrastructure programmes if they are to keep up with the speed of private activities in housing.

It is within this framework that the areas mentioned above are of particular concern. It is clear that the public sector can play a role in encouraging training, the building materials industry, and housing finance. Yet, relatively less attention has been directed to these areas. What is important is the establishment of a capacity to perform these functions, rather than continuing the site level. The promotion of
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the building materials industry is likely to have a more significant effect on the supply and cost of shelter than a limited number of additional sites. If these levers can be moved within the shelter sector, there are likely to be important improvements in the supply of shelter in any particular city.

Another way to view this process is to suggest that the role of the public sector should be to assist in the creation of tools which other groups would be able to utilize in the provision of shelter. These tools may include forms of organization, finance, and technology in terms of materials and information. Institutions must take on the role as agents which enable rather than frustrate, and which encourage rather than inhibit private activities in this field. Systemic constraints, such as national policies or building codes should be addressed through policy changes at the national level or through changes in codes and regulations at the city level. Once these barriers are removed, however, efforts should be made to support the many diverse delivery systems which provide shelter. It will only be through the multiplication of efforts that the scale of demand for shelter can be realistically addressed.

NOTE


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