

**LOW-INCOME HOUSING:
A WOMEN'S PERSPECTIVE**

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ABSTRACT

Since little hard data specific to women and low-income housing projects is yet available, this paper develops a women's perspective on low-income housing by presenting a socioeconomic profile of poor urban women in the Third World and analyzing the constraints and opportunities such women could be expected to encounter, given the characteristics of housing projects.

Data on urban women show that they are, in general, relatively young, less well educated than their male counterparts, responsible for both managing the household and contributing to its income, disproportionately represented in low-paying service and informal-sector occupations, and increasingly likely to be heads of household. In light of these factors, how can key features of housing projects be adapted to accommodate the particular needs of women?

Taking into account poor women's low literacy rates and the economic responsibilities that occupy them during working hours, information about an intended project should be communicated verbally and women should be contacted in the evening. When developing selection and affordability criteria, transfer incomes received from relatives and friends should be considered in calculations of household income, since these are often a substantial source of income for women heads of household. Creative financing techniques, such as negative amortization, can be used to reduce down payment requirements while keeping monthly payments at an affordable level.

Furthermore, project financing mechanisms should allow for repayment schedules tailored to individual cash flow patterns—for instance, permitting women involved in small-scale informal-sector businesses, who keep accounts on a daily or weekly basis, to make more frequent smaller payments rather than larger monthly installments. Women's access to project financing can also be expanded by redefining acceptable forms of collateral and guarantee and by reducing the transaction costs of financing through simplified application procedures and business hours that do not conflict with women's work schedules.

In reviewing factors related to the physical design and location of housing, it is proposed that lower-cost housing options which require self-help construction (core units and sites-and-services) be complemented by loans to beneficiaries for hiring labor as well as purchasing materials. Such loans could ensure that women will not be forced to choose more expensive completed units because they do not have the time or skills needed to finish construction. To provide possible sources of increased income for poor households, housing design and land-use codes should permit part of the shelter unit to be used for accommodating boarders or for other commercial purposes. In addition, housing projects should be located near the centers of economic activity where women work; if that is impossible, inexpensive and effective systems of transportation to central areas should be developed.

The paper concludes by presenting examples of projects that have successfully used the strategies recommended. In particular, case studies from ICRW's work with the Solanda Low-Income Housing Project in Quito, Ecuador, and the Women's Self-Help Construction Project in Panama City highlight the operational meaning of some of the women's issues discussed.

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Housing Urban Women in the Third World: Introduction

Most developing countries have experienced large increases in urban population over the past several decades--a trend that is likely to continue. In 1950, about 15 percent of the population of Asia, Africa, and Latin America lived in cities. By 1975 that proportion had increased to 36 percent. It has been conservatively estimated that in the year 2000 the proportion will be at least 42 percent, with continuing rapid increases expected thereafter (Beier, Churchill, Cohen, and Renaud, 1976). Huge urban agglomerations are now growing in the Third World and the conditions of these cities are appalling; millions live in crowded and unsanitary slums, and congestion and pollution are far worse than in the developed countries.

In recognition of the desperate and growing need to provide adequate shelter and urban services in the cities of developing countries, development agencies have allocated large amounts of resources to a variety of housing and infrastructure development schemes. Since 1963, for example, the U. S. Agency for International Development (AID) has authorized more than U.S. \$1.6 billion in Housing Guaranty loans for projects in 44 countries (AID, 1982); by the end of fiscal 1981, the World Bank had approved 62 urban projects, amounting to over U.S. \$2 billion in lending (World Bank, 1983).

Because of the dimensions and complexity of urban problems and the need to coordinate investments in urban shelter, infrastructure, transport, and social services, implementation of urban projects has required flexibility on the part of both government agencies and development organizations. In fact, much to their credit, development agencies have been willing to continuously revise their approach to and expectations of urban projects in light of problems and limitations experienced in the field. In 1978, for example, AID began to finance community facilities and services with Housing Guaranty loans when feedback from housing projects suggested that shelter development and community development were interdependent (AID, 1982). The World Bank, in 1975, moved from establishing global norms (such as minimum number of rooms per dwelling unit) to using more country-, city-, and neighborhood-specific approaches linking housing standards to the conditions found in a particular area (World Bank, 1983).

As more and more information has been obtained regarding the characteristics of potential beneficiaries of low-income housing, projects have been developed to include credit components for meeting the finance needs of urban informal-sector business



owners, and mutual-help components have been developed to provide for the construction of community facilities at low cost. A great deal of research has been done on the impact of projects on the self-employed versus salaried employees and the performance in projects of migrant versus urban-born populations.

The impact of shelter solutions on women has always been great, due to the major role that women typically play in managing the household. But it is only recently that development agencies have begun to focus at all on the potential differential impact of housing projects on women versus men and the particular housing and shelter needs that urban women may have. The importance of a women's perspective on housing and urban services has been underscored by the realization of women's substantial responsibilities for the economic well-being of the household, the relevance of household location to women's employment opportunities, and the opportunity costs of women's time spent in obtaining urban services and participating in mutual- and self-help schemes. Documentation of the increasingly large proportion of urban women who are single, divorced, or widowed heads of household has also helped to bring the issue of women and housing to the forefront.

Unfortunately, however, little hard data on women and housing projects is yet available. A study undertaken for the AID Office of Housing, for example, originally intended to be a multinational study of women and housing, ended up reviewing the situation in only three countries with information from several small sample surveys (Resources for Action, 1982). Of 126 evaluation studies of four World Bank-financed low-income housing projects, only 13 provide information (and then only in passing) on the problems and performance of women in the projects (International Development Research Centre, 1982).

Given the paucity of data specific to women and housing projects, this paper attempts to present a women's perspective on low-income housing projects by developing a socioeconomic profile of low-income women and analyzing the constraints and opportunities such women could be expected to face, given the characteristics of housing projects. Issues are raised regarding project information distribution channels, beneficiary selection criteria, project affordability, financing mechanisms, physical design, and type of participation required of beneficiaries. Recommendations for improving women's access to projects are derived, and case studies of the Solanda Low-Income Housing Project in Quito, Ecuador, and the Women's Self-Help Construction Project in Panama City are presented.

Characteristics of Urban Women

Currently, urban women constitute 58 percent of the total female population in Latin America, 20 percent in Asia, and 17 percent in Africa. Moreover, because of increased female migration from rural to urban areas, their numbers are growing at a more rapid rate than the overall population. In Latin America women have traditionally outnumbered men in urban areas both because of a substantial demand for female domestic labor in the cities and because of rather limited opportunities for women in agricultural labor (Furst, 1979a). In Africa and Asia, however, rural-urban migration has, until recently, been a male phenomenon. When women migrated to the cities it was usually to accompany parents, spouses, or common-law partners rather than to seek employment. For the most part, African women in rural areas continued to play an extensive economic role even when separated from their spouses; in Southeast Asia, as well, women remained in rural areas because of employment opportunities in agriculture and trading (Furst, 1979b). Currently, however, rapid social change and the limited absorptive capacity of the rural sector in both Africa and Asia have led to major increases in female migration. In Tanzania, for example, women constituted only 33 percent of rural-urban migrants prior to 1950; by 1971, however, 54 percent of urban migrants were women (Shields, 1980). In Botswana, as of 1976, a similar proportion of urban migrants (56.5 percent) were women (Bryant, 1977). It is only in North Africa and the Middle East that female rural-urban migration appears to remain limited, and this is likely to be a reflection of inadequate data (Furst, 1979a).

The following figures on urban sex ratios reveal the extensive urbanization of women:

TABLE 1
URBAN SEX RATIOS

	<u>Year</u>	<u>Number of men per 100 women</u>
Morocco	1971	91.3
Ghana	1970	107.1
Brazil	1970	90.9
Chile	1970	87.8
Kenya	1969	166.1
Tanzania	1967	127.3
Indonesia	1971	97.9
Malaysia	1970	99.5

SOURCE: U.S. Bureau of the Census,
Illustrative Statistics on Women in Selected
Developing Countries (Washington, D.C.:
Government Printing Office, 1980), p. 16.

Who are these urban women and what do we know about them? Data specific to urban women are severely limited and their depth and quality vary by region. It appears, however, that the typical urban woman is young, relatively uneducated, involved in informal-sector employment, and, in many cases, a head of household. A brief overview of data on urban women is given below.

Age

The urban female population of most developing countries is characteristically a youthful one. For example, the age profile of the female population of urban Tanzania shows a concentration within the age group of 15 to 44 years, the prime working age as well as the peak reproductive years; approximately 83.9 percent of the female population of Dar es Salaam is in this age category (Shields, 1980). Moreover, the highest proportion of women, 22.6 percent, are within the 20-to-24-years-of-age group. Additional evidence of the preponderance of urban women in the prime working age group is available from survey data on four African and Middle Eastern cities. For example, in Cairo nearly 60 percent of the female population is between the ages of 15 and 49 years. For Damascus the figure is 49 percent; for Kinshasa, Zaire, 45 percent; and for Tororo, Uganda, 46 percent (Duza, 1976). Data for Latin America are similar. In Chile, for example, over 50 percent of the urban female population is between 15 and 49 years of age. In Guatemala and Nicaragua, 49.3 percent and 46.7 percent of urban women, respectively, are within this group. Moreover, in all three countries the greatest concentration of prime-working-age urban women is found in the even younger age group of 15 to 29 years. In Nicaragua, for example, 28 percent of urban women are between the ages of 15 and 29 (United Nations, 1977). Ecuador also has a high concentration of urban women (45 percent) between these ages (AID, n.d.).

Education

Although women's access to education in developing countries has improved considerably over the past twenty years, most of these urban women continue to be poorly educated compared to men. For example, only 6 percent of urban women in Colombia have completed secondary education (Rey de Marulanda, 1981). Twenty-seven percent have had some secondary education, 20 percent have completed primary

education, and 44 percent have had incomplete primary or no education. More than 52 percent of urban men, on the other hand, have completed primary education.

In Tanzania, over 50 percent of urban women have no education, compared to 23.6 percent of urban men. Only 22.1 percent of women have attended school through the higher primary levels and only 8 percent have received some secondary education. Moreover, the estimated mean length of schooling for women is a startling 3.3 years (Shields, 1980). Survey data for urban Egypt, Syria, Zaire, and Uganda reveal remarkably similar educational levels for urban women. About one out of every five females aged 10 and over is illiterate, compared to one out of every ten males (Duza, 1976).

These low levels of education have very clear negative implications for women's economic status and their participation in formal labor markets. Moreover, since enrollment ratios for young urban women remain lower than those for men, women's relative educational disadvantage seems likely to continue.

Labor Force Participation

In spite of their relatively low educational attainment, labor force participation among urban women is strong. In Honduras, for example, 67 percent of the female urban population is economically active, and in Asuncion, Paraguay, the female labor force participation rate is over 50 percent (Resources for Action, 1982). Single, widowed, and divorced women in urban Latin America have notably high rates of participation; for the region as a whole, well over 50 percent of single urban women 20 to 34 years of age are employed. In Argentina, half of all divorced women are employed, as are 24 percent of widowed mothers in Chile (Buvinić and Youssef, 1978a). In Tanzania, approximately 23 percent of urban women aged 25 to 29 and 21 percent of those aged 30 to 34 are economically active. In Kenya the activity rates for urban women are even higher. For example, 29.3 percent of the women in the age group 20 to 24 are economically active as are 31.2 percent of those aged 35 to 39 (Shields, 1980).

The formal sector employment available to these women, however, is typically low-status and poorly paid. In urban Tanzania, for example, almost 29 percent of women wage earners are found in clerical work while 16.5 percent are engaged in hotel/bar/porter jobs (Shields, 1980). By contrast, only 4.5 percent of male wage earners are found in those occupations. Moreover, a mere 1.6 percent of female earners are engaged in "skilled" occupations, compared to 10.4 percent of males.

In Latin America, as well, urban women show a marked concentration in the lower status occupational categories, mainly the service sector. For example, in Brazil, Chile, and Peru over 50 percent of economically active urban women are engaged in the service sector (PREALC, 1978). (See Table 2.) A 1977 survey of households and workers in four major urban centers of Colombia shows that 68.5 percent of the female labor force is engaged in the service sector (Rey de Marulanda, 1981). This evidence of women's concentration in the service sectors is disturbing since earnings distributions clearly show that this sector is associated with low wages and thus the majority of the urban female labor force falls into the low-income category.

TABLE 2
PERCENTAGE OF URBAN FEMALE EMPLOYMENT IN THE SERVICE SECTOR
OF FOUR LATIN AMERICAN COUNTRIES

	<u>Brazil</u>	<u>Chile</u>	<u>Colombia</u>	<u>Peru</u>
Administrative	3	14	3	2
Social Services	15	9	} 13	16
Public Administration	-	9		
Domestic	37	36	45	31
Other	14	2	1	2
Total	69	70	62	51

SOURCE: PREALC, Participación Femenina en la Actividad Económica en América Latina (Análisis Estadístico) (Santiago: PREALC, 1978), table 5, as translated by the authors.

Other sectors offer only limited employment opportunities for women. For example, while there is ample evidence of an expanding industrial sector in Latin America, industrial workers make up only 10 to 20 percent of the female labor force. While women may be incorporated into factory work, especially in the textile and food processing industries, an increasing emphasis on heavy industry will undoubtedly lower the percentage of women engaged in industrial employment. In Brazil, for example, the proportion of female workers in the manufacturing sector dropped from 18.6 percent to 11 percent during the period 1950-70. Moreover, studies in Venezuela and Brazil show that after twenty years of industrial growth, the incorporation of women into the modern formal sector is still centered around traditionally female occupations (Schmink, 1982).

Informal Sector Employment

Unable to gain higher-level (and thus better-paid) formal-sector employment, increasing numbers of women have turned to self-generated employment in the informal sector either as a supplement to formal sector earnings or as their sole source of support. In urban areas women take up occupations such as street vending and personal domestic services. Earnings and mobility are low in these informal-sector activities, but for most poor women access to this sector is easy compared to the problems they face in obtaining formal-sector employment. In much of the Third World, the informal sector rivals formal employment as a source of jobs for both men and women. In Bombay and Jakarta, for example, as well as in many African cities, 50 to 60 percent of the labor force is employed in the informal sector, which is the fastest growing segment of the economy. In Lima, 53 percent of the urban labor force works in the informal sector and 62 percent is so employed in eight other Peruvian cities. In Brazil, a full 69 percent of urban workers can be categorized as informal-sector employees, and in Ecuador almost 50 percent of those employed are in the informal sector (Mazumdar, 1976). In San Salvador it is estimated that 85 percent of poor households are engaged in tiny informal-sector businesses, which often provide 50 percent or more of household income (Farbman, 1981).

Women are quite disproportionately represented in these urban informal occupations. In urban Tanzania, for example, about 80 percent of the total female labor force is self-employed and 53 percent of all informal-sector workers are female (Shields, 1980). In Belo Horizonte, Brazil, 47.3 percent of female heads of household are employed in the informal sector, versus only 14.9 percent of male heads (Merrick, 1976). In Peru, even when domestics are excluded, 40 percent of the informal-sector labor force and 61 percent of the self-employed are women, compared to only 18 percent of the formal-sector labor force. About 50 percent of the informal labor force of Brazil is female, and in Ecuador half of all women employed in urban labor markets work in the informal sector (Mazumdar, 1976). In Botswana and Nepal, more than 80 percent of the total female labor force is self-employed in the informal sector (Sundar, n.d.).

Informal-sector employment tends to be concentrated in marginal activities and is associated with relatively low productivity. This is reflected in the close association between informal employment and lower average earnings, particularly for women. In Brazil, for example, informal-sector earnings are only 55 percent of those in the formal sector for men with incomplete primary education and just 47 percent for females.

Completion of primary education raises these earnings by 60 percent for men, but improves informal earnings for women by only 6 percent (Merrick, 1976).

In urban Tanzania, 47 percent of self-employed women, versus only 4 percent of self-employed men, had incomes of less than 100 shillings in 1971. In Kenya, 40.7 percent of informally employed women had incomes of less than 199 shillings, compared to 13.8 percent of men (Shields, 1980). A study of the informal sector of Mexico City shows that 23.7 percent of the total labor force of the city work in marginal jobs that pay less than minimum wage (U.S. \$100 per month); notably, however, these jobs account for 72.2 percent of the female labor force versus 53.9 percent of the male labor force (Arizpe, 1976). Finally, in urban Peru, studies show that women hold 46 percent of the informal sector jobs and earn an average income of U.S. \$30 per month versus an average of U.S. \$70 per month for men (Mazumdar, 1976).

Women Who Head Households

These low earnings, as well as the earnings differential between men and women, are even more exaggerated in the case of women who head households. This is of particular concern because one of the more outstanding features of urban women in the Third World is their very high propensity to be heads of household. It is now estimated that about 30 percent of households worldwide are headed by women who have no husbands or common-law partners contributing in a meaningful way to household income. In urban areas, however, the proportion of these households is substantially higher. Census data for thirteen Latin American countries reveal that the incidence of woman-headed households is 60 percent higher in urban than in rural areas (Buvinić and Youssef, 1978b). In the urban areas of Brazil, Venezuela, and El Salvador, approximately 45 percent of household heads are women (Buvinić, 1981). In Paraguay and Honduras, one in three women head households, and in Chile 43 percent of all single women over 14 years of age are mothers and, therefore, potential heads of household (Resources for Action, 1982). The reported rates of female headship in Africa and the Middle East are much lower than in Latin America. For example, a recent study in Tunisia found that only 10 percent of urban households are headed by women. A similar proportion was reported in a study of Cairo, Damascus, Kinshasa, and Tororo (Duza, 1976). The rates of female headship in these cities are substantially higher, however, among divorced and widowed women. Moreover, given the persistence of the cultural ideal of male-headed households, it is likely that these figures are severely biased downward.

The urban nature of the growing phenomenon of woman-headed households is, in part, a result of the concentration of industrial and commercial employment opportunities in urban areas and the traditional division of labor, which gives women greater income-earning potential in towns (as domestic servants and petty traders). The city also offers relatively higher economic security and fewer social sanctions to abandoned women with dependents and women in "visiting" unions.

For many women, however, these advantages of city life may be offset by marginal or barely subsistence earnings and a lack of institutional supports for mothers who must combine productive responsibilities with child care. In Santiago, Chile, a 1973 field inquiry in marginal slums showed that 29 percent of the women who headed families, as compared to only 10 percent of the men, fell into the lowest income bracket. In Guayaquil, Ecuador, a similar survey indicated that 37.5 percent of the women earned less than 400 sucres per month while only 18.1 percent of men reported such low incomes. A representative sample survey of metropolitan Belo Horizonte, Brazil, revealed that 41 percent of the female-headed households, as compared to 26 percent of the male-headed households, were at poverty levels (Merrick, 1976). Moreover, when households headed by prime age, divorced and separated women were singled out, the proportion at poverty levels reached 60 percent. Finally, in fifteen Commonwealth Caribbean countries, 54 percent of the male-headed households earned U.S. \$1,000 or more per month while only 13 percent of the female-headed households earned this amount (Buvinić and Youssef, 1978a).

Thus women who are heads of household find themselves in a particularly precarious position. On the one hand, they have lower incomes than male heads or joint heads of household. On the other hand, they typically bear greater economic responsibilities than the general population because they have more dependents and fewer other adults to contribute to household income. These households are also handicapped by a relative lack of access to productive resources, such as credit and land.

In addition, women have both home production and market production roles and obligations, and the poorer the household, the more burdensome these roles become. Income-earning activities that can be combined with child care are of the marginal and low-income types. The earnings of women heads have been shown to come mostly from employment in the informal sector of the economy. As noted earlier, this sector is characterized by very low productivity, marginal employment, and extremely low wages.

Women's Issues in Housing Projects

Given what we know of the situation of low-income urban women--i.e., that they are, in general, among the poorest segment of the population, less well-educated than their male counterparts, responsible for both managing the household and contributing to its income, disproportionately represented in informal-sector occupations, with a high propensity to be heads of household--what are the potential difficulties or opportunities that women may face in urban housing projects? In order to highlight some of the important issues, it is useful to review the potential impact on women of the key features of urban housing projects: project information distribution channels, selection and affordability criteria, project financing mechanisms, physical design, and type of participation required of the beneficiary.

Information Distribution Channels

Once government and/or development agencies embark upon the development of a low-income housing project the dissemination of information about the project to potential beneficiaries can occur in a number of ways, depending upon the type of project to be undertaken and existing and/or locally acceptable channels of information distribution. For example, publicizing an intended sites-and-services or core-housing project, both of which involve the preparation of vacant land for shelter use, may be accomplished through general public notification procedures. Calls for applications may be advertised in local newspapers, on public notice boards at marketplaces and places of employment, or through notices distributed by hand at banks, shops, and other public places. Information regarding an intended slum upgrading or resettlement project, on the other hand, must be more specifically targeted to the existing residents of the proposed project area. For example, a World Bank upgrading project in Lusaka, Zambia, relied on "de-densification walks" to decide upon and inform residents of de-densification plans (Lusaka Housing Project Evaluation Team, 1977). Armed with maps and photographs, project officials, political leaders, and any interested residents walked through the sections of the community that were being considered for de-densification. They looked at houses built close together and their condition and usually reached a consensus on which houses were good candidates for demolition. Later, families were recontacted for consultation regarding settlement. In general, however, because of a concern for

encouraging community participation, all types of housing projects are publicized through existing community action groups, cooperatives, and local political organizations.

Although the intention of such notification procedures is clearly to reach as large a group of potential beneficiaries as possible, given project budget and time constraints, these channels are often not effective in informing low-income women of proposed projects, eligibility requirements, and application procedures. The problem for women hinges on three factors. First, poor women as a group tend to have low literacy rates. Thus, general advertisement through newspapers and public notices may not reach the majority of low-income women. Second, because of their economic responsibilities, women in the lowest socioeconomic groups will not often be found at home during working hours and, therefore, may not be contacted even when project information is made available via neighborhood and house visits. Finally, women are often excluded from local clubs, organizations, and cooperatives that tend to be male-dominated and, unless informed by male relatives and friends, will not have access to project information through these channels (Safilios-Rothschild, 1982).

In Honduras, for example, housing is organized through local councils to which women are rarely elected. Women surveyed there felt that they had no way to express their needs to local decision makers and were ill-informed of planning decisions (Resources for Action, 1982). Women in Honduras do participate in mothers' clubs, but these are generally centers for learning domestic and traditional skills and are occasionally used as vehicles for implementing simple maternal-child health programs (Youssef and LeBel, 1981). In predominantly Muslim countries women have even more limited access to information because of societal restrictions on their social and political activities (Resources for Action, 1982).

Selection and Affordability Criteria

Selection and affordability criteria for urban housing projects are generally developed to ensure that project housing is allocated to low-income families rather than speculators and to those families that will be able to maintain housing payments without foregoing other necessities such as food and clothing. Cost recovery is also a major concern and important in demonstrating the replicability of projects. Thus, minimum and maximum monthly income requirements are set; the minimum is determined by a requirement that no more than a certain proportion (usually 25 percent) of household

income be allocated to housing payments, the maximum by a requirement that household income be no greater than that at a given percentile (usually the 50th) of local income distribution. To secure housing finance and keep monthly payments low, down payments of 5 to 15 percent of total housing costs are usually required. Evidence of income stability and continued ability to pay, such as business registrations, may improve applicants' chances of being selected for the project. In addition, to prevent speculation and reach those in greatest need of housing, low priority is usually given to an applicant whose spouse already owns property.

Income Requirements. Women who head households in urban areas tend to have substantially lower incomes than male heads of household and thus are less likely to meet minimum income requirements. There is growing evidence, however, that a much higher proportion of women heads of household would meet income eligibility requirements if transfer income as well as earned income were included in calculations of household income (Buvinić and Nieves, 1982). One of the principal survival strategies of this group apparently involves developing and maintaining support networks among relatives, friends, and male companions who do not reside in the household but contribute to its support on a fairly regular basis. A study in El Salvador found that 34 percent of the households living in the informal sector of Santa Ana, the second largest city, received transfers from other households. In the lowest decile of the earnings distribution of the city, 58 percent of the households were transfer recipients and the transfers represented 66 percent of total income. In the second lowest decile, 48 percent received transfers representing 25 percent of total income (Lindauer and Kaufmann, 1980).

Studies also demonstrate a tendency for transfer income to be "earmarked" in that households receiving a high proportion of income in the form of transfers also tend to spend a higher than average proportion of their income on the satisfaction of basic needs. This casts some doubt on the legitimacy of requirements that, for example, no more than 25 percent of earned household income must be used for monthly housing payments. Low-income households receiving substantial income transfers may in fact be capable of allocating to housing a much higher proportion of earned income because of the broader income base provided by the transfers (Keare and Parris, 1980). Thus, minimum monthly income requirements, which tend to exclude women heads of household and other groups among the poorest, may be unnecessarily high.

Down Payment Requirements. Down payment requirements, ranging from 5 to 15 percent of total housing cost, are typically introduced both to increase the likelihood of cost recovery (i.e., diminish the risk of default) and to keep monthly housing payments

low. In recent years, with rising construction costs and interest rates, urban projects have begun to rely on larger down payment requirements in order to maintain low monthly payments and thus reach the very low-income groups. Unfortunately, it is likely that low-income women are unable to meet down payment requirements more often than low-income men and are excluded from housing projects in greater proportions. Results of an International Center for Research on Women (ICRW) survey of women heads of household applying for the Solanda housing project in Quito, Ecuador, for example, show that only 15 percent of the women surveyed who are eligible in terms of income have savings enough to make down payments on the minimum cost housing unit. Seventy percent have savings that are not even equal to half of the minimum down payment required. Even when the value of liquid assets, assuming stringent divestiture, is calculated and added to savings, only 46 percent of the women surveyed have savings and assets enough to make the minimum down payment required (Blayney and Lycette, 1983).

It would, of course, be inappropriate to generalize the findings of a small sample survey. There is, however, evidence from several countries that low-income women have very limited savings and, therefore, ability to offer housing down payments (Sundar, n.d.). Reduced down payment requirements will not necessarily improve women's access to housing projects, unfortunately, because of the trade-off between lower down payments and higher monthly payments in conjunction with restrictions on the proportion of income that can be allocated to housing. That is, when down payment requirements are reduced and monthly payments rise, the minimum household income required for project eligibility must rise. Given women's position in the income distribution it is possible that the number of women who become eligible for housing with reduced down payments will be exceeded by the number who become ineligible for failure to meet the higher minimum income requirement.

Income Stability. Project selection and affordability criteria usually reflect an attempt to ensure cost recovery through the selection of applicants who have incomes that are expected to be stable or improving. Thus, applicants may be asked to provide information about any businesses they operate in the form of cash flow statements, statements of assets and holdings, and growth projections. It is likely that this sort of information will be more readily available as well as more accurate from the holders of formally set up businesses than from informal business operators. Thus, because of their propensity to undertake informal enterprises, women may well be disadvantaged by such selection criteria. A World Bank report on the impact of selection criteria in a housing project in Senegal, for example, notes a tendency to select formal over informal sector

workers despite the relatively high incomes of those in the informal sector (Office d'Habitation de Loyer Modere, 1978). The same study found that female applicants were at a disadvantage, although the data on female informal sector workers were not specifically analyzed. Of those selected, 13 percent were women while women represented 21 percent of total applicants.

Other Criteria. Other selection criteria may also introduce a systematic bias against women into the selection process, given the local cultural context. For example, in polygamous societies many women, although married, maintain separate households. Selection criteria that bar applicants with a property-owning spouse will lead to the exclusion of women who are, in fact, legitimate candidates for project housing. The evaluation of selection criteria in Senegal, mentioned above, cites this bias as one explanation for the disproportionately low number of successful women applicants.

Project Financing Mechanisms

Urban housing projects are typically developed by government housing ministries and are financed by national housing banks or housing development corporations. In fact, one of the goals of housing projects sponsored by international development agencies is often to provide technical assistance for institutional upgrading of the national housing agencies. The involvement of these institutions, however, often limits the flexibility of project design, selection procedures, and financing mechanisms. Institutional development--which may include reorganization of an agency, rationalization of project development procedures, and introduction of computerized accounting systems--proceeds gradually. In addition, most housing agencies and banks in developing countries remain highly centralized and bureaucratic. The very nature of the project development institutions, therefore, may result in the use of cumbersome and/or inappropriate beneficiary selection criteria and long delays between the call for project applications and the actual commencement of construction.

Financing mechanisms in particular may be inappropriate to meet the needs of potential project beneficiaries. As discussed above, down payment requirements of financing may be so high as to exclude many women applicants. Minimum monthly income requirements, applied to ensure cost recovery, may be rigidly defined, assuming an unnecessarily low proportion of income to be devoted to housing or excluding transfer income from affordability calculations. Again, low-income women are especially

susceptible to exclusion from housing projects based on such criteria. Women who do qualify for housing finance may be discouraged from project participation, or may be unable to perform successfully in the project, because of hidden costs engendered by financing mechanisms that are not tailored to their needs.

There are a number of factors that may inhibit women's demand for credit from formal financial institutions, including transaction costs, cumbersome application procedures, and cultural constraints.

Transaction Costs. Interest payments make up only a part of the costs of credit. Additional costs include payment for paperwork, travel costs to visit the lender, and the opportunity cost of time taken to negotiate and repay loans. For women, who are often new borrowers, these loan transaction costs may be several times as great as the amount of interest charged, making the total cost of borrowing substantially higher than indicated by the interest rate and perhaps out of reach of the borrower.

In addition, the hours of operation of credit institutions may be inappropriate for most women borrowers who are responsible for cooking, cleaning, and child care in addition to their work outside the home. Time allocation studies of low-income women have shown that even when women participate in the labor market, the time they devote to household chores does not diminish; rather it is their leisure time which declines (King and Evenson, 1983). Thus, the opportunity cost of time spent making applications for loans may be higher for poor women than for men, discouraging women from seeking credit.

Application Procedures. Especially when interest rates that financial institutions may charge on loans are regulated, elaborate application procedures may be required of potential borrowers to ration credit in the face of excess demand. Under these circumstances women's demand for credit will be inhibited because of their higher illiteracy rates and lower educational attainment relative to men. Most poor women are incapable of completing application forms which require more than rudimentary reading and writing skills.

Social/Cultural Constraints. In addition to the factors discussed above, women often face social and cultural constraints which further restrict their demand for credit. For example, it may be considered inappropriate for a woman to offer the occasionally necessary bribe to a male official in charge of credit applications.

Having obtained credit, women borrowers may be less successful than men in fulfilling their repayment obligations due to rigid repayment schedules. Most mortgage

repayment schedules call for monthly installments, whereas low-income women involved in small-scale informal-sector businesses or day labor may be accustomed to keeping accounts on a daily or weekly basis. For them, frequent small payments may be more manageable than fewer, larger payments.

In many urban housing projects, small business credit components are included in the hope of improving beneficiaries' productivity and incomes and, therefore, repayment rates. Many such programs have been successful. However, more often than not such components offer loans at below-market interest rates, which may mean that demand for credit exceeds the amount of financing that lenders are willing, and find profitable, to supply. Lenders must therefore ration credit. When this non-price rationing takes place, it is almost inevitably the smaller borrower, the borrower lacking influence, the female borrower, who is unable to gain access to credit.

In addition, low-income women may be unable to avail themselves of project credit components because they cannot meet collateral requirements or because they are constrained, as discussed above, by the transaction costs of borrowing.

Type of Participation Required, Physical Design, and Location

The physical design of and type of participation required in a low-income housing project can be critical factors in whether or not women will have access to the project and how they will benefit from it. Generally, housing projects involve one or several of the following interventions: upgrading existing settlements by improving service levels, drainage and sewerage systems, and footpaths and roads; providing serviced lots on new sites with water and electrical connections but no shelter unit; providing serviced core units with only a housing shell; and providing fairly complete shelter units on serviced sites.

Serviced lots and core units require some form of self-help participation by project beneficiaries, while all four types of interventions may require mutual help and community participation in the construction of facilities such as market areas, child-care centers, and schools.

Lack of income is often a critical factor limiting women's access to the traditional complete shelter unit on a serviced site, so that serviced lots and core units, with their reduced costs, might seem to be more appropriate vehicles for providing women with housing.

The form and extent of self-help or mutual help required in a project, however, is of particular concern with regard to women. Whether as members of households or heads of household, women typically spend upwards of twelve hours a day (King and Evenson, 1983) performing income-earning activities and necessary household functions such as food preparation, water and firewood collection, child care and cleaning. Thus, the opportunity cost of women's time is often greater than that of men, and women participants in self-help projects frequently take longer to complete construction of their shelter units. In addition, women often lack skills for construction with modern building materials. Lacking time and skills, women might contract labor, but they are less likely than men to be able to afford to do so. A strategy sometimes used by male participants in self-help programs is to send their wives to work while they build the house. In female-headed households, where the economic contribution of each household member is critical, this strategy may not be feasible (Foundation for Cooperative Housing, 1979). Moreover, during the construction stage of self-help housing, participants may be compelled to pay rent for shelter while also investing in building materials for the new house. Limited income, again, constrains the access of women to this option.

In the World Bank El Salvador program, for example, unmarried women and women heads of household were found to prefer core units to self-help construction, even though this meant taking out larger loans. By buying a unit ready for occupancy, the feasibility of carrying out income-earning and household-management activities simultaneously could be improved. However, if serviced lot and core unit schemes are designed without reference to the heavy demands placed on women's time, the self-help and mutual-help requirements of such schemes can be so burdensome as to place many women, and particularly women who head households, in the untenable position of being ineligible for the lower-cost housing options which require self-help while at the same time being unable to afford the more expensive fully serviced shelter units available.

The physical design of project housing units is also important in ensuring that women benefit from new or upgraded housing. If housing units and land-use codes are developed in such a way as to permit use of part of the dwelling for commercial purposes, women can more easily combine their household and economic responsibilities, which often involve informal sector activities conducted in the home. The addition of rooms available for rent can also be of benefit, not only as sources of additional income for home owners, but also as alternative shelter solutions for women and others who are not eligible to buy housing. There is some evidence, in fact, that taking in boarders is an

important strategy in the economic survival of women who head households and provides an important source of housing for women who are tenants.

Finally, site planning and location, service arrangements, and the design of community facilities can be critical in easing the burden of women's double day. For example, site layouts can be planned to cluster several houses around a communal area (Foundation for Cooperative Housing, 1979). In the El Salvador project, this layout has given rise to informal, collective arrangements for child care which would have been difficult to develop otherwise.

The actual location of a housing project in relation to sources of employment is particularly important for women. Commuting long distances to work in large urban areas involves substantial transportation and time costs. Since women's earnings are low, these costs severely reduce earnings and encourage women to leave modern-sector employment and seek income-generating opportunities in informal-sector activities closer to home. For the large numbers of low-income women already involved in informal-sector occupations such as trading and small-scale retailing, access to markets for both the purchase of inputs and the sale of outputs is of critical importance. The full range of service and community facilities can also have a tremendous impact on women's lives. Where individual household water connections are not available, for example, the spacing of water standpipes should take into consideration the opportunity cost of women's time spent in obtaining the household's daily water supply. Strategically located communal water taps or market stalls can substantially reduce these costs as well as promote the formation of a variety of informal support networks. Community-based child-care facilities with flexible hours of operation will be important, too, for the large proportion of low-income women who work, leaving their homes early in the morning and often returning late in the evening.

Potential Solutions

It is clear that there are a number of issues that must be addressed in the design and implementation of urban projects in order to improve women's access to, and benefit from, housing. How, for example, can women's access to projects be improved through more effective informational procedures? How can selection and affordability criteria be designed to accommodate women's financial situation while still ensuring cost recovery? What financing mechanisms will work for poor women? And, finally, how can projects be designed to avoid placing women in the difficult position of choosing between more expensive fully serviced housing options and those that are less complete and require a great deal of self-help participation?

Within the context of traditional low-income housing programs and the sites-and-services schemes which have become, to some extent, the new orthodoxy in housing schemes, there are many steps that can be taken to improve women's access to the programs:

- In the initial stages of project development, when applications for the program are being taken, information regarding the program and how to apply for it can be made available to local women's organizations and community workers who have contact with low-income working women. To the extent possible, this information should be given verbally rather than in written form. A corps of "housing extensionists" might, for example, be developed to inform low-income women of the project, taking into account their work schedules and attempting to contact them during the evening hours.
- The definition of income used to determine eligibility for the project should be broadened to include the often substantial transfer incomes that low-income households, and particularly households headed by women, receive from relatives and friends.
- Affordability criteria should be calculated on the assumption that among low-income groups more than 25 percent of household income can be spent on housing, particularly when in-kind payments and transfer incomes are not included in the definition of household income.

- Creative financing techniques, now widely used in the United States, should be adopted to reduce the down payment requirements of housing while keeping monthly payments at an affordable level. Negative amortization techniques, for example, have this effect.
- Project financing methods should rely less heavily on rigid monthly repayment schedules and, instead, allow repayment schedules to be tailored to individual cash flow patterns.
- The transaction costs of obtaining financing, which bear so heavily on women, should be reduced by simplifying application procedures and scheduling required interviews at times that will not conflict with women's work schedules.
- Shelter options that require self-help construction should be accompanied by loans that may be used to hire labor and purchase materials so that women who head households are not forced to purchase more expensive shelter units due to lack of time and skills for construction.
- Physical design and land-use codes should permit part of the shelter unit to be used for accommodating boarders or for commercial purposes.
- Location of shelter units on peri-urban land far from centers of economic activity should be avoided. When land cost dictates such location, however, inexpensive and efficient mechanisms for transport to central areas should be developed.

A number of these strategies have already been used successfully. For example, housing projects in Zambia, Kenya, and Colombia were designed to allow space for rental to boarders and one author notes that the investment by owners in their serviced lots would be impossible without the income generated by the renting of rooms (Peattie, 1982). In the Zambia project, rental income constituted a full 25 percent of total household income in households headed by women (Bamberger, Sanyal, and Valverde, 1982). In Indonesia, the Kampung Improvement Program in Jakarta is designed to allow for commercial use of the shelter unit, typically in the form of a small sari-sari shop. Moreover, a number of housing projects have developed nonconventional financing mechanisms. These mechanisms include redefining acceptable forms of collateral and guarantee; instituting small, short-term, repetitive loan programs with flexible repayment schedules; and providing branch offices that have convenient locations and operating hours.

The marketplace banks created by the Philippine Commercial and Industrial Bank, for example, regard operating licenses, taxis, and stalls of vendors as good collateral (United Nations, 1983). In Guayaquil, Ecuador, an institutional mechanism for improving housing through small loans accepts personal goods that remain in the owners' possession as guarantees.

Other forms of collateral have also been used to adapt to the financial positions of lower-income households. In the squatter improvement areas of Lusaka, households have been entitled to a fixed loan on the basis of their 20-year occupancy licenses (Bamberger, Sanyal, and Valverde, 1982). In Tanzania, households may apply for a loan from the Tanzanian Housing Bank on the security of the house itself, provided it has been insured and inspected by a housing official.

One of the most popular forms of guarantee on housing loans to low-income families appears to be the group guarantee. The basic principle underlying this approach is that individuals form a group for the purpose of borrowing funds for housing and agree to be liable for any individual defaults in payment. The members of the group become responsible for rectifying a default and for ensuring that the loan is fully paid on time.

In the Philippines, the Centre for Social Credit of the Philippine Commercial and Industrial Bank was set up, in part, to make financing available to groups of low-income families with no means of providing conventional collateral. The Centre makes loans to groups of poor families for housing and other purposes such as the purchase of light manufacturing equipment. These groups are required to be well-established and to show evidence of having worked well together on common projects in the past which may or may not have entailed borrowing. While each individual is responsible for repaying his or her share, members of the groups also have a collective responsibility for payment of the entire loan.

The Los Pocitos project in Panama also took advantage of the group guarantee principle in providing housing finance. Each family was required to be a member of its local credit union and join a group whose members became equally responsible for the repayment of individual loans. Projects such as these, which are sustained through mutual and government guarantees, are particularly attractive to banks and other investment institutions since financing risks have been substantially reduced.

Some nonconventional housing finance schemes have been effective in meeting the needs of low-income groups because they have provided their clients with the option of small, short-term, low-cost loans. Usually, the possibility of becoming eligible for

another small loan after prompt repayment of the old loan is incorporated into these repetitive loan schemes and there are often provisions for increasing the amount of each successive loan. In some cases, the small loans are made for financing only a specific part of the dwelling.

The principle of successive incremental loans has been proposed as part of the "Freedom to Build" project in the Philippines. The sponsor, Share and Care Apostolate for Poor Settlers (SCAPS), intends to focus its initial housing assistance efforts on relocated squatters. It is hoped that the introduction of a few simple financing devices will improve the ability of squatters to make improvements to the dwelling component of the sites-and-services project, for which no government assistance has been planned. SCAPS proposes to assist the self-help builders by means of a fund for home improvement loans, a credit cooperative, a store, and a community organization.

SCAPS will make available incremental loans only to small groups of borrowers who, in undertaking collective responsibility for the loan repayment, are expected to be more likely to help one another in the actual construction process. Upon the prompt repayment of the initial loan, the individual members will become eligible as a group for a series of successively larger loans. The group's continued eligibility for incremental loans will be dependent upon the total repayment of the earlier loan. Thus, each individual will have an incentive to pay his or her part of the group's loan on time and to see that the other members do the same.

In Chile, as part of an AID Housing Investment Guaranty Program, a variable installment mortgage scheme is being used in which the rate of interest at the start of the mortgage is set at a low level. The interest rate will then be adjusted upward at regular intervals so that the effective rate of return over the full term is equivalent to that of a conventional fixed-payment mortgage. The initial monthly amortization payments under the variable interest scheme are U.S. \$30.75 per \$1,000, while the monthly amortization payment under a conventional scheme would be U.S. \$35 per \$1,000--a difference of 12.14 percent.

In the Republic of Korea, a nonconventional housing finance scheme has been developed in which the variable installments on mortgages achieve an even greater reduction in the initial payments (from U.S. \$47.10 to U.S. \$27.66 per \$1,000) and rise in conformity with expected increases in the incomes of low-income families. The rate of interest, 10.14 percent, remains the same throughout the 22.5-year term of the loan. Six months after the first payment, the monthly payment is increased by 5 percent of the initial payment. Every six months thereafter, the payment is increased by the absolute amount of this initial increase.

The net effect of reducing initial payments to the borrower and increasing the borrower's later payments is a temporary decrease in cash flow for the lending institutions. However, the lender is eventually compensated through the progressively higher installment payments that result from upward adjustments of the principal of the loan by amounts equal to the difference between the lower initial payments under the variable payment scheme and the amounts that would have been paid under a conventional approach.

Finally, in West Java, Indonesia, the marketplace banks are another pioneering approach that could be expanded to accommodate lower-income borrowers' needs for housing finance. The Bank Pasar Kotamaya Bandung (a market bank of Bandung) was set up in various urban marketplaces in 1968 to provide credit to small merchants with low incomes and very little capital. Although its success has largely been due to innovative financing features, its impact would not have been as substantial without the daily presence of the bank's loan officers in the marketplace itself. In fact, few of the bank's financial services are actually conducted on the bank's premises since loan officers circulate throughout the low-income neighborhoods to collect weekly repayments and make new loan agreements.

The current rate of loan default is about 10 percent; however, total losses are only 3 to 5 percent since the bank can usually recover the loan amount by selling the collateral pledged on a loan. If a borrower is unable to meet weekly repayments, the loan may be rescheduled for one additional month with a half-percent penalty charged for the period of arrears. This extension can be used twice before the collateral is put up for sale. Since the bank operates on a weekly collection basis, corrective action can be taken quickly. Furthermore, the grace period and extension limits are for one month only.

In many cases, however, the administrative costs associated with these innovative features will raise the costs of project housing and, paradoxically, contribute to the exclusion of the very poor from the project. It is for this reason that more and more interest is being generated in the inclusion of substantial numbers of rental units in housing projects and the notion of allowing low-income households to sell their project housing units in order to realize capital gains, which may eventually enable them to buy houses they can afford to occupy. Both sets of strategies--those focused on more flexibility within traditional low-income housing and sites-and-services projects and those moving away from the notion that ownership of housing by the poor is a primary goal--must, of course, be tested by time.

ICRW has recently been involved with two shelter projects that highlight the operational meaning of some of the women's issues in housing discussed above, the Solanda Low-Income Housing Project and the less traditional Panama Women's Self-Help Construction Project. Experience with two housing projects is, of course, insufficient for drawing conclusions about the appropriateness of one type of project versus another for low-income women. Nonetheless, some valuable lessons can be taken from ICRW's work with these two projects to contribute to a women's perspective on low-income housing.

The Solanda Low-Income Housing Project¹

In October of 1982, ICRW was asked to assist in the design of a project that would benefit low-income women in Ecuador. The Center proposed to work with the Fundación Mariana de Jesus (FMJ), a private nonprofit Ecuadorean agency, on a low-income housing project to be built on the grounds of the old hacienda Solanda in the outskirts of Quito with a Housing Guaranty loan from AID. The Solanda project is designed to benefit around 6,000 low-income families by providing inexpensive housing, community facilities, and planned social programs. The land for the project was donated by the FMJ, which has also designed and will implement the social component of the project. Two sister government agencies, the Ecuadorean Housing Bank (BEV) and the Ecuadorean Housing Board (JNV), are undertaking the construction and will disburse the loans and collaborate with the FMJ in the social areas.

ICRW selected Solanda rather than other activities in AID's portfolio for a number of reasons. First, in Ecuador, as in many other countries in the region, there is growing recognition that poor women in the cities are often the primary family breadwinners and face serious economic difficulties on their own, while poverty in rural areas is still perceived to be a family affair. This receptivity and the existence of information on the problems women have faced in other housing schemes facilitated the integration of a women's component into a program that had not been set up (or had no specific mandate) to work with women. Second, the experience of urban development projects in other Latin American cities documented the need for women-oriented components in Solanda. Third, the FMJ was an institution that had technical competence in the housing sector and at the same time was willing to try innovative ideas. Fourth, and most important, the Solanda project offered the opportunity to integrate women into a mainstream development effort rather than create a special (possibly marginal) program for women, and had the potential for reaching a large number of women beneficiaries. By becoming involved in Solanda, ICRW wanted to break away from the typical development intervention for women in the region, in which a private voluntary agency, usually

¹For further information, see Robert G. Blayney and Margaret Lycette, "Improving the Access of Women-Headed Households to Solanda Housing: A Feasible Down Payment Assistance Scheme," report prepared for USAID/Ecuador, 1983; and Mayra Buvinić y Margaret Lycette, "La Mujer en el Programa de Vivienda Solanda," ponencias preparadas para y bajo los auspicios de la Fundación Mariana de Jesus, Quito, Ecuador, 1983.

staffed by women volunteers, implements one or more small projects that are set up specifically for women and benefit only a few.

But there were trade-offs in choosing Solanda. The liabilities of large projects that try to integrate more than one component and involve more than one institution are well known. Delays in implementation are common and Solanda is no exception. Fifteen months later, at the end of ICRW's technical assistance agreement with the FMJ, the social and physical components of the project were out of phase because of delays in the construction timetable that were the result of the complexity of the project and were worsened by the 1983 economic crisis in the country. While attempts were made at inter-institutional coordination, physical and social plans were still being generated independently.

With funding from the Women in Development Office of AID, ICRW provided technical assistance to the FMJ in (1) analyzing the data on applicant households with a particular emphasis on developing a socioeconomic profile of women heads of household in that population; and (2) studying the feasibility of setting up a down payment fund for women heads of household in the project. A significant portion of ICRW's work with the FMJ was devoted to the data-processing steps prior to actual analysis of the socioeconomic survey of 7,176 applicants that will be used in the project selection process and the design of the social component. These steps included coding the questionnaire, defining the variables for the socioeconomic analysis and the selection process, and setting plans for cross-tabulations. While awaiting the first computer printouts of the overall analysis, ICRW and the FMJ tabulated a subset of the data on the women applicants who head households to investigate their characteristics and some of the constraints they face.

A Profile of Women Heads of Household in the Applicant Population

Using a summary data sheet prepared by the social workers who interviewed all applicants, FMJ and ICRW staff jointly identified women heads of household, following a conservative operational definition of women heads that restricted the use of the term to those who were clearly the main economic providers of the household. They were chosen only from the population of women applicants, thus excluding women heads of household whose applications were submitted by a male family member. The data that follows provide a descriptive socioeconomic profile of 1,175 women applicants who, according to

the definition used, are heads of household. This profile will be enriched when the complete set of information on women from the socioeconomic survey is available. Similar information on men heads of household, when analyzed and compared to that of women heads, will give needed perspective to the women's profile.

Forty-seven percent of women heads of household applying to Solanda are single, while another 30 percent are separated or divorced and 12 percent are widowed. The remaining women are married or living with common-law partners but are the main breadwinners. The high percentage of single women in the applicant population is striking, but not surprising, given existing research that shows a significant proportion of single mothers in Latin American cities. The likelihood that these single women are also mothers is almost assured by the definition of head of household that was used in this study. Since single mothers may face more difficulties than widows, divorcees, or separated women who are also heads of household, single women have been separated in the analysis from women in other marital status categories.

As expected, single women are younger than women in other marital status categories, although the overall population of women heads is relatively young. Fifty-five percent of all women are less than 39 years old and a full 70 percent are less than 44 years old. The educational level of single mothers is not significantly different from that of other women. Slightly more than one-third of both groups have at least some secondary education and slightly over half of the women in each group have at least some primary education. Single women, however, differ from women in other marital status categories both in their typical occupations and in their average monthly household incomes. Tables 3, 4, and 5 below give marital status, occupation and household-income data for these women heads of household.

When occupations in Table 3 are grouped into the main categories of self-employment and service, single women predominate in the latter: one-third of women in other marital statuses versus 22 percent of single women can be considered self-employed, while 25 percent of single women as compared to only 21 percent of other women are in service occupations.¹ This difference is significant statistically. Table 4 shows that the monthly income of households where women are in service occupations is lower than that for women in other occupations. Since most single women heads are in service jobs, it can be expected that their household incomes will be lower than that of

¹ $\chi^2 = 16.7, df = 4, p < .01$

other women. Table 5 shows the distribution of household income by marital status. It reveals that monthly income of households headed by single women is significantly lower than monthly income of households headed by women in other marital statuses (8,412 sucres versus 10,1037 sucres per month).¹

TABLE 3
OCCUPATION OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MARITAL STATUS

Occupation	Marital Status				Total	
	Single		Other			
	n	%	n	%	n	%
Professionals	15	2.7	14	2.3	29	2.5
Professional assistants, technicians, paraprofessionals	65	11.8	53	8.5	118	10.0
Laundresses, seamstresses, pressers	41	7.4	62	10.0	103	8.8
Merchants	53	9.6	88	14.1	141	12.0
Personal service proprietors	2	0.4	5	0.8	7	0.6
Personal service workers	29	5.3	24	3.9	53	4.5
Other service workers	69	12.5	54	8.6	113	10.5
Managers/proprietors of small-scale production enterprises	26	4.7	34	5.5	60	5.1
Office workers	26	4.7	28	4.5	54	4.6
Sales workers	46	8.4	58	9.2	104	8.8
Laborers	41	7.5	40	6.4	81	6.9
Others	138	25.0	164	26.2	302	25.7
Total	551	100.0	624	100.0	1,175	100.0

¹ $t = 7.19, p < .001$

TABLE 4
MONTHLY HOUSEHOLD INCOME OF WOMEN APPLICANTS
WHO HEAD HOUSEHOLDS BY OCCUPATION

Occupation	Monthly Household Income (Suces) ¹		
	\bar{X}	Md	s_x
Professionals	11,249	10,850	3,790.22
Professional assistants, technicians, paraprofessionals	9,325	9,000	2,933.82
Laundresses, seamstresses, pressers	9,233	9,410	3,382.89
Merchants	10,857	9,999	5,178.60
Personal service proprietors	8,877	9,600	3,391.58
Personal service workers	8,808	8,025	4,480.94
Other service workers	8,180	7,998	3,898.52
Managers/proprietors of small-scale production enterprises	9,005	8,789	2,923.79
Office workers	10,422	9,990	4,389.58
Sales workers	9,943	9,016	4,146.95
Laborers	9,606	9,092	3,807.85
Others	8,636	8,001	3,790.69

\bar{X} = mean
 Md = median
 s_x = standard deviation

¹ At the time the data presented in these tables were collected, the exchange rate was U.S. \$1 = 80 suces.

TABLE 5
MONTHLY HOUSEHOLD INCOME OF WOMEN APPLICANTS
WHO HEAD HOUSEHOLDS BY MARITAL STATUS

Monthly Household Income (Sucre)	Marital Status				Total	
	Single		Other			
	F _n ¹	%	F _n	%	F _n	%
0-5,714	121	22.0	83	13.3	204	17.4
5,715-6,764	181	32.9	133	21.3	314	26.7
6,765-7,337	216	39.3	172	27.6	388	33.0
7,338-7,820	240	43.7	197	31.6	437	37.2
7,821-8,322	300	54.6	230	36.9	530	45.1
8,323-8,800	329	59.9	253	40.6	582	49.5
8,801-9,165	357	64.9	282	45.3	639	54.4
9,166-9,685	380	69.1	314	50.4	694	59.1
9,686-10,186	413	75.1	365	58.6	778	66.2
10,187-10,716	431	78.3	391	62.8	822	70.0
10,717-12,716	500	90.8	489	78.6	989	84.2
12,717 +	551	100.0	624	100.0	1,175	100.0

¹ F_n = Cumulative frequency

Constraints for Women Heads of Household in Solanda

By definition, the socioeconomic analysis excluded poor women who did not apply to Solanda because they did not have access to information about the project or had difficulty with the application procedures. In fact, data recently made available by the FMJ shows an implicit selection operating during the application process: of the 7,176 applicants who responded to the socioeconomic survey, 1,500 did not complete the next step in the process—picking up a second form that requested standard documentation required by the Ecuadorean Housing Bank to process loans. An additional 901 applicants received the forms but did not return them with the proper documentation. That is, 33 percent of the original applicants had already dropped out of the project before any actual selection had begun. (Information is not yet available on how many of these dropout cases are women heads of household and why they dropped out).

Barring new reasons for the dropouts, the major constraint women heads of household faced in having access to the project was financial. In January 1983, the estimated cost of the least expensive housing option in Solanda was 231,295 sucres.¹ With the required 15 percent down payment (35,000 sucres) and only 25 percent of household income to be allocated to housing payments, households needed, at the time, a minimum monthly income of 7,890 sucres and a maximum of 10,716 sucres to qualify for the project.

Table 5 shows that, given the January 1983 prices, 43.5 percent of single women and 31.6 percent of other women would not have been eligible for Solanda since their monthly family income was below 7,820 sucres per month. Table 6 shows data on savings. According to this table, only 9 percent of all women heads had sufficient household savings to meet the initial down payment of 35,000 sucres. If the down payment had been reduced to half—that is, to 17,500 sucres—77 percent of all women applicants would still not have been eligible for housing in Solanda because of problems with the down payment.

¹ U.S. \$3,850 using the exchange rate at that time, U.S. \$1 = 60 sucres.

TABLE 6
SAVINGS OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MARITAL STATUS

Savings (Suces)	Marital Status				Total	
	Single		Other			
	n	%	n	%	n	%
00,000 - 17,000	420	76.2	484	77.6	904	76.9
17,097 - 35,000	81	14.8	82	13.1	163	13.9
35,000 +	50	9.0	58	9.3	108	9.2
Total	551	100.0	624	100.0	1,175	100.0

Tables 7 to 10 present the basic statistics on women who were eligible, in terms of the January 1983 requirements, for Solanda and those women who would not have qualified for the project, even if the down payment requirement had been completely eliminated, simply because they did not have sufficient income to meet the monthly payments (of 7,800 per month). How do they compare? Briefly, the poorest women who head households in the applicant population are younger women, single, and probably with children. They have little education and predominate in work in the service sector and "other" occupations that were not identified in the survey, probably because they were too unstable and too sporadic. Differences in education and occupation between the two income groups were highly significant.¹

¹p < .001, in both cases.

TABLE 7

MARITAL STATUS OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MONTHLY HOUSEHOLD INCOME CATEGORY

Marital Status	Monthly Income				Total	
	< 7,800 Sucres		≥ 7,800 Sucres			
	n	%	n	%	n	%
Consensual Union	14	3.2	98	13.2	112	9.5
Single	238	54.8	313	42.2	551	46.9
Separated	74	17.0	119	16.1	193	16.4
Divorced	48	11.1	109	14.7	157	13.4
Married	9	2.1	12	1.6	21	1.8
Widowed	51	11.8	90	12.2	141	12.0
Total	434	100.0	741	100.0	1,175	100.0

TABLE 8

EDUCATION OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MONTHLY HOUSEHOLD INCOME CATEGORY

Education	Monthly Income				Total	
	< 7,800 Sucres		≥ 7,800 Sucres			
	n	%	n	%	n	%
None	20	4.6	9	1.2	29	2.5
Some Primary	268	61.8	364	49.2	632	53.8
Some Secondary	122	28.1	284	38.3	406	34.6
Some Special Training	16	3.7	37	5.0	53	4.5
Some Higher Education	8	1.8	47	6.3	55	4.6
Total	434	100.0	741	100.0	1,175	100.0

TABLE 9

OCCUPATION OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MONTHLY HOUSEHOLD INCOME CATEGORY

Occupation	Monthly Income				Total	
	< 7,800 Sucres		≥ 7,800 Sucres			
	n	%	n	%	n	%
Professionals	6	1.4	23	3.1	29	2.5
Professional assistants, technicians, paraprofessionals	39	9.0	79	10.7	118	10.0
Laundresses, seamstresses, pressers	31	7.2	72	9.7	103	8.8
Merchants	32	7.4	109	14.7	141	12.0
Personal service proprietors	3	0.7	4	0.5	7	0.6
Personal service workers	23	5.3	30	4.0	53	4.5
Other service workers	58	13.4	65	8.8	123	10.5
Managers/proprietors of small-scale production enterprises	20	4.6	40	5.4	60	5.1
Office Workers	12	2.8	42	5.7	54	4.6
Sales Workers	34	7.8	70	9.4	104	8.8
Laborers	31	7.1	50	6.8	81	6.9
Others	145	33.3	157	21.2	302	25.7
Total	434	100.0	741	100.0	1,175	100.0

TABLE 10

TOTAL HOUSEHOLD SIZE OF WOMEN APPLICANTS WHO HEAD HOUSEHOLDS
BY MONTHLY HOUSEHOLD INCOME CATEGORY

Total Household Size	Monthly Income					
	< 7,800 Sucres		≥ 7,800 Sucres		Total	
	n	%	n	%	n	%
1	14	3.2	9	1.3	23	2.0
2	66	15.2	65	8.8	131	11.1
3	110	25.3	129	17.4	239	20.3
4	86	19.8	193	26.0	279	23.7
5	66	15.2	125	16.9	191	16.2
6	40	9.2	83	11.2	123	10.5
7	22	5.1	69	9.2	91	7.9
8	13	3.0	34	4.6	47	4.0
9	10	2.3	17	2.3	27	2.3
10+	7	1.7	17	2.3	24	2.0
Total	434	100.0	741	100.0	1,175	100.0

In a supplementary 10 percent representative sampling of a subpopulation of 520 women heads of household, income-eligible women (that is, according to the January 1983 estimated housing costs, women with a monthly household income range from 7,800 to 10,716 sucres) mentioned virtually every option available for generating funds when asked about the down payment. The most frequently mentioned strategies were using current savings (38 percent); saving more, spending less (42 percent); borrowing money (40 percent); and collecting money due and selling assets (26 percent). Although these responses clearly indicated intentions to sacrifice a great deal in order to obtain housing, analysis of the women's financial situation showed that these intentions did not stand up to the reality of the women's financial situation.

As Table 11 shows, only 15.4 percent of income-eligible women had current savings enough to make the minimum required down payment of 35,000 sucres. Adding potential savings during 1983 did not change this proportion, and it was only when it was assumed that households would use all current savings and liquify all assets that 69 percent of income-eligible women had funds enough to make the minimum required down payment. Under the more reasonable assumption that only half of the value of total assets could be recovered, only 46 percent of income-eligible women had enough funds for the down payment. If the down payment were to be lowered to half, counting current savings and selling 50 percent of liquid assets, an additional 23 percent of the women would have been eligible. The study further showed that these women had limited experience with borrowing even from relatives and friends. Yet, they would have to borrow substantial amounts to raise the Solanda housing down payment.

TABLE 11
SOURCES OF DOWN PAYMENT FUNDS: SAVINGS AND ASSETS

	Current Savings	Total Savings--End 1983	Current Savings and Liquid Assets	Savings--End 1983 and Liquid Assets	Current Savings and 50% of Liquid Assets
Percent of Population with Full Minimum Down Payment	15.4	15.4	69.2	69.2	46.2
Percent of Population with One-Half Minimum Down Payment	15.4	23.1	23.1	23.1	23.0
Percent of Population with Less than One-Half Minimum Down Payment	69.2	61.5	7.7	7.7	30.8

NOTE: This table refers to "income-eligible" women, those with incomes of 7,800 - 10,716 sucres.

What options were available at the time to women heads of household in the eligible income ranges for financing the housing down payment? A look at existing financial mechanisms in January of 1983 revealed several potential sources of housing finance for women heads of household: first, total housing finance through the Social Security system (IESS); second, the BEV's rent with option to buy; and third, down payment financing through the IESS or a savings and loan cooperative. Table 12 shows the financing options available for the full or half down payment as well as the type of housing that these options would finance and the percentage of beneficiaries who would qualify for each. All income-eligible women would have qualified in terms of income for total housing finance through the Social Security system. However, this option would have been restricted to those who were employed, and one-third of the women heads were self-employed. The other options required incomes that would have excluded a minimum of 58 percent and a maximum of 77 percent of income-eligible women.

TABLE 12
FINANCING OPTIONS

	Total IESS Finance	Rent-- Option to Buy	Financing Down Payment		Financing One-Half Down Payment	
			IESS	S&L	IESS	S&L
Beneficiaries	employed-- income above 4,500 sucres	income above 10,203 sucres	employed-- income above 8,972 sucres	none	employed-- income above 8,431 sucres	income above 9,615 sucres
Type of Housing	all options	B2	B2, D2	none	B2, D2	B2, D2
Percent of Women Heads of Household Who Have Incomes of 7,800-10,716 Sucres ("Income-Eligible")	*	~23	23.5	0	42	23

* Under this option, all women heads of household (WHH) with incomes over 4,500 sucres and below AID's cut-off of 10,716 sucres are eligible = 58% of all WHH.

This analysis clearly indicated that women heads of household needed an alternative source for down payment finance for Solanda. Discussions with financial institutions in Quito eliminated ICRW's first proposal to establish a housing down payment loan fund, due to the perceived high cost of administering small loans. Instead, ICRW recommended a dual approach to housing finance for women heads of household in Solanda. First, a down payment guarantee fund would be deposited with BEV to be utilized as a guarantee against total or partial down payment deferments for selected beneficiaries for up to ten years. Beneficiaries would be required to save a given amount monthly in addition to making the established basic monthly mortgage payment for a given housing solution. Second, in order to ensure that women heads of household under the guarantee program would be able to maintain monthly housing payments and savings, it was further recommended that a Solanda multi-purpose cooperative be developed to improve women's access to productive resources and thus stabilize or even increase their income levels.

Results of ICRW's Technical Assistance

The ICRW proposal for a down payment guarantee fund was rejected since BEV did not have the necessary institutional capacity and there were no other existing financial institutions that could handle such a program. Instead, based in part on ICRW's analysis, AID initiated conversations with BEV on the possibility of modifying the down payment policy to benefit lower-income families, both male- and female-headed.

As a result of these conversations the implementing organizations adopted lower down payment requirements (5 percent) and lower design standards (sites-and-services rather than complete housing) starting with the second phase of the project. According to November 1983 estimates, the price of the cheapest serviced lot would require a monthly income of 6,300 sucres.¹ Without considering down payment requirements, 70 percent of single women heads of household and 80 percent of those in other marital status categories would now be eligible for Solanda. Many of those eligible women heads of household, however, would qualify for only the cheapest, incomplete housing options which would require that they had either available time or capital to invest in housing

¹U.S. \$1 = 80 sucres

completion (since the majority of these women do not have other household members able to undertake construction).

One way out of this dilemma is to provide credit to finance construction labor costs, child care, or income foregone during construction. In response to this need, a proposed credit program to provide low-income women and men in Quito access to short-term, small loans with flexible repayments and a savings component is under study. Another solution, under active consideration in the design of Solanda's social component, is innovative child-care arrangements that would free women's time for construction.

Even with these alternatives available, the hidden costs of low-cost but incomplete housing may still discourage eligible women heads of household in the applicant population, who may drop out of the project. In addition, the lowered payment requirements are a necessary but not sufficient condition to insure the equal access of women and men heads of household to Solanda housing. The selection process can still favor men over women within any income category, simply because there are likely to be more men than women heads in all categories. To reduce the risk of excluding eligible women heads of household, ICRW collaborated with the FMJ in setting up the variables for the selection of housing applicants. Close monitoring of the actual selection and a built-in possibility of adjusting selection results will be necessary to insure the access of poor women heads of household to the project.

The assistance ICRW provided to the FMJ in processing and data analysis emphasized but was not restricted to women. The knowledge about and concern for women influenced the refinement of employment and related questions for the entire applicant population (such as including a question on the distance between place of work and home). In addition, as a result of the technical assistance, a question on the sex of the applicant was included in the socioeconomic survey for Solanda, yielding a great deal of information on women heads of household in the applicant population.

Overall, the collaboration between the FMJ and ICRW was successful in bringing to light basic information on women heads of household and in encouraging a greater awareness and understanding of their situation. An indicator of this impact is the resolutions that were adopted at an October 1983 international meeting in Quito by the agencies implementing the project; some of the main resolutions dealt with women heads of household, the need to find solutions to their poverty and their lack of funds for housing down payment and monthly payments. Awareness and resolutions, however, are not sufficient in insuring that women heads of household will be assisted during

implementation. Aside from sensitive designs, a component critical to the success of Solanda in benefiting all low-income households will be clear targets disaggregated by sex and effective monitoring of progress in achieving these goals.

Lessons from Solanda

There are a number of important lessons that can be drawn from ICRW's experience providing technical assistance to the FMJ for the Solanda housing project.

(1) Setting up a women's component. At the beginning of the technical assistance ICRW proposed, for administrative reasons, establishing a women's unit within the FMJ to coordinate all technical assistance; the proposal was fortunately rejected.

In retrospect, establishment of a separate women's unit would have improved the efficiency of the technical assistance in the short term but would have severely hampered important achievements that entailed close collaboration with FMJ project staff in other units on a variety of non-women-specific tasks. The achievements that were conditional on working across units were: (a) the recognition, by project designers and implementers, stated in revised project priorities, of the economic bind of low-income women heads of household that was documented in the research; (b) the refinement of employment and other related research questions for all applicants as a result of a concern to assess more reliably the employment patterns of women; and (c) the decision to lower the down payment requirements from 15 percent to 5 percent of housing costs to all applicants.

(2) Monitoring and Evaluation. Even the most basic information about the proportion of women heads of household in the applicant population is useful to track the impact of project selection procedures. Thus, ICRW's simple request that a question on the sex of the applicant be included in the socioeconomic survey helped establish a record on women heads of household and set the stage for monitoring and basic impact evaluations. A related lesson is the importance of having basic data disaggregated by sex to define sex-specific targets and monitor progress toward reaching them in integrated projects, such as Solanda, that do not have independent or isolated women's components.

(3) Positive impact of a concern for women in low-income housing projects.

Technical assistance focused on but not restricted to women contributed to outcomes that will, in principle, benefit lower-income male-headed households and, more generally, lower-income families. These outcomes are lower down payment requirements and more reliable assessments of employment patterns for all applicants to housing projects.

(4) Obstacles to women's participation in low-income housing projects.

The inability of women heads of household to meet project selection criteria, largely for economic reasons, is the major stumbling block to their participation in this and other housing projects. At the same time, efforts to bring more women into projects can be hampered by the lack of appropriate institutions that can provide poor women with access to financial resources.

Delays in implementation of complex housing projects also work against women, not only because of the resulting increase in housing costs. More important, perhaps, delays in implementation coupled with institutional constraints lower the possibility that nonessential components (i.e., social ones) will be implemented. Many of these delays, and the increased housing costs, were a product of Ecuador's 1983 economic crisis, which affected the priority given to social components directed to the poor.

An Alternative Strategy for Housing Women:
The Panama Women's Self-Help Construction Project¹

Background

In Panama the urban poor have been relegated to marginal housing, much of it barracks that remain from the era of canal construction at the turn of the century. A large number of these tenement houses have been condemned. One such area of inferior housing, much of it without electricity or water, is located in Curundu, a virtual swampland on the banks of the Curundu River. Here stagnant canals carry wastewater and sewage. Unemployment reaches well above the 19 percent national average and illegal activities such as prostitution, numbers games, lottery sales, and theft are common. Yet Curundu is a vital community that has been in existence for more than thirty years.

Periodically this slum area of Panama City suffers catastrophe. When the rains come the dirt streets are awash with sewage water, houses flood, and children perish in the inundated canals. Fires are frequent in the wooden tenements, started by faulty electrical wiring or cooking fires in uninsulated kitchen areas. One such fire occurred in September 1981, destroying the residences of more than three hundred families and providing a timely catalyst for the development of the Women's Self-Help Construction Project (WSHCP).

The WSHCP was launched in October 1981 with eighty women from Curundu who had participated, during the preceding summer, in short-term training courses in masonry, plumbing, and carpentry organized by the Servicio Nacional de Formacion Profesional (SENAFORP). (Three untrained women later joined the project.) The goal of the WSHCP was to build one hundred houses, and its unique feature was that the houses were to be built entirely by slum women, none of whom had prior experience in construction and most of whom had no formal labor market experience.

¹ For further information, see Robert H. Girling, Margaret Lycette, and Nadia H. Youssef, "A Preliminary Evaluation of the Panama Women's Self-Help Construction Project," report prepared for USAID/Panama, 1983.

Political pressure by a local community leader was instrumental in obtaining support for the project from the Ministry of Housing (MIVI), SENAFORP, and one other government agency. Project participants were given land, on-site supervision, and materials to construct their own homes. In addition, they received a monthly stipend of U.S. \$80 to assist with the support of their families during the construction period. When the project is completed, the women will be expected to pay for materials and to repay the stipends.

ICRW's Assignment

The first phase of the project, construction of fifty houses, was completed in the fall of 1982. At that time ICRW was asked by USAID/Panama to evaluate the project under the centrally funded "Women's Socioeconomic Participation Project." ICRW agreed to explore questions of whether self-help housing construction could be organized on a cost-recoverable basis, what effect the training in construction skills might have had on the income-generation capability of WSHCP participants, and how such effects could be enhanced in future projects.

From ICRW's perspective, additional questions of interest related to the socioeconomic characteristics of the project participants, how they managed their household responsibilities during the construction period, the quality of the housing built and, most important, whether the benefits of the project outweighed the costs when the women's labor was appropriately valued. ICRW was particularly concerned with the opportunity cost of participants' labor, given past experience with development projects that assume no cost of women's time and work.

In order to answer these questions, ICRW undertook a survey of project participants and interviewed staff of the institutions that provided support to the WSHCP. In addition, the Center analyzed the benefits and costs of the project.

The Women in WSHCP

ICRW survey data indicated that the majority of project participants were in the lowest quintile of the income distribution, poorly educated, and frequently unemployed. Forty-five percent of the women were heads of household, with no spouse or common-law

partner living with them. Their ages ranged from 19 to 62. The majority were in the lowest quintile of the income distribution. One-half had children under age 6. The project participants, therefore, were not atypical of poor women in Panama. Yet these women managed to construct their own houses and as a result seem to have developed a sense of power, greater self-reliance, and pride.

The women interviewed by ICRW talked very positively about the training and the construction phase and did not indicate any problems in working together. They felt that the training sessions and construction work fit into their normal routine. They continued to rise at 4:30 a.m. to prepare food for the day; they left home at 6:00 a.m. and returned after 3:30 p.m., some to take up a job for a few hours, others to engage in informal trade. Saturdays were reserved for washing clothes, cleaning house, and other household tasks. The women claimed they lost no hours from leisure because they had seldom experienced such activities. They reported that child care was not a problem during the project because children over age 5 are commonly left by themselves or in the care of a slightly older sibling.

A relatively high number of women interviewed (about one-third) were "trabajadoras comunitarias," community workers employed by the government who continued to receive their regular salary (U.S. \$125 per month) throughout the construction period, since government employees can be reassigned to other projects yet remain on the government payroll. Two women continued to work full-time jobs in the evenings after returning from the construction site. Some women, including "trabajadoras comunitarias," derived income from informal sources such as engaging in trade when at home. Although it is inconceivable that these activities were not affected by the time spent on the project, the women made no reference to any economic loss incurred.

Cost-Benefit Analysis

The project has produced a stream of tangible and intangible benefits. In its first phase, it has provided fifty families with homes and upgraded their environment, taught participants new skills, and generated self-esteem and community bonds.

To estimate project benefits and compare these with costs, ICRW calculated the present discounted value of the anticipated stream of benefits; the formula and results appear in Table 13. For each variable, other studies were used as a basis for making

TABLE 13
COSTS AND BENEFITS OF THE WSHCP

	WSHCP (50 units)	MIVI (50 units)	MIVI - reduced lot size (50 units)
<u>Total Project Costs (in U.S. dollars)</u>			
Materials	109,800	102,000	102,000
Land & Infrastructure	97,500	152,000	97,500
Labor	56,875	36,600	36,600
Supervision	7,000	7,100	7,100
Financing	21,000	14,500	14,500
Total	292,175	312,200	257,700
<u>Total Annual Benefits (in U.S. dollars)</u>			
(E) Housing & Environment	32,470	39,243	32,470
(T) Training ¹	9,000	-	-
Participatory Experience ²	+	-	-
(C) Contribution to Community Construction ³	6,000	-	-
(S) Transmission of Skills ⁴	3,000	-	-
Intergenerational Effects ²	+	-	-
(PV) Present Discounted Value of Benefits ⁵	374,990	307,787	254,566
Benefit-Cost Ratio ⁶	1.28	.99	.99
Internal Rate of Return	16.00%	11.75%	11.82%

- ¹ Based upon 10 percent increase in participants' average annual earnings.
- ² While it is likely that the value is positive, there is no basis for making quantitative evaluation of these items.
- ³ Based upon survey of self-help activities in Torrijos-Carter.
- ⁴ First year benefit only.

$$B = \text{Benefits} = \sum_{t=1}^{25} E_t + T_t + C_t + S_t$$

t = period in which benefit is received
i = 12% per annum

$$PV = \sum_{t=1}^{25} \frac{B_t}{(1+i)^t}$$

- ⁶ Benefit-Cost Ratio = PV ÷ Total Project Costs.

estimates. Where no additional information was available (for example, regarding international effects) no estimate was quantified. For the purpose of evaluation, the effect of the training that participants received was assumed to be equal to a 10 percent increase in their average earnings. (An actual study of the training effect should be undertaken, however, when the project is completed and participants again take up income-earning activities).

When the costs of the project (training, materials, land, labor, supervision, and interim financing) are compared to the benefits (housing, the effect of training on potential earnings, the positive impact of the participatory experience, and other indirect benefits) the WSHCP certainly appears to be a worthwhile investment. The project's costs were not significantly greater than those of similar projects carried out by the Ministry of Housing (see Table 14). The benefit-cost ratio of the project was 1.28 with an internal rate of return of 16 percent (Table 13). This compares favorably to a benefit-cost ratio of .99 for similar Ministry of Housing projects, which have an internal rate of return of 11.8 percent.

Replicability

There are indications that replicability of the project may hinge on the ability to duplicate the extraordinary charisma of the political leader who mobilized support for the project and the leadership of the SENAFORP staff. Another factor will be availability of low-cost land and materials and government social services such as child care and transportation. The provision of transportation to the work site seems to have been an important factor in the low rates of absenteeism in the WSHCP, and while women of the project did not use the child-care facility provided, this may have been due to their unfamiliarity with the facility and its off-site location. Aside from such services, replicability will of course require the political will of the government.

Finally, there is the difficult issue of cost recovery. To determine the possibilities of project cost recovery, ICRW examined the socioeconomic characteristics of project participants to calculate affordability coefficients and affordable monthly payments. On the basis of the estimated affordable payments a series of strategies for cost recovery was developed.

TABLE 14
COSTS PER UNIT (IN U.S. DOLLARS)

	WSHCP			MIVI	
	Low	High	Most Likely	Actual	Estimate, Reduced Lots
Surveying and Foundation	205	346	346.00	190	190
Floor	126	177	177.00	177	177
Walls	365	409	409.00	409	409
Roof	602	609	609.00	609	609
Doors	139	140	140.00	140	140
Plumbing & Fixtures	380	400	380.00	380	380
Wiring	110	120	110.00	110	110
Paint	25	70	25.00	25	25
<u>Total Materials</u>	1,952	2,271	2,196.00	2,040	2,040
<u>Land and Infrastructure</u>	1,560 ¹	2,470 ²	1,950.00 ³	3,040 ⁴	1,950 ³
<u>Supervision</u>	80	165	140.00 ⁵	142	142 ⁵
<u>Labor</u>	914	1,197	1,137.50	732	732
<u>Interim Financing</u>	350	500	420.00	290	290
<u>Total Cost</u>	4,856	6,603	5,843.50	6,244	5,154
<u>Memorandum Item: Training</u>	100	160	120.00	N.A.	N.A.
<u>Recoverable Cost</u>	4,776	6,155	5,480.00	6,244	5,154

N.A. = Not applicable

¹ 130 m² serviced lot, \$12/m²

² 130 m² serviced lot, \$19/m²

³ 130 m² serviced lot, \$15/m²

⁴ 160 m² serviced lot, \$19/m²

⁵ MIVI reports no supervision costs. This figure reflects profits per unit.

The analysis showed that if the standard mortgage repayment scheme of 25 years at 12 percent were used on this and similar projects, families with incomes below the 19th percentile, or those with monthly incomes below U.S. \$230 in 1982 prices, would not qualify (Table 15). Fully 64 percent of the WSHCP participants and women like them, whose families desperately need housing, would be excluded.

One possibility would be to provide low-income families with serviced lots only. This would be a partial solution, but one that is not entirely satisfactory because some women would have to work to build complete housing units for their neighbors while receiving only a foundation for their own families. This might undermine the community spirit which appears to have sustained the commitment of the women and ensured the success of the project.

Alternatively, more creative methods of low-cost housing finance could be considered. Some of these strategies and options have been outlined in Table 15. Several of the more promising cost-recovery options rely for their success on improvements in individual and community incomes. For example, the Revolving Loan Fund/Deferred Payment Option would divide the housing cost into two portions: direct labor costs (stipends) and material costs. Participants would pay off their labor costs over an initial three-year period. The larger debt for construction materials would then be amortized over the next 22 years, requiring a higher monthly payment that would be met by increased income. The Negative Amortization Option would allow for payments based on below-market interest rates. The difference between actual payments and money owed on the basis of the market interest rate would be added to the outstanding loan balance and the terms of the loan extended until repayment was achieved. Finally, the Community Payment Option would involve monthly payments by participants equal to 25 percent of household income and a monthly contribution from the income of community-owned and -operated enterprises.

Conclusions

The Women's Self-Help Construction Project is an ambitious undertaking and one which covers difficult terrain. Not only did the project introduce women to construction activities--an area of work that had been the virtual preserve of men--it also involved them in the self-help approach to housing solutions. The project raises questions about the potential impact of skills training on future income generation, the potentially positive effect of the entire experience on women's lives, and the chances for project

TABLE 15
STRATEGIES FOR COST RECOVERY IN THE WSHCP

	Cost Recovery Options					
	Standard Repayment	Reduced Interest Rate	Revolving Fund/Deferred Repayment	Serviced Lot	Community Payment	Negative Amortization
Amount to be Amortized (U.S. \$)	5480/unit	5480/unit	(a) 914/unit (b) 4566/unit	2050/unit	548,000/100 units	5480/unit
Interest Rate	12%	9%	12%	12%	12%	actual: 12% base of payments; variable, begins at 5%
Terms (years)	25	25	(a) years 1-3 (b) years 4-25	25	25	Variable
Monthly Payment	\$57.54	\$45.48	(a) \$30.34 (b) 48.85	\$21.52	\$4361 individual \$1393 community \$5754 total	\$31.78 initially
Percent of WSHCP Participants Included ¹	36	52	72	79	100	71
Grant Element	None	\$1145/unit	(a) support of revolving fund for 3 years ² (b) grace period years 1-3	None	technical assistance with community enterprises	None

¹ Normal incomes of participants, i.e., excluding \$80 monthly IFARHU subsidy.

² Present value of grant = \$186,092. Note however that 100 units per year may be financed by the fund indefinitely.

replicability (including cost recovery) for the most impoverished segment of the Panamanian population. The project highlights some of the more difficult issues, in both theory and practice, regarding women's economic roles and the entire concept of self-help housing.

The crucial issue, and the one against which a final evaluation of the WSHCP must be measured, is the extent to which the project is a model of what works or what does not work. What are the scope and the limits of this type of self-help housing in addressing needs for affordable urban housing in the Third World?

First, it bears recounting that of the fifty women who built their own houses in the first phase of the project only eighteen could have afforded the actual cost. Because of the fiscal difficulties of the Panamanian government, the second phase, which was expected to start in January 1983, has not yet broken ground.

Projects that shift a major portion of the cost of construction--i.e., the labor component--to the individual may be the only avenue by which the poor can gain access to basic housing. Nevertheless, it is questionable whether debt-strapped governments will have both the capital and the administrative resources needed to make self-help projects successful. Such small-scale projects tend to be intensive in their use of administrative labor. The availability of administrative capacity and training resources for operation on a larger scale are likely to be constrained. In view of the managerial constraints typical of many Third World countries, it may be that self-help housing can hardly be expected to fully provide a large-scale solution to the housing needs of the poor. However, the traditional market strategies offer no solution since high interest rates operate to exclude access by the poor to basic housing. ICRW has suggested some alternative housing finance mechanisms for addressing this problem and believes that it would be worthwhile to study them in greater detail.

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