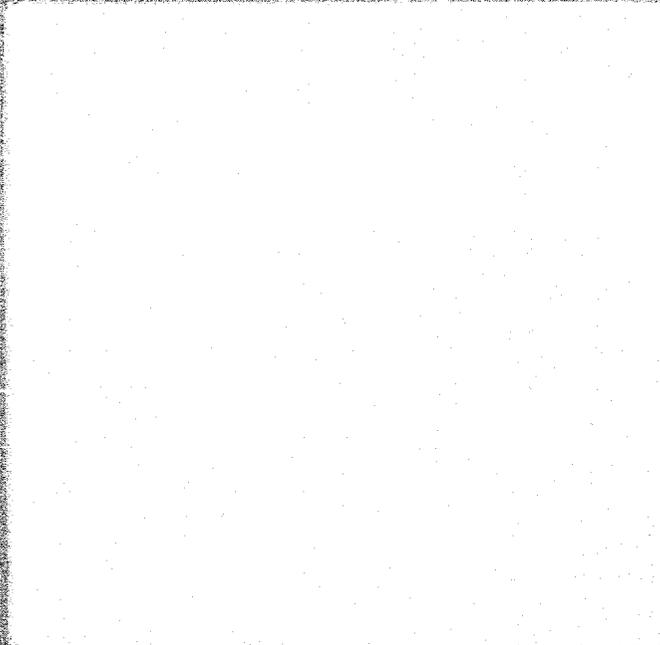


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The Housing Process in Port-au-Prince, Haiti

Final Report

June 1989

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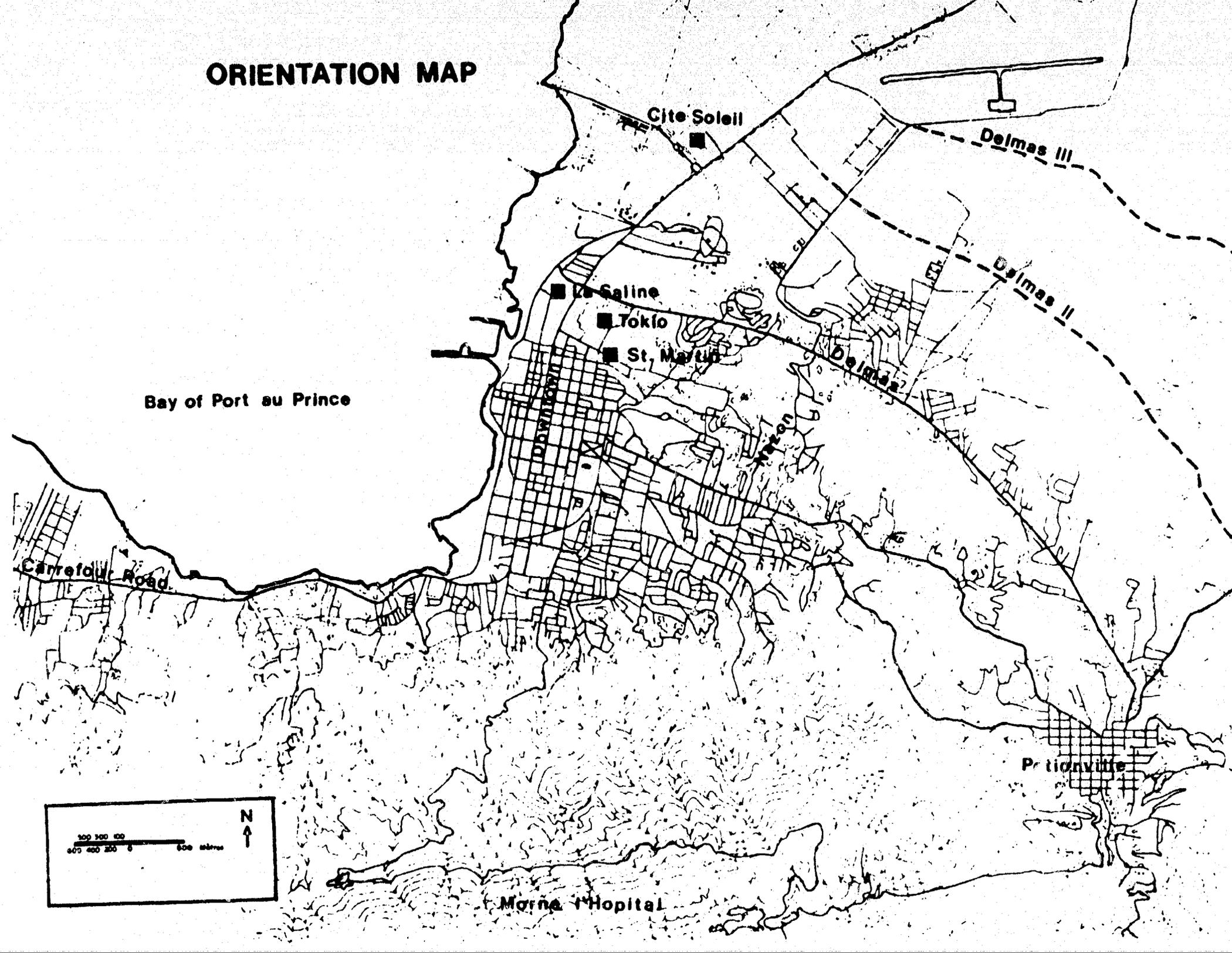
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ORIENTATION MAP



I. INTRODUCTION

As one in a series of investigations of the "informal housing sector" in the Caribbean, a series that also covers Barbados, Dominica, Jamaica, and St. Vincent, the Regional Housing and Urban Development Office (RHUDO) of the United States Agency for International Development (USAID) engaged The Urban Institute to conduct a study of "The Housing Process in Port-au-Prince, Haiti." Simon Fass and Carole Roy began the work under subcontract to The Urban Institute in September 1987.

The study, integrating prior investigations with original survey research, had four components. One was description and analysis of population and housing characteristics in Port-au-Prince. Second was exploration of the perceptions that families had of their current shelter conditions and the criteria they applied in making location choices, including criteria for judging relative security of land tenure. Third was analysis of the building process, including the means by which households located and acquired properties as well as the procedures they followed to erect dwellings. Fourth was examination of the methods by which households financed these undertakings.

Collection of most background materials and prior studies was complete by December 1987. But political conditions in Haiti were not conducive to conducting the random sample survey we originally planned. Delays followed upon each other. Fortunately, through the good relations cultivated between the Centre de Promotion des Femmes Ouvrieres or CPFO, at the time a USAID-funded training project for women working in factories and now a self-standing non-profit organization, and its beneficiaries, we were able to solicit the assistance of 20 workers not only for the purposes of testing the questionnaire and acting as respondents to its final version, but also to introduce our interviewers to their friends and close neighbors who were owners of recently-constructed dwellings: the specific population we were trying to find. Although perhaps losing statistical randomness by relying on formal introductions, there was much gain in respondent cooperation and accuracy of response. Moreover, we were able to conduct and complete the survey at the end of April 1988.

The survey eventually covered 100 households scattered throughout the city, and included 14 renters of dwelling

units (i.e., 14 of the 20 factory workers) and 86 home owners (including 6 workers). The sample may be too small and too biased for purposes of generalization to the larger urban population, but that was not our purpose in conducting it. Our purpose was to gain deeper insight into and greater understanding of housing processes at work in the city, and of some of the ways that the population perceived certain important parts of it. There had been no prior investigations of these matters in Haiti, at least not of a systematic variety. Indeed, although each of us had a decade or more of active involvement in the city's housing sector, we found ourselves unable to answer the questions that RHUDO originally posed in 1987. With the survey data in hand, we found ourselves in a position to begin to answer those questions in 1988.

The first paper emanating from the study, Preliminary Findings (prepared for discussion at the "Conference on Low Income Shelter and Urban Development Issues and Strategies" held in Bridgetown, Barbados July 28-29, 1988), offered a view of findings that were beginning to emerge at that time. This Final Report, formally completing the study for RHUDO, adds one year of further data analysis to the previous work.

Following the sequence of study components mentioned above, Section II provides a description of population growth in Port-au-Prince from its founding through the present, and of the evolution of household income and its distribution over the last decade. Along the way the description notes that the current estimated population of over 1.5 million, expanding at 7.8% per year, makes Port-au-Prince the largest and fastest-growing city in the Caribbean. With an average monthly income of about US\$25 per person in an economy requiring \$10 per month per person to obtain nutritional intake of 1500 calories and 30 grams of protein from minimum-cost diets, and with over 65% of households obtaining less than average income, the city's inhabitants are also the poorest in the region. Urban housing characteristics do no more than reflect this unfortunate fact.

Focussing on these characteristics, Section III begins with an overview of shelter as it presented itself in 1976, and then follows with a similar but more detailed description of conditions in 1988. It notes that while there have been some improvements, such as an apparent increase in the share of dwellings made of cement block (i.e., relative to the share made of wattle, wood or scrap), more effective waste collection and stormwater drainage, and better quality

control of potable water supply, current conditions are by and large the same or worse than they were in 1976. The price of drinking water has soared at a rate much higher than for other basic necessities as a consequence of limited spatial expansion of the urban supply system. Adding to this the effects of slow growth in the rate of conversion of land to residential use, especially for use by lower-income households, and the correspondingly high rate of increase in the rent and purchase price of land, neighborhood densities have increased substantially and dwellings have become more crowded than ever before.

Within this context the section notes that the practical meaning of progress for families that managed to improve their shelter conditions as a result of rising real income was more financial than physical (though this too improved with rising income). The most important indicator of progress over the decade was an increase in the proportion of households paying longer-term rent for 6 or 12 months in advance, and a corresponding decline in the segment that paid rent monthly. Shares of the total population that were land owners or home owners (on rented land) declined substantially between 1976 and 1988, and both forms of ownership shifted decisively towards the city's highest income strata. Nevertheless, without the presence of government regulations to impose "standards" on plots and buildings, and with about \$100 as the minimum amount required to rent land and erect a dwelling, the possibility of home ownership remained open to households across a broad range of incomes.

Turning to our sample of households, scattered throughout the range, Section IV examines the perceptions that they had about what was good or bad in their current neighborhoods, and the criteria they used to assess the relative merits of different potential building sites. By and large, the responses were the same as one would expect in any city. Cleanliness, adequate infrastructure facilities and services (water especially), proximity to whatever made for ease of income generation (roads, public transport, local purchasing power, etc.), good social relations with neighbors, absence of criminal or other anti-social behaviors, and so on were important factors in judgments about the relative goodness of their current areas of residence. Several of these, plus highly pertinent ones such as soil and topographic characteristics, were also important components in the list of criteria for selecting new sites for building. But ranking high on this list was the simple availability of a site. That is, facing an urban-wide

scarcity of plots for rent, the appearance of one offering at least minimal suitability for construction and access to water was reason enough to acquire it. When choices were few, land was its own selection criterion. In this respect the home owners we interviewed were very fortunate in having found "something" upon which to build.

Section V traces the methods they used to locate their properties, notes their tenure status on the land, and explores both the logic they applied in cultivating a secure (or insecure) sense of tenure and the procedures they adopted to reinforce that sense. After noting that communication networks of family and friends, and to a lesser extent real estate agents, were the main vehicles through which sites became known, and that most owners were renters of private land and squatters few, the bulk of the discussion turns on the matter of security of tenure. Excepting a disproportionate share of squatters, some 90% of households felt very secure on their parcels. They could not conceive of unfair dispossession by land owners.

Several factors contributed to this sense of security. Among them, the most important was belief in the social convention that as long as rent was paid in full and on time the act of dispossession required land owners to pay damages equivalent to the replacement value of their homes. Dispossession was unlikely, they believed, because households usually responded to the implicit incentive to assure tenure by building homes quickly and with durable materials, i.e., in order to raise required damages to a level much higher than the value of the underlying land. That is, the price of security was the building of dwellings with more costly materials than might otherwise be necessary, and therefore also of smaller size to adapt to limited construction budgets -- a trading of dwelling space for security. In this respect our observations run contrary to the conventional wisdom that families do not risk making major investments on land that is not theirs. In Port-au-Prince they must make major investments if for no other reason than to assure security of tenure.

Concerning itself with these investments, Section VI describes the distribution of plot and house sizes across the sample, reviews the various types of construction and their total and unit costs, and traces the processes of building from first acquisition of sites through home completion. Along the way it notes that dwellings, ranging from \$100 to over \$10,000, are never totally complete as long as there remains scope for horizontal expansion of

surface area or for upgrading of finish. The process of building, after an initial burst to assure tenure, continues on for many years as permitted by the flow of resources necessary to pay for it.

Section VII then examines the means by which households mobilized these resources. Slow building up of cash out of transient surges of income flows, either accumulated into large amounts for a one-time building effort or into smaller amounts for piecemeal construction over time, was the dominant mode of finance. Short-term interest-free loans from family and friends, and to a lesser extent interest-bearing commercial loans, were very important as means to accelerate processes of home acquisition and construction. Providence in the form of gifts, inheritance and lottery winnings also had an important place. But the basic observation in the analysis is that the capacity and willingness of households to save for housing rent, purchase, or construction out of any level of income, whether in the form of accumulation before investment, of repayment of loans after investment, or of a combination of the two, is central to the issue of housing finance. The problem for most households in a society where income remains low relative to the costs of all basic necessities is the severe limitation imposed by the economy upon their capacities to increase savings at rates permitting noticeable improvement in their housing circumstances.

With regard to this last, we introduce our conclusions in Section VIII with a focus on the function that ownership should serve in the kind of economy that is Port-au-Prince. We do not see that ownership has particular relevance as an end in itself. We do see it as one of several important means to achieving the broader socioeconomic development purpose of improving the health and productivity of the population and, through this, of raising income. Any and all efforts to accelerate the rate of increase in the share of the housing stock made of cement, to stop and reverse the trend towards increasing population density within homes and within neighborhoods, to improve sanitary conditions, to lower the price and increase consumption of water, and other similar undertakings, are all very important.

The ensuing review of what has been and is being done with respect to improving key elements of urban infrastructure and public services, to expanding the pace of land development and conversion to residential use, to establishing mechanisms of housing finance for lower-income households, and to lowering construction costs, injects a

note of caution concerning the wide gap between what seems necessary and what is possible in a near term. Nevertheless, on the basis of what we choose to interpret as significant and positive institutional movement among donor agencies across a decade, we retain optimism that the future will eventually bring major improvement in shelter to the population.

II. POPULATION AND INCOME

Population Growth, 1706-1988

The French founded the town of Port-au-Prince as a safe harbor for the fleet in 1706, and in 1749 made it capital of the colony of Saint-Domingue, the island of Hispaniola now shared by Haiti and the Dominican Republic. Until the addition of administrative functions for a colonial capital, the town's basic economic function was service as a port; exporting to France sugar, coffee, indigo, cotton and other regional products, and importing basic producer and consumer goods demanded by colonists. The region surrounding the city was not especially productive and population growth was slow. The town had 1200 inhabitants in 1749.

Inclusion of administrative activities stimulated growth, to 3000 residents in 1751 and, on the eve of independence in 1804, to 7000. With independence allowing the country to retain more of economic value-added, export taxes, and import duties, the further boost to the urban economy pushed the annual population growth rate from 1.7% between 1751 and 1804 to 2.6% between 1804 and 1888, and to over 60,000 people by 1895 (Fass; 1988).

Under the United States occupation of 1915-1934, and its control of the treasury through 1947, public expenditures dropped precipitously. What was available for disbursement shifted from urban outlays to rural roads and health services. The city's economy sagged, with the consequent result that population growth fell to 1.5% per year between 1895 and 1950. Still, containing a 1950 population of almost 150,000, the city was five times the size of Cap Haitien, its closest rival.

After regaining control of the treasury, one government after another shifted public expenditures back to the city, more or less abandoning the countryside and agriculture

altogether, with the Duvalier administration giving all hope of significant growth in other towns a "coup de grace" by allowing their ports to fall into disrepair and transferring most revenue collection authority to the capital. The result by the mid-1970s was a pattern of fiscal incidence wherein Port-au-Prince, containing 15% of the national population, received 83% of all public expenditures; including 79% of salaries, 95% of operating expenditures, and 80% of subsidies (World Bank; 1978). With concentration of growing public and private foreign assistance and manufacturing plants following the government's lead, with agriculture in a state of stagnation if not outright decline, and with rural population density of over 250 persons per square kilometer of exploitable land at once straining the capacity of the land to support families and offering an average of one hectare per family as the basis from which to extract a livelihood, it was not surprising that growth should surge ahead at 6% per year, to 500,000 in 1971 and 638,000 in 1976 (Fass; 1988).

Preliminary results of the 1982 census showed a population of 800,000, suggesting a decline in the growth rate to a 1971-82 annual average of about 4.5% (Haiti; 1986). This census estimate was widely viewed to contain substantial undercounting, although the implication of a slowdown was to a certain extent plausible. Growth rates in the public sector and manufacturing, for example, began to decline in the late 1970s; and urban population growth rates of 6% are not usually sustainable for long periods of time. Indeed, between 1980 and 1986 industrial production and investment fell at a rate of 1.8% per year (World Bank; 1988).

Other economic sectors, however, such as public and private foreign assistance, and remittances from the ever-growing population of Haitians residing abroad, were expanding. And, continuing a long trend, agricultural output was falling, at a rate of 1.3% per year from 1980 to 1986 (World Bank; 1988). This continued to put pressure on rural incomes that in 1988 averaged \$850 per household per year (with \$600 as the median below which half the population lived). Even if certain sectors of the urban economy faltered, growth in other sectors combined with agricultural decline would still leave a wide enough disparity between urban and rural possibilities to sustain or increase migration and push population to a rate higher than in 1971-76.

A recent study that used aerial photographs and sample surveys to estimate a 1988 population of 1.57 million, or a 1976-1988 growth rate of 7.8% per year, was therefore also plausible (Haiti; 1988a). But whether higher or lower, the fact remains that Port-au-Prince now has a population exceeding 1.2 million, perhaps as high as 1.6 million, and is the largest city in the Caribbean.

Income Distribution

With an average household income of the order of US\$140 per month, or about \$25 per person, with 65% of the population obtaining less than the average, and with the purchasing power of \$25 given tangible meaning by the \$10 per month required to obtain 1500 calories and 30 grams of protein daily from a minimum-cost diet, it is also one of the poorest cities in the world.

Table 2.1 shows three estimates of the distribution of household income in 1988 dollar terms, one each for 1976, 1986, and 1988. The estimate for 1976 was based on the distribution of rent payments as recorded by the 1971 census, with assumptions made about the share of rent in monthly income at different rent levels. The calculations did not make a distinction between different types of dwelling rents (i.e., between weekly, monthly, bi-annual or annual payments). Because longer-term rents were and remain much lower than monthly rents, the calculations may have underestimated income.

The 1986 data, useful as a means of checking the 1988 estimate as well as a reasonable indicator for the city on its own terms, was based on interviews with 270 factory workers. The 1988 estimate came out of a socioeconomic survey of 2200 households, with income derived from reported monthly expenditures. Since monthly recall of expenditure usually leads to exaggeration of actual expenditures by the order of 25%-30%, a relationship made evident when a subsample of the 270 workers were later trained in preparation of household budgets and then asked in 1987 to compare daily records with their responses to the 1986 survey, the 1988 distribution may overestimate income. The actual average may be less than \$140.

But whether higher or lower what is evident (as much from the data as from observation of vastly increased construction and commercial activities throughout the city requiring considerable purchasing power to sustain), is that

TABLE 2.1: INCOME DISTRIBUTION IN PORT AU PRINCE, 1976-1988

Income Category	Bracket (\$1988)	Distribution of Household Income		
		1976 *	1986 **	1988 ***
	- 25	5.0%	1.1%	0.5%
I	26 - 50	34.0%	8.0%	7.5%
	51 - 75	20.0%	13.2%	19.0%
	76 -100	10.5%	23.0%	21.0%
	101 -125	8.2%	14.0%	15.5%
II	126 -150	5.0%	10.6%	10.0%
	151 -175	4.0%	9.4%	7.5%
	176 -200	2.5%	6.0%	4.0%
	201 -225	1.3%	3.0%	2.0%
	226 -250	1.2%	2.3%	1.8%
	251 -275	1.2%	1.5%	1.3%
III	276 -300	1.2%	1.5%	1.2%
	301 -325	1.2%	1.0%	1.2%
	326 -350	1.2%	1.0%	1.2%
IV	351 -400	1.1%	1.0%	1.3%
	401 -500	1.1%	2.3%	2.0%
	501 +	1.3%	1.1%	3.0%
Average, All Households		\$102.00	\$138.00	\$142.00
-household size (persons)		4.8	5.1	5.7
-income per person		\$21.00	\$27.00	\$25.00
Average, Category I		\$53.00	\$72.00	\$72.00
-household size (persons)		4.6	4.9	5.5
-income per person		\$12.00	\$15.00	\$13.00
-% of households		69.5%	45.3%	48.0%
Average, Category II		\$149.00	\$152.00	\$193.00
-household size (persons)		5.5	5.3	5.9
-income per person		\$27.00	\$29.00	\$33.00
-% of households		22.2%	45.3%	40.8%
Average, Category III		\$285.00	\$282.00	\$284.00
-household size (persons)		6.1	5.5	6.1
-income per person		\$47.00	\$51.00	\$47.00
-% of households		3.6%	4.0%	3.7%
Average, Category IV		\$458.00	\$456.00	\$500.00
-household size (persons)		5.7	5.2	5.8
-income per person		\$80.00	\$88.00	\$86.00
-% of households		4.7%	5.4%	7.5%

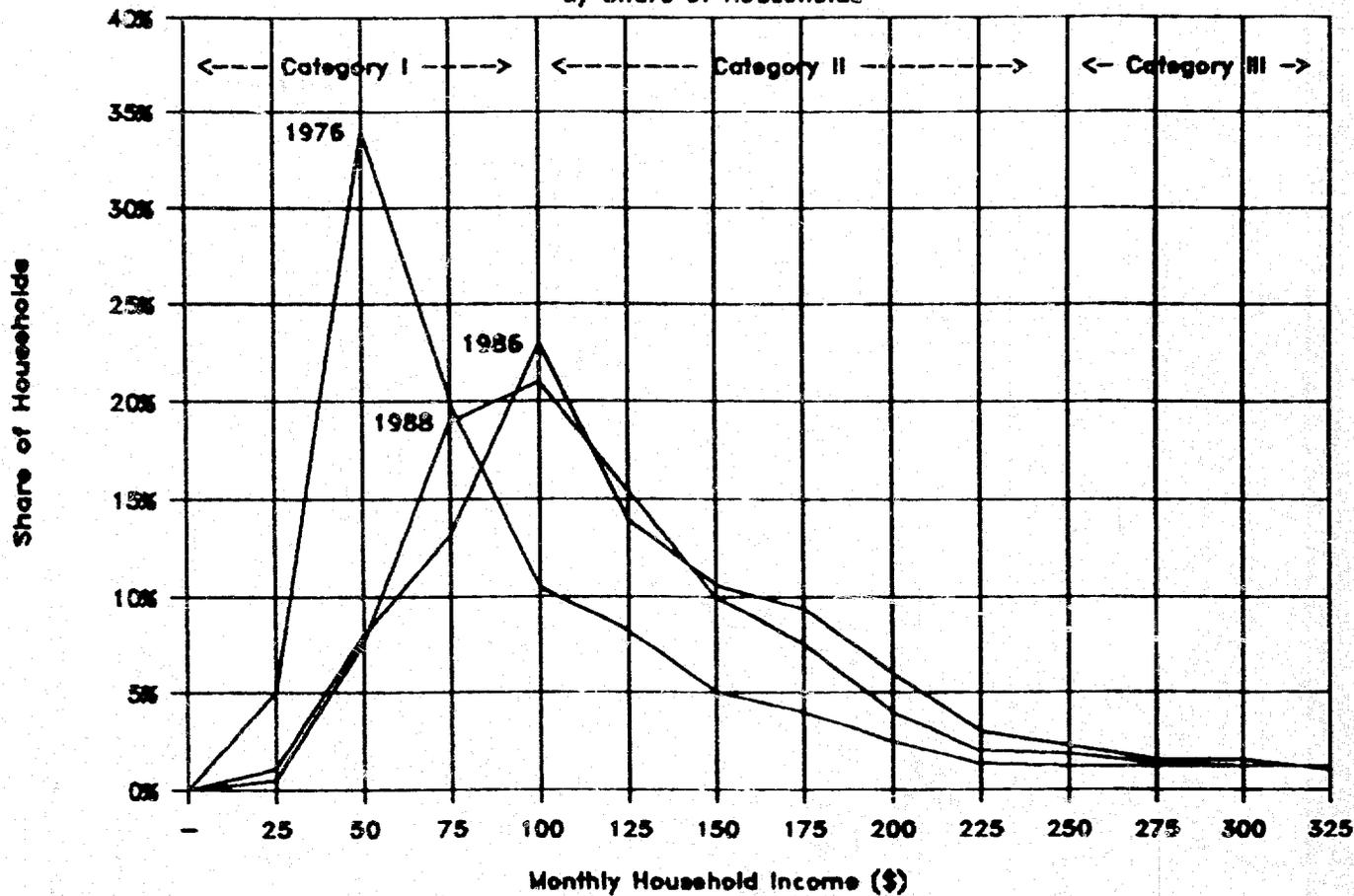
Sources: * Authors' estimates based on data in Fass; 1988

** Authors' estimates from 1986 survey data on 268 factory workers provided by the Centre de Promotion de Femmes Ouvrieres

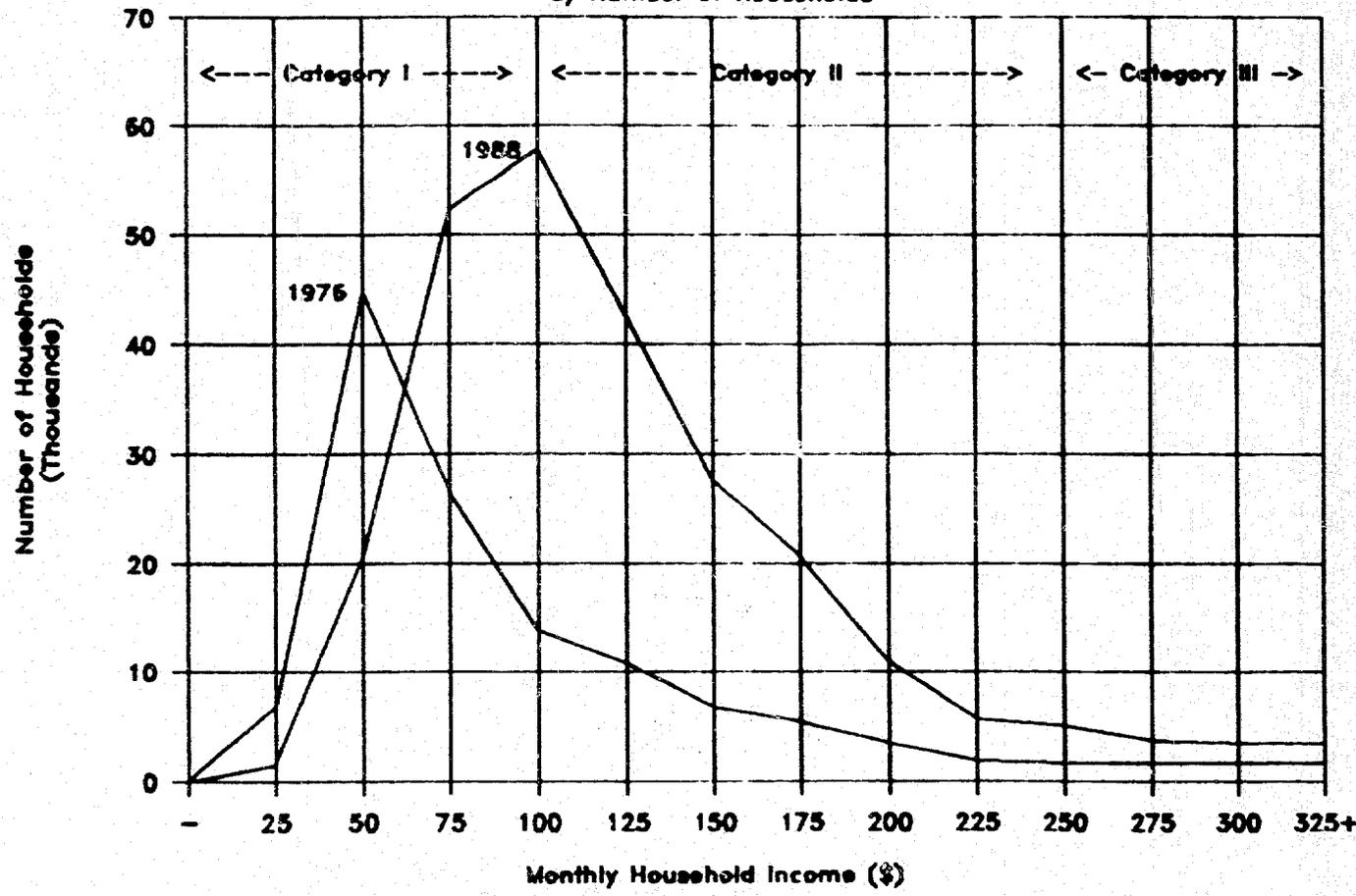
*** Authors' estimates based on data in Haiti; 1988b

Fig. 2.1: Income Distribution, 1976-88

By Share of Households



By Number of Households



there has been considerable expansion in what the table and Figure 2.1 label income Category II, and in the upper reaches of Category I. Adopting relative standards, one could call this growth of a "middle-income" group. The increase since 1976 is probably not as large as suggested in the table and figure, but there has been something resembling growth in real income among a very a substantial number of households.

What is also clear is that the distribution around the mean is skewed towards the lower end, that the per person average for that end is at best \$15 in 1988, that 60-70% of that amount would on average have to be spent on obtaining minimal nutrition, and that half the urban population lives in this economic circumstance. Combining the circumstance with an urban infrastructure and management capacity designed for a city of perhaps 500,000, the characteristics of the houses and the neighborhoods in which the majority of people today reside leave much to be desired relative to what they might be with higher real income in an urban setting able to better cope with as many people as it presently contains.

III. AN OVERVIEW OF SHELTER

Housing in 1976

The first major effort to describe and analyze the characteristics of housing and neighborhood conditions in a comprehensive manner was undertaken in 1973-76 by the public works and finance ministries under auspices of a project sponsored by the United Nations to develop a master housing and infrastructure investment plan for the city (i.e., Haiti; 1976a, 1976b). To outsiders, this work revealed conditions bordering upon the disastrous. For example, upward pressure on land prices and rents on the one hand, and income levels that after expenditures for food, water and other necessities did not permit households latitude for spending large shares of it for housing on the other, caused population growth through 1976 to concentrate in a very few areas. Most of the population in income Category I, or more than 70% of the total population, lived in one-storey homes at gross residential densities exceeding 800 persons per residential hectare. Within the category, a third of the population lived at densities of more than 1,000 persons per hectare, as in the neighborhoods shown in Figure 3.1, with

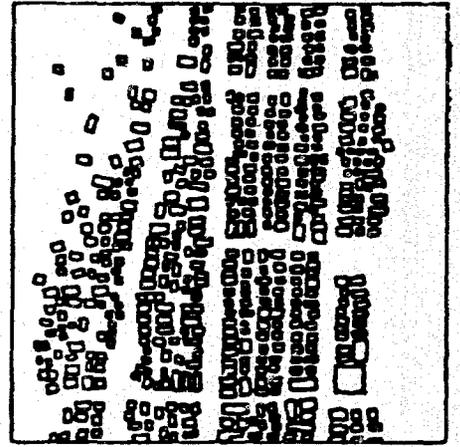
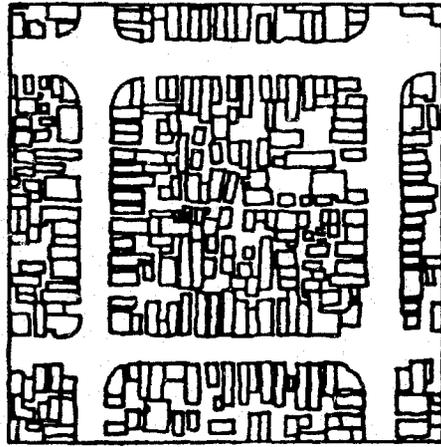
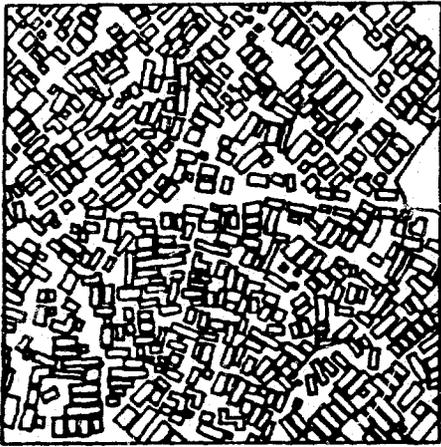
each person having less than 10 square meters (m^2) of gross residential land available. For the vast majority, dwellings were small and neighborhoods crowded.

They were also built with the least costly materials available on the market. Among households in Category I: 20% lived in wattle (i.e., earth and straw lattice) homes with thatched roofs; 40% had dwellings made of scrap, such as broken crate boards or the flattened cans and cardboard shown in Figure 3.2, usually with metal roofs; and toward the upper end of the Category I scale, 32% had walls of wood plank as in Figure 3.3 or cement block, both with metal roofs. The remaining 8% lived on streets, including those obliged to sleep on their doorsteps in relays because homes were too small to accommodate all household members at once. Depending on location, unit size, and type of rental contract (e.g., prepayment for a month, six months, or a year), the 75-80% of this population occupying rental housing paid the equivalent of between 10 and 30% of income for what were often no more than tents of scrap.

Typical of the conditions under which these people lived was the neighborhood of St. Martin, shown in Figure 3.4. It had 20,000 people living on 13 hectares at a density of 1540 persons per hectare. In 1976 the average size of dwellings, almost all made of wood or scrap, was 6.4 square meters (m^2), and offered 1.4 m^2 of habitable living space per person. For the three-quarters of the population in St. Martin who rented their dwellings, the respective figures were 5.1 and 1.0 m^2 ; and they paid an average of 17% of monthly income for this limited space (Fass; 1988).

The environment surrounding the houses also left much to be desired. There being no piped water service into the area, some residents travelled considerable distances to rarely-functioning public standpipes while most purchased it by the bucketful from passing vendors. With the vendors themselves having to travel considerable distances to purchase water from families connected to the city's supply system, their prices were high. On average, residents paid 10-15% of income to obtain approximately 10 liters per person each day. Because water in the supply system was of dubious quality, especially during the rainy season when storm and flood waters infiltrated loose joints of pipes running on the surface of streets, the share of income devoted to water might often be little or nothing compared to outlays necessary to cure illnesses brought on by what was in it.

Figure 3.1: Neighborhoods With High Residential Density



Scale:

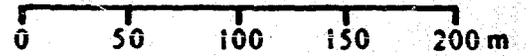


Figure 3.2: Scrap and Wattle Dwellings
(dimensions in meters)

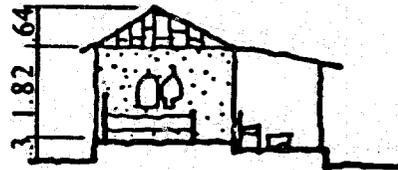
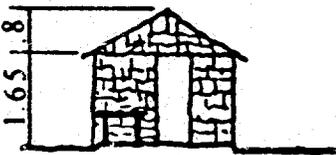
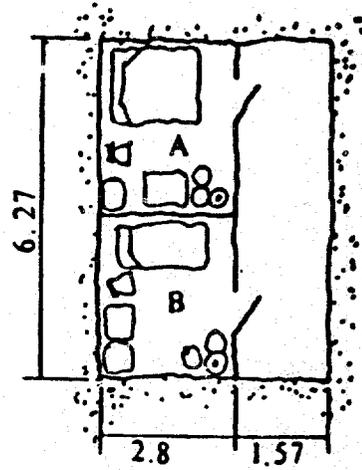
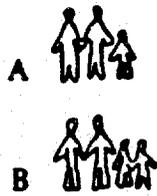
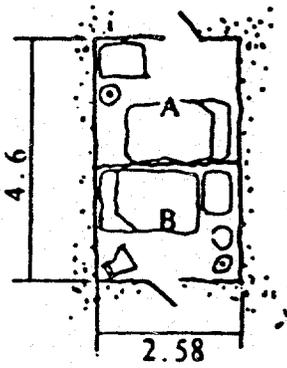


Figure 3.3: Wood Dwellings
 (dimensions in meters)

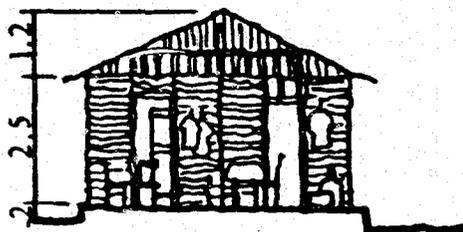
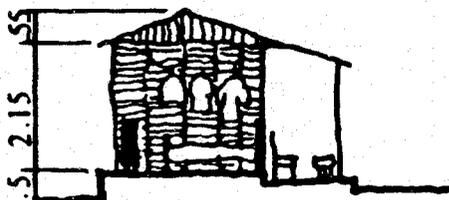
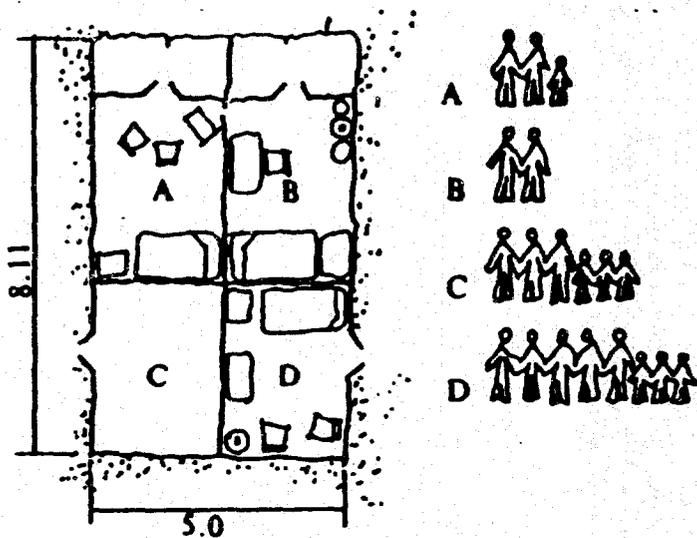
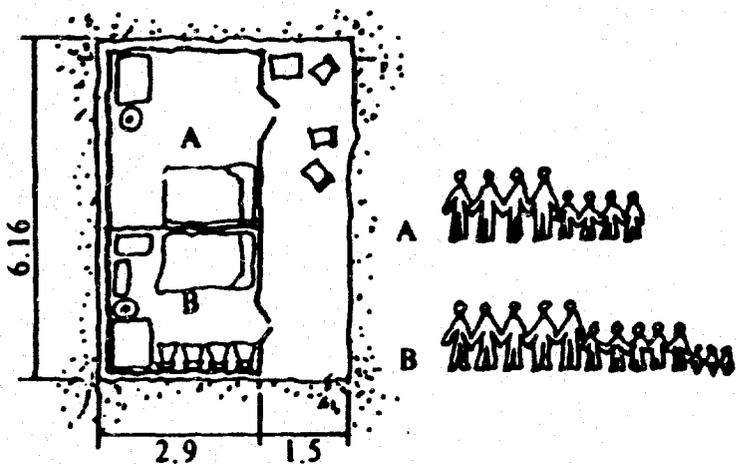
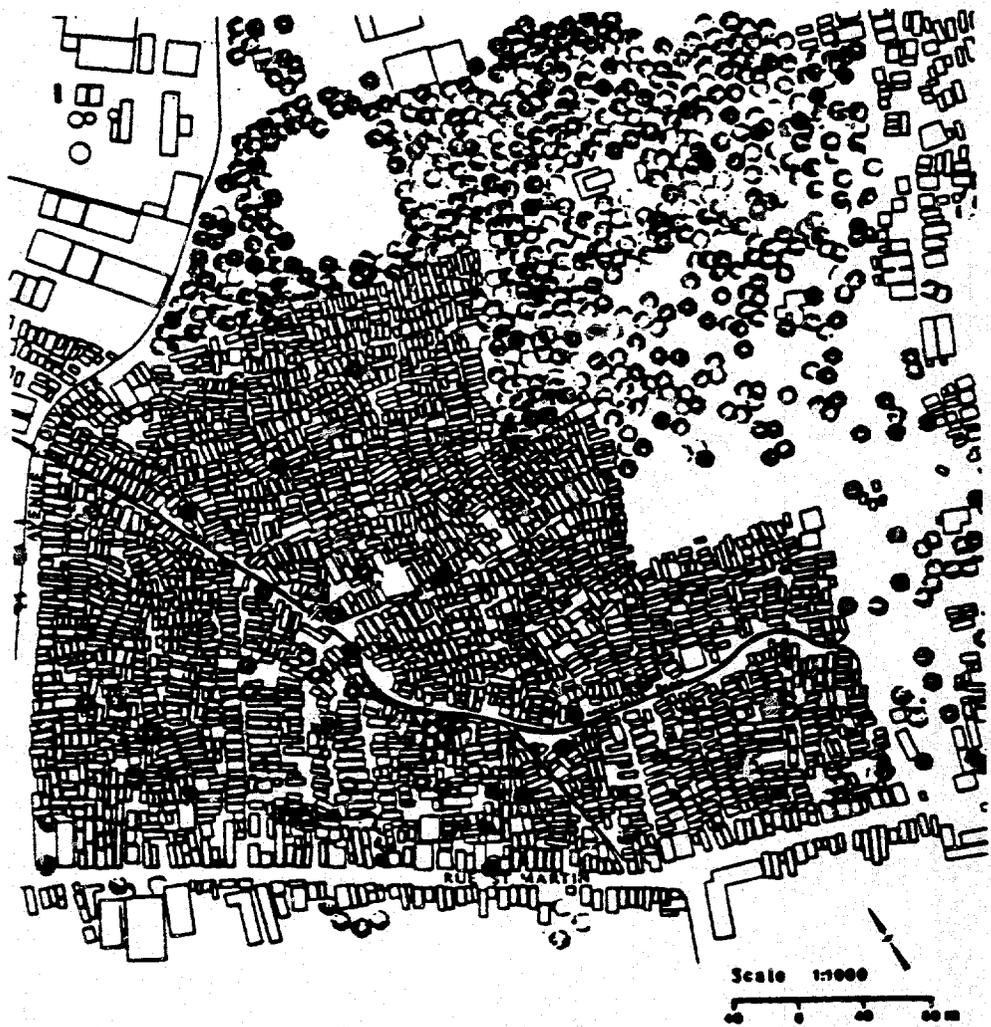


Figure 3.4: St. Martin (1976)



Together with high density of wooden structures and absence of roads leading to the interior of the neighborhood, lack of water service also made St. Martin a tinder box. In 1981 and 1982 fires consumed over 1,500 homes and displaced almost 8,000 people. The widest space that could serve as a firebreak was a storm drainage channel that passed through the center of the area. Without garbage collection service, residents used the channel as a dump, which then doubled as a feeding ground for pigs, goats and rats and a breeding ground for mosquitos and other vectors of diseases that could spread easily and quickly through the densely crowded population. Each rainy season debris from upstream accumulated with the garbage to form dams, flooding major portions of the area behind them and then causing a downstream surge to knock down homes when particularly heavy downpours broke through the barriers. When all the mud left over dried out, dust permeated everywhere to make breathing difficult.

Such environmental conditions were better than in some places and worse than in others. They were better than in neighborhoods close to the nearby central market, such as La Saline where years of garbage accumulation made hills of waste, where water was harder to find and more costly, and where several drainage channels converged to create wide areas of periodic flooding. They were also better than in newly urbanizing areas directly north of the market (surrounding the neighborhood of Cite Soleil and which presently contains almost 250,000 people) where, besides the ubiquitous problem of garbage and water scarcity, swamps and high water tables prevented the construction of pit latrines. Conditions were better to the south, east, west and northwest of downtown, especially in terms of residential density and the possibility of constructing latrines, but issues of flooding, garbage and lack of water often remained.

Housing in 1988

Certain of these characteristics showed improvement between 1976 and 1988, while others showed deterioration. With respect to building materials, for example, varying rises in prices of different commodities led to a small increase in the annual growth rate for a weighted average of materials required to construct houses with cement block, from 9.1% in 1970-75 to 9.4% afterwards (Table 3.1). But because the more recent rate was higher than that of other important price indicators, such as indices for basic foods

Table 3.1: RETAIL PRICES OF CONSTRUCTION MATERIALS, 1970-87
(delivered to site)

Material	Unit	Price 1970	Price 1975	Annual Increase 1970-75	Price 1987	Annual Increase 1975-87
Cement Block, 15	each	\$0.09	\$0.14	9.2%	\$0.35	7.9%
Cement Block, 20	each	\$0.11	\$0.16	7.8%	\$0.40	7.9%
Corrugated Sheet, #17	each	\$1.10	\$1.40	4.9%	\$2.80	5.9%
Corrugated Sheet, #23	each	\$1.40	\$1.70	4.0%	\$3.70	6.7%
Portland Cement	bag	\$1.50	\$2.40	9.9%	\$6.50	8.7%
Reinforcing Rod (3/8 dia.)	pound	\$0.09	\$0.20	17.3%	\$0.32	4.0%
Stone/Rock	cubic meter	\$2.00	\$3.00	8.4%	\$12.00	12.2%
Sand	cubic meter	\$2.00	\$3.30	10.5%	\$10.00	9.7%
Wood Pole (1"-2" dia. x 14')	dozen	\$2.00	\$4.00	14.9%	\$9.00	7.0%
Lumber	board foot	\$0.12	\$0.25	15.8%	\$0.75	9.6%
Nails	pound	\$0.25	\$0.30	3.7%	\$0.60	5.9%
Index of Weighted Average (derived from Table 6.3)	(1970=100)	100	154	9.1%	457	9.5%
Real Price Indicators						
Consumer Price Index	(1970=100)	100	178	12.2%	470	8.4%
Food Commodity Indices - rice	(1970=100)	100	235	18.6%	350	3.4%
-corn	(1970=100)	100	250	20.1%	620	7.9%
-bread	(1970=100)	100	160	9.9%	240	3.4%
Estimated Income (GNP/capita)		\$80	\$162	15.2%	\$400	7.8%
Official Daily Minimum Wage		\$0.70	\$1.30	13.2%	\$3.30	8.1%

and the official minimum wage, shifts in relative prices between materials and other essentials made access to this form of construction more accessible after 1976 than before for population groups that were able to maintain or increase their real income levels.

Changes in price between materials also altered the relative costs of different types of construction. Whereas the cost of building walls with cement block was 44% higher than with wood in 1970, by 1975 the difference had fallen to 9%, and in 1987 cement was slightly less costly than wood (Table 3.2). Of course, the need for foundations kept total costs of cement construction higher than for wood. But the difference had narrowed to the point where cement block became method of choice for many or most of those who would otherwise have selected wood. For all the additional cost of foundations, cement was definitely a better means of protecting people and goods from the elements and from disasters such as fire and flooding.

The principal beneficiaries of these price changes were prospective builders in the upper income brackets of Category I, all brackets in Categories II and III, and those who eventually rented dwellings from them: or 40%-50% of the total population at maximum. For the rest, wattle, wood, scrap and stone would still have to do. But with builders among the 40%-50% responsible for a disproportionate amount of owner-occupied and rental unit construction, the share of new additions to the housing stock made of block was increasing relative to other construction types. Though perhaps still not a majority, by 1988 a much larger share of households than the 25% of 1976 were able to live in block dwellings and to obtain the associated benefits of lower risk to health and property.

Whatever the actual extent may have been, the autonomous private processes by which price changes and income rises shifted construction to cement block did much more for overall quality of the housing stock than did all direct public efforts. The national housing office (ONL) and its successor, the Public Enterprise for Promotion of Social Housing (EPPLS), constructed 6630 dwelling units in the city (plus 2520 in Cap Haitien and Cayes) between 1979 and 1988. Projects in the capital included: 1900 dwellings in St. Martin financed by the United Nations Capital Development Fund (UNCDF) and the German government (KFW) to replace units lost by fire or demolished to make way for works in a "slum upgrading" scheme; 300 units financed entirely by the EPPLS to replace other fire-damaged houses; 1760 new units

Table 3.2: CONSTRUCTION MATERIAL COSTS FOR WOOD AND CEMENT WALLS, 1970-87
 (for a dwelling with 2 doors, 9m² in area and 2.3m in height)

	Quantity	Cost 1970	Cost 1975	Annual Increase 1970-75	Cost 1987	Annual Increase 1975-87
	-----	-----	-----	-----	-----	-----
WOOD:						
lumber (planks)	180 BF	\$21.60	\$45.00	15.8%	\$135.00	9.6%
wood poles (2" dia.)	dozen	\$2.00	\$4.00	14.9%	\$9.00	7.0%
Total		\$23.60	\$49.00	15.7%	\$144.00	9.4%
CEMENT:						
block, 15	300	\$27.00	\$42.00	9.2%	\$105.00	7.9%
portland cement	2 bags	\$3.00	\$4.80	9.9%	\$13.00	8.7%
sand	2 cu. meters	\$4.00	\$6.60	10.5%	\$20.00	9.7%
Total		\$34.00	\$53.40	9.4%	\$138.00	8.2%
Ratio of Costs, Cement to Wood		1.44	1.09	-5.4%	0.96	-1.1%

in Drouillard, adjacent to Cite Soleil, financed by the UNCDF; and 2670 new units financed by the KFW and World Bank in nearby Linthau. Separately, the Presidential palace paid for construction of 130 units in Cite Soleil and 1100 units near the airport. Though constituting a larger public housing effort than at any previous time, this net addition of 5660 dwellings (out of gross construction of 7860) was hardly noticed against a background of private building that added another 165,000 dwellings (of which probably more than half in block) to the total stock during the same period (Haiti; 1988a).

Public and quasi-public efforts to stimulate private initiative were also limited in their effects. The state's primary mortgage lending agency, the Old Age Insurance Office (ONA), financed an average of 265 units per year between 1985 and 1987. A private mortgage bank organized with USAID assistance in 1984, the BCI, was financing at a rate of less than 300 units annually through 1988. Indeed, the public sector's most important contributions to private initiative during the period flowed from deliberate actions to permit construction on state lands in the vicinity of Cite Soleil, allowing the population there to rise from 20,000 in 1976 to the approximately 250,000 in 1988, and from inaction that permitted construction anywhere and everywhere else: especially in areas where protection of drainage basins and water quality, and other environmental concerns would have prevented building of any kind in most other cities.

Waste Disposal and Storm Drainage

In matters of environment, city-wide improvements were several. Reported garbage collections increased from less than 100 tons a day in 1976 to over 400 tons in 1988 after loans, grants and management assistance supplied by the French government and the Interamerican Development Bank (IDB) increased the availability of equipment and the efficiency of its use (Haiti; 1988c). The durability of these improvements remain to be seen (the city lost 16 of its 56 trucks through cannibalization for parts in 1987), and the bias of service toward higher-income areas remains a problem. Nevertheless, while the population continues to produce much more waste than is collected, perhaps 700 to 800 tons per day, the rate of increase in quantities thrown into drainage channels, perhaps the absolute quantity as well, has dropped.

In parallel, IDB and OPEC Fund assistance in implementation of major portions of a \$58 million stormwater drainage and maintenance improvement plan have vastly reduced the frequency of flooding in areas that suffered from them in 1976. This result stems primarily from deepening and widening of existing channels. The major cause of flooding in those areas: a combination of failure to prevent erosion of soils from farms on slopes of the mountain behind the city (Morne L'Hopital) and from building sites near drainage basins closer to town, failure to collect garbage before households find themselves compelled to throw it into ravines, and failure to clear the channels before the rainy season arrives, have not yet been broached successfully. In this respect the works have not solved the problem of flooding so much as they have postponed the reappearance of its symptoms.

Nor have the works covered much of the area that was not built up in 1976. The improvement plan based itself on a size and spatial distribution of the population that was obsolete even before first efforts began. Newly-urbanizing areas, some beyond the perimeter of planned works but mostly within it (e.g., in basins that by law should not have houses built in or near them but that in fact have been completely covered with construction), are now beginning to suffer the consequences of project planning permanently hampered by absence of mechanisms to control land use or construction methods.

Water Supply

Improvements in water supply through 1988, brought through assistance of the IDB, UNDP, World Bank, World Health/Pan American Health Organizations (WHO/PAHO) and the French government, have taken the form of more consistent quality control and service in areas covered by trunklines in 1976 and in a few new areas added to the system, addition of about 100 standpipes to the 27 that functioned a decade earlier, an increase in the number of households with piped connections from 14,000 to 23,000 (or 28,000 if one includes illegal connections), an increase in production from an average of less than 50,000 cubic meters per day to 78,000 cubic meters, an increase in total consumption from 31,000 cubic meters to 48,000, and the putting of CAMEP, the municipal water agency, on a financial footing permitting revenues to almost cover recurrent costs (Haiti; 1988c).

Unfortunately, except for improved quality, these system improvements have been overtaken by population growth to such an extent that the quantitative situation is worse now than in 1976. The share of households with connections to their homes or courtyards (i.e., serving a cluster of dwellings from one tap) has dropped from 23% to 17%. Production has dropped from about 0.08 cubic meters per day per person to 0.05, and consumption from an average of 0.05 to 0.03. Standpipes, as a consequence, do not usually function for more than a few hours a week, if they function at all. The market price of water, depending on location, has gone up from two to four times as rapidly as other basic commodities, and the share of the population that must pay the price has increased.

Beyond these difficulties, unabated farming on the slopes of Morne L'Hopital have reduced water retention of the soil and have led to a continuing decline in average annual flows from springs on the mountain, from over 1000 liters per second in 1980 to 700 in 1987. Thus the capacity of CAMEP to produce more water depends on its ability to finance the estimated \$50 to \$75 million required to build a dam west of the city and to transport the water over a long distance; something its current financial situation does not allow. Nor did that situation, in combination with challenges to system planning mentioned above, permit CAMEP to expand area coverage at a pace commensurate with spatial expansion needs, or to use water service as a direct means of guiding that expansion.

Residential Expansion and Density

Although the city did grow from 1612 to 3665 hectares of residential (i.e., built-up) land through 1988, and from a bit less than 3 million to over 7.5 million m² of covered dwelling space, the distribution of this expansion across income categories was highly skewed in favor of wealthier population segments; with the consequence that average densities are higher and dwellings more crowded than ever before. According to the most recent survey, average household size expanded by 18% since 1976, principally through an increase in the size of Category I households from 4.5 to 5.5 persons (Table 3.3). The average size of dwellings also increased, by 23%. This was almost entirely the result of growth in the Category II population and its ability to obtain dwellings that averaged 30 m². For those in Category I, whose dwellings stayed at the same 11 m² average as in 1976, the effect of increased household size

to lower the amount of covered dwelling space by 18%, from 2.4 to 2.0 m² per person.

Similarly, the amount of residential land available to Category I households decreased from 55 to 32 m² per household, and from 12.2 to 5.8 m² per person. For Category II, the respective declines were from 160 to 95 m² per household and from 29 to 15 m² per person. The overall effect has been to increase residential density across the city from 396 inhabitants per hectare to 428, in Category I to increase it from 822 to 1725 persons, and in Category II from 341 to 618 persons. That is, the spatial characteristics described above for St. Martin in 1976 now cover a much larger number of people.

Statistical declines of these kinds need to be interpreted with caution. For many or most households in higher categories the figures for 1988 constitute improvements in their shelter conditions. For example, if growth in real income permitted an average Category I household of 1976 to become an average Category II household of 1988, diagonal reading of Table 3.3 would show that their dwellings increased in size from 11 to 30 m², covered area per person from 2.4 to 5.1 m², residential land per household from 55 to 95 m², land per person from 12.2 to 16.2 m², and that the residential density of their neighborhoods declined from 822 to 618 persons per hectare. For Category I there was a net deterioration as fires, public works and, most importantly, competition from higher-income families and subsequent conversion of the space for their use drove many lower-income families to double up with others (hence the increase in household size) in other, already built-up areas (hence the decline of total land available to Category I from 505 to 423 hectares notwithstanding growth of that population from 415,000 to 730,000).

What the table does underscore is that pressure on Category I households might have been less, and improvements for Category II greater, if urban growth had not been so skewed towards Categories III and IV. Together constituting 12% of the population, they were able to consume 75% of the city's total expansion of 2054 hectares. In this they were also able to increase the total share of land they occupied from 41% in 1976 to almost 60% in 1988, and to suggest that the problem of access to land has not improved at all over the period.

TABLE 3.3: HOUSING AND RESIDENTIAL DENSITY IN PORT AU PRINCE, 1976-1988 *

	Income Category**				Total
	I (lower)	II (middle)	III (higher)	IV	
Population, 1976	415,000	160,000	28,000	36,000	638,000
Population, 1988	730,000	660,000	60,000	118,000	1,568,000
Annual Rate of Growth	4.8%	12.5%	6.6%	10.4%	7.8%
Households, 1976	91,800	29,325	4,755	6,205	132,085
Households, 1988	132,275	112,435	10,195	20,670	275,575
Annual Rate of Growth	3.1%	11.9%	6.6%	10.5%	6.3%
Average Household Size, 1976	4.5	5.5	5.9	5.8	4.8
Average Household Size, 1988	5.5	5.9	5.9	5.7	5.7
% Increase or Decrease	22.1%	7.6%	-0.1%	-1.5%	17.8%
Covered Area Per Household, 1976 (m ²)	11	30	65	120	22
Covered Area Per Household, 1988 (m ²)	11	30	60	108	28
% Increase or Decrease	0.0%	0.0%	-7.7%	-10.0%	22.8%
Covered Area Per Person, 1976 (m ²)	2.4	5.5	11.0	20.7	4.6
Covered Area Per Person, 1988 (m ²)	2.0	5.1	10.2	18.9	4.8
% Increase or Decrease	-18.1%	-7.1%	-7.6%	-8.6%	4.2%
Residential Land Per Household, 1976 (m ²)	55	160	355	760	122
Residential Land Per Household, 1988 (m ²)	32	95	400	850	133
% Increase or Decrease	-41.8%	-40.6%	12.7%	11.8%	9.0%
Residential Land Per Person, 1976 (m ²)	12.2	29.3	60.3	131.1	25.3
Residential Land Per Person, 1988 (m ²)	5.8	16.2	68.0	148.9	23.4
% Increase or Decrease	-52.3%	-44.8%	12.7%	13.6%	-7.5%
Persons per Residential Hectare, 1976	822	341	166	76	396
Persons per Residential Hectare, 1988	1725	618	147	67	428
% Increase or Decrease	109.8%	81.2%	-11.3%	-12.0%	8.1%
Total Residential Land, 1976 (hectares)	505	469	169	472	1612
Total Residential Land, 1988 (hectares)	423	1068	408	1757	3665
% Increase or Decrease	-16%	128%	142%	272%	127%

* Source: Haiti; 1988b, and authors' estimates.

**See Table 2.1 for income brackets for each category.

The Issue of Land

As in other cities, the problem of land defines itself through a combination of institutional and cultural factors that conspire to create a very narrow market for its sale and purchase. On the institutional side, there is first the absence of an up-to-date cadaster or land register for the city. One major exception is an area of 150 hectares containing 1500 parcels in Delmas that was prepared by the National Cadaster Office with help from the German government through its GTZ. Without a cadaster sellers (or sometimes buyers) are obliged to pay anywhere from \$1000 to \$2000 in legal research, survey fees and court costs to register ownership for each transaction. Such outlays are similar whatever the size of the parcel. In the GTZ project, for example, the cost of research and registration without recourse to outside services or court costs remained constant at \$600 per parcel in a range of 400 to 1800 m². A basic consequence is bias in transactions towards parcels of larger size where registration costs are small relative to the price of the underlying land; and thus also towards higher income households that can afford to pay the price.

Further narrowing the share of households that could pay the price is scarcity of mechanisms for longer-term financing of acquisition of property or construction, as implied above in connection with ONA and BCI lending operations. The cadaster issue has played a role in this through imposition of a transaction cost out of proportion with a parcel's capacity to serve as guarantee for a loan. Hypothetically, a 100 m² plot worth \$1500 would have to sell for \$2500-\$3500 to cover registration costs. The collateral value being limited to \$1500, most lenders are unwilling to provide more than that to prospective buyers. Under the circumstances, buyers would need to finance the balance out of savings, or else make their prospective investment more eligible for loans by acquiring the property entirely out of savings and then seeking finance for construction. In either instance the size of required savings is sufficiently high to reserve such possibilities for higher-income households.

Adding to this on the cultural side, higher-income households and the institutions which some of them control do not have the experience of entering the real estate development business from the outside. The notion of buying and registering a parcel, subdividing it with or without services, and then selling each lot together with pre-arranged title papers (i.e., obtained at lower cost through

economies of scale in use of legal, survey and court services), is rare. Recent initiatives by such groups as Tecina in Freres and Belvil, NEEMS in Croix des Missions, Uldeka in Delmas, COLOPE in Petit Place Cazeau, and comparable undertakings in the Juvenat, Turgeau and Chemin des Dalles areas reflect change in this matter.

Still, at \$18 per m² for serviced lots 600 to 1200 m² in size, as in the case of Tecina, or \$10,000 to \$20,000 for the land, the market stays closed to all except those with considerable means. Indeed, with unserviced land selling in 1988 at \$7 per m² in Bon Repos (a good distance north of the city), \$15 in Petit Place Cazeau (closer in), and \$30 in Petionville and Turgeau (well within the city); with all these prices roughly three times higher than in 1984 and 7 to 10 times higher than in 1976; and with developers or other sellers still rarely able to think in terms of selling lots a bit smaller than 400-500 m² (not to mention the 100 m² noted above or the range of 30 to 60 m² that are of interest to many in Category II), prospects for rapid change in habits and for opening up of a real estate market consistent with the economic circumstances of a larger share of the population appear remote.

Confounding matters in the small corner of the market where lots of 50 to 100 m² might be found is the "wholesale-retail" price continuum that affects transactions for all commodities. Beyond the influence of transaction costs, there is a basic relationship in the unit price of land and the quantity purchased. The sample of prices noted in the preceding paragraph are for conventional lots of 500 to 1000 m². If those lots were, say, \$10 per m², purchase of a hectare containing 10-20 such lots would require something of the order of \$5-\$6 per m². Similarly, purchase of lots of 250, 125, 60 and 30 m², following a rule that with variation adds about 25% to the unit price for each further division in size, would cost \$3000, \$2000, \$1000 and \$700 respectively. The incentive to buy under this sort of price regime is low; especially when such amounts are all that buyers can husband for land and construction.

Another cultural aspect influencing the market is the difficulty of squatting, though this too is changing bit by bit. With every piece of land in Haiti, including state properties, spoken for by "someone", squatting has always carried with it considerable risk. Until breakdown of the alliance between the Duvalier family and its armed security force, the VSN or "Tontons Macoutes", spontaneous land invasion or squatting was impossible. Such squatting as did

take place was organized by officers or other aspiring individuals in the force with sanction by the administration, and was restricted to properties of landowners in political disfavor. As the breakdown progressed from 1980 onwards, organized land invasion targets were any properties of families that did not have the means to defend their ownership rights. With the departure of the Duvaliers in 1986, responsibility for organizing land invasions shifted to military officers, although much of it remained in the hands of ex-Macoutes who retained influence and guns, and who were also in the army.

That is, while the absolute quantity of squatting may have increased in recent years, little has changed with respect to the land's character of usually having a "someone" of importance, and hence of higher income, to "speak" for it and to collect revenues from its occupants. The small shares of the population that occupied land free of charge, about 6% in 1976 and 3% in 1986, were more often than not beneficiaries of gifts of land or dwellings from others who claimed the properties as theirs. With elimination of many (but hardly all) Macoute "someones", the share living free may have increased since 1986. In any event, with squatted lands hardly ever finding their way back to their legal owners, they cannot be registered or sold. The more squatting that occurs, the less the supply of land available for purchase.

Last but not least, with all the foregoing serving to limit supply and to drive up the value of land much faster than the general inflation rate, owners do not have much incentive to sell in an environment where property taxes, such as they are, have no relationship with land value. There are no other assets or instruments that have appreciated as quickly over the last two decades. Potential sales proceeds have no alternative investment possibilities that can bring annual (appreciation) returns of 20% to 30%. Moreover, if pressed for cash, rental of the land can convert the asset into a permanent income stream. At the limit, for example, a hectare could easily accommodate 100 households in Category II at average density, or 150 in a pinch. With annual land rents for that category currently running between \$60 and \$120, depending on location, an owner can obtain an inflation-adjustable income of \$6,000 to \$18,000 per hectare on land that might otherwise sell for \$50,000 to \$60,000. Or the land could be turned to Category I use, which at up to 350 households and \$40 per household in annual rent would generate around \$14,000. In these hypothetical estimates the minimum-maximum range of returns

is 10% to 30%; higher than most other large-scale investment opportunities and completely hidden from public scrutiny.

Meanings of Progress

In general, therefore, the combination of institutional underdevelopment (including limited expansion and improvement of water supply), cultural norms, and economic constraints imposed by low income relative to prices of land, housing and everything else of salience, have kept the population's shelter characteristics from improving much relative to what they were a decade earlier. A return to St. Martin, which in both 1976 and 1986 was inhabited by households spanning the full spectrum of income Categories I and II (but with a larger share in the second category more recently), and to two adjoining neighborhoods, Ti Tokio with slightly higher average income and La Saline with lower income, shows limited progress.

Table 3.4 notes that although an important share have been converted to cement block through the public projects noted earlier as well as private initiative, dwellings are still mostly in wattle/earth and wood/scrap structures. The distribution of land and home ownership (i.e., on rented land) remains unchanged. The basic improvement in tenure has taken the form of a shift from monthly to semi-annual and annual rental (i.e., permitting a 30%-50% discount relative to what households must pay if renting monthly), from 31% of the St. Martin population in 1976 to 53% in 1988. The distribution of water supply and human waste disposal methods are also the same as before. The only big changes are access to electricity for lighting, from less than 20% of all households in the three areas in 1976 to 75-85% in 1986, and a massive increase in residential density in St. Martin, from the 1540 noted earlier to 2230 (i.e., resulting from addition of 9000 more people).

And if shelter attributes revealed limited advance in the neighborhoods, it was because there was little change in the socioeconomic characteristics that underlay them. As shown in Table 3.5, almost half of households were still headed by (working) women, and most residents, though not born in the city, were relatively permanent residents of their neighborhoods. Educational levels remained about average with the city as a whole. The structure of employment and salary income was also a duplication of urban averages. Expenditures, exaggerated as they might be by the method of data collection and as adjusted as they must be to

TABLE 3.4: SHELTER CHARACTERISTICS IN THREE NEIGHBORHOODS, 1986

	Tokio	St. Martin	La Saline
	-----	-----	-----
Total Population	2,800	29,000	3,000
OCCUPANCY:			
Number of Structures/Houses	680	4600	875
Number of Dwellings per Structure	1.4	1.4	1.1
Number of Occupied Dwellings	930	6335	1005
Number of Persons per Dwelling	3.0	4.6	3.0
Vacancy Rate	6.0%	1.4%	2.6%
CONSTRUCTION: Structures Built of:			
wattle/earth	5.9%	2.5%	6.6%
wood/scrap	63.3%	59.3%	76.1%
cement block	19.5%	29.0%	14.6%
reinforced concrete	11.3%	9.3%	2.7%
TENURE:			
Dwellings Occupied by:			
land or home owners	25.6%	24.4%	31.4%
long-term renters	68.1%	52.6%	41.4%
monthly renters	3.7%	13.8%	19.1%
freeholders and others	2.7%	9.2%	8.1%
LIGHTING: Households With Electricity:	85.1%	77.9%	84.1%
WATER SUPPLY: Households:			
with pipes in home or yard	5.6%	13.0%	0.0%
using public standpipes	18.4%	13.8%	6.1%
purchasing from vendor	74.8%	73.2%	93.9%
obtaining free from neighbor	1.3%	0.0%	0.0%
HUMAN WASTE: Households:			
using flush toilets	1.0%	1.1%	0.0%
latrine in yard	62.1%	71.1%	39.3%
latrine elsewhere	30.1%	23.0%	39.6%
open field	6.9%	4.8%	21.1%

Source: Haiti; 1988

TABLE 3.5: SOCIOECONOMIC CHARACTERISTICS IN THREE NEIGHBORHOODS, 1986

		Tokio	St. Martin	La Saline
DEMOGRAPHICS:	Total Population	2,800	29,000	3,000
	Households Headed by Women:	45.1%	46.1%	48.0%
	Average Number of Persons per Household:	3.0	4.6	3.0
	Share of Households Containing:			
	1 person	19.7%	4.9%	22.3%
	2 persons	30.3%	16.1%	23.3%
	3 persons	22.4%	17.4%	25.3%
	4 persons	11.9%	16.9%	13.3%
	5 persons +	15.7%	44.7%	15.8%
	Migrants in the Population:	55.1%	52.2%	57.2%
	- who have lived in area:			
	less than 1 year	7.0%	6.4%	10.9%
	1 to 3 years	20.4%	25.7%	30.0%
	4 to 7 years	16.9%	23.2%	20.1%
	8 years or more	55.6%	43.2%	39.0%
EDUCATION:	Adults Who Are Illiterate	30.7%	36.1%	44.9%
	Adults who have some primary school only	42.9%	34.0%	39.3%
EMPLOYMENT:	adults working in public sector	6.8%	9.7%	5.7%
	private sector as employers or wage workers	19.4%	25.4%	16.2%
	private sector as independent workers	73.8%	56.1%	78.1%
SALARY INCOME:	Households With Some Salary Income:	65.2%	65.1%	65.0%
	- in which salaries are:			
	< \$40/month	7.2%	4.0%	27.6%
	\$40- \$79	17.8%	8.6%	26.0%
	\$80-\$119	16.8%	15.4%	10.0%
	\$120-\$199	18.5%	28.0%	14.4%
	>\$200/month	39.7%	44.0%	22.1%
	average per household	\$158.43	\$176.57	\$112.01
	average per person	\$52.62	\$38.57	\$37.52
EXPENDITURE:	Monthly Outlays (unadj.):			
	monthly rent	\$1.55	\$1.82	\$2.01
	electricity	\$2.73	\$3.02	\$1.67
	kerosene	\$0.22	\$0.39	\$0.39
	water	\$10.90	\$8.82	\$7.22
	schooling	\$9.23	\$9.87	\$3.22
	food	\$104.62	\$138.03	\$73.58
	transport	\$7.60	\$19.13	\$3.67
	other	\$0.04	\$7.45	\$16.57
	total per household	\$136.89	\$188.52	\$108.33
	total per person	\$45.47	\$41.18	\$36.29
	Monthly Outlays (adjusted):			
	monthly rent	\$42.44	\$13.17	\$10.55
	electricity	\$3.21	\$3.88	\$1.98
	kerosene	\$1.49	\$1.75	\$2.47
	water	\$14.58	\$12.05	\$7.69
ASSETS:	Share of Households With:			
	radio	56.9%	69.6%	45.5%
	television	27.2%	24.4%	12.1%
	fan	21.6%	21.8%	11.6%
	refrigerator	4.4%	4.2%	1.1%
	car	3.3%	1.2%	0.0%
	iron	2.8%	3.8%	1.4%
	bicycle/motorcycle	1.2%	3.9%	1.0%
	sewing machine	1.5%	7.0%	0.0%
HEALTH:	Households With Major Illness in Past Year:	27.2%	31.0%	33.5%
	-in which illness affected:			
	1 person	45.5%	15.1%	50.1%
	2 persons	36.8%	32.7%	39.1%
	3 persons	9.5%	23.7%	5.1%
	4 persons +	8.3%	28.5%	5.7%

Source: Haiti; 1988

get a better sense of patterns (e.g., by dividing total outlays for monthly rent, electricity, kerosene and water by the shares of the population paying for these things rather than by the total population), still highlight the total dominance of food and water in household budgets, and the relatively modest share given over to housing.

In parallel, the distribution of assets underscores continuing limitations on the capacity of households to save for non-productive purposes. As in 1976, when they were mostly powered by batteries, radios are predominant. With electricity and expansion in the share of Category II households, televisions and fans have found their place. But beyond these things, other consumption-type assets are of negligible significance. Also, one of the major impediments to saving out of limited income, outlays to cure illness, are as frequent as ever. A quarter to a third of households in the neighborhoods had to deal with major illness affecting at least one of their members in the preceding year. In the majority of cases in St. Martin such illness affected 3 or more persons per household. The table reveals nothing about the origins of illness, but it is reasonable to presume that poverty in an unhealthy environment had something to contribute.

And as in 1976, there is nothing special about these characteristics. La Saline is poorer than average, but except for density, St. Martin and Ti Tokyo are more or less prototypical of neighborhoods housing the bulk of Category I and II households all over the city. By way of illustrating this important point, Table 3.6 shows certain housing attributes of the factory workers surveyed in 1986 and whose distribution of household income closely matches the 1988 estimate for the entire city. The vast majority lived in one- or two-room dwellings offering a mean of 2.0 to 3.3 m² per person. Two-thirds were long-term renters paying an average of \$22.50 per month in an equally-distributed range of \$10 to \$50 per month (wherein, among other variables excluded from the table, important factors influencing rents were size of dwelling, availability of water and availability of human waste disposal methods). Most had electricity for lighting. Most bought water by the bucket. Most used simple latrines. Theirs was and remains a basic profile of how people live in Port au Prince today.

In that profile there is also something of a pattern of progression that delineates the chronological path of shelter "improvement" for a household in the particular circumstances of the city. Adding in a few observations from

TABLE 3.6: SHELTER CHARACTERISTICS OF FACTORY WORKER HOUSEHOLDS, 1986

	Share of Households	Average HH Size*	Persons per Room	m2 per Person
	-----	-----	-----	-----
Households in Dwellings With:				
1 room	59.3%	5.1	5.1	2.0
2 rooms	20.1%	6.1	3.0	3.3
3 rooms	6.7%	7.8	2.6	3.8
4 rooms	7.8%	7.9	2.0	5.1
5 rooms	3.0%	8.8	1.8	5.7
6 rooms +	3.0%	10.1	1.7	6.0
		Average # of Rooms	Average Monthly Rent	
		-----	-----	
Households Occupying Dwellings as:				
land owners	15.2%	3.3	-	
home owners	7.1%	2.8	\$5.50	
long-term renters	67.3%	4.4	\$22.50	
monthly renters	7.4%	4.6	\$32.00	
free/other status	3.0%	2.0	-	
		Home Owners	Long-Term Renters	Monthly Renters
		-----	-----	-----
Distribution of Average Monthly Rents:				
\$1- \$9	-	73.3%	7.8%	5.0%
\$10-\$11	-	20.0%	10.1%	5.0%
\$12-\$15	-	-	11.2%	20.0%
\$16-\$19	-	-	17.3%	-
\$20-\$24	-	-	14.5%	15.0%
\$25-\$29	-	-	16.2%	10.0%
\$30-\$44	-	6.7%	11.7%	15.0%
\$45 +	-	-	11.2%	30.0%
Rent by Number of Rooms:				
1 room	59.3%	\$4.50	\$19.70	\$32.70
2 rooms	20.1%	\$5.20	\$28.50	\$28.60
3 rooms	6.7%	\$6.70	\$47.20	\$60.00
Rent by Availability of Electricity:				
with electricity:	83.0%	-	\$25.70	\$27.50
without electricity:	17.0%	-	\$11.35	\$49.60
Rent by Source of Water Supply:				
pipes in home/yard	18.0%	-	\$30.30	\$43.70
public standpipes	11.0%	-	\$11.00	\$9.50
purchase from vendor	62.0%	-	\$21.90	\$27.60
free from neighbor	9.0%	-	\$24.40	\$60.00
Rent by Means of Human Waste Disposal:				
flush toilets	7.2%	-	\$36.20	\$21.00
latrine in yard	71.5%	-	\$23.70	\$38.70
latrine elsewhere	18.3%	-	\$21.30	\$31.00
open field	3.0%	-	\$16.80	\$10.00

Source: Data provided by the Centre de Promotion des Femmes Ouvrieres.

earlier parts of this section, rises in household income seem first to involve efforts to accumulate enough savings to shift households from monthly rental to semi-annual or annual rental (in the same or another dwelling). The meaning of improvement here is essentially financial: minimization of required shelter outlays. Following this shift, rent savings are expended on higher consumption of other basic needs such as food and water, school tuition, and so forth, and/or on further investments in independent trade, manufacturing and service activities in which households may be involved.

When further rises in income need no longer be expended for higher consumption of basics other than shelter, or when returns to further investment in income-generating activities fall below those possible from alternative expenditures, attention to housing may come again to the forefront. In this second stage improvement takes the form of maximizing the efficiency of rental outlays. For a given budget constraint, households may seek more satisfactory combinations of rental housing attributes, such as size and building material, and locational attributes, such as improved access to water and public transport, better environmental and neighborhood social and economic characteristics, and so on.

The possibility of moving to a third stage, i.e., looking for a plot to occupy and then building a dwelling upon it, either as a land owner, as home owner on rented land, or as a squatter, presents itself when at some point in the second stage it becomes clear that the rate of accumulation of savings necessary to pay longer-term rent is comparable to the rate required to finance construction of a minimally-adequate house (i.e., as perceived by the household) at a minimally-appropriate location. The house can be of wattle, scrap, wood or cement block. Locations can be infill of vacant areas within the limits or on the margins of heavily built-up areas, or they could be in new lands opened up by residential investments of higher-income households. These lands require their developers to invest in roads to their properties and in such actions as necessary to extend legal or clandestine water pipes to them. With access to a passable road and the possibility of obtaining water somewhat assured, available land adjacent to or near higher-income homes can often be quite satisfactory places for households with lower income as well if distance to public transport, proximity of schools, and other disadvantages of settling in newly-opened areas do not constitute major obstacles.

Leaving aside the possibility of windfalls, financing of this progression requires household income and saving to rise at rates exceeding dwelling rent (about the same as the cost of food since 1976 in general, but significantly higher on a per unit of area basis), construction materials (a bit higher than for food, as noted earlier), labor (about the same) and, if applicable, the purchase price or rent for land (much higher than all the foregoing). Faced with all manner of threats to income and savings accumulation, such as illness, fire, flooding, theft, loss of earnings, and arrival of new dependents (children, family moving in from elsewhere, etc.), the challenge of raising real income and savings at the necessary sustained rates, let alone preventing it from falling, is considerable. Movement along the path of improvement is therefore slow for most people.

Distribution of Home Ownership

By way of general illustration, if Table 3.6 serves as a fairly reasonable representation of the city, the 15.2% of households that were land owners in 1986 were a much smaller share of the total than their counterparts in 1976 (about 29%). And the 7.1% that were home owners constituted about the same percentage as in 1976 (approximately 8.5%). Thus, in regard to proportionate gains, the most significant form of progress over the decade, as in St. Martin, was the movement from monthly to longer-term rental.

With respect to absolute figures, one may surmise that the net gain in the number of land owners, from 38,000 in 1976 to 42,000 in 1986, accrued largely if not almost entirely to those among the 20,000 additional households that were born to, moved into or stayed within income Categories III and IV. Similarly, one might assume that the net increase in home owners from 11,000 to 20,000 accrued disproportionately to others in these same categories. However, with \$100 representing the lowest cost of building a small wattle unit, with \$5 per year as the minimum rent on land for such a home, and with semi-annual and annual dwelling rent floors in the vicinity of \$25 and \$50 respectively in recent years, one may suppose that a goodly number of households in Categories I and II were also able to move along the path and reach home ownership during the decade.

The share of the total population of home owners in each income category is uncertain. But if our sample of

households acquiring their own homes during the last few years is remotely representative, if the range of weekly rates of saving discussed in Section VII is allowed to serve as guide, and if one assumes that the average savings rate is approximately 10% of weekly income, then the resulting calculations imply that approximately 17% of households that progressed to home ownership in recent years may have been in Category I, 31% in Category II, and the remaining 52% in Categories III and IV.

Speculative as it is, this estimate of the distribution of ownership highlights perhaps the only characteristic of Port-au-Prince that offers inhabitants a significant potential advantage over urban residents in most other countries of the region -- easier access to home ownership. This advantage stems from the absence of government will or capacity to impose any kind of "standard" on the size or other characteristics of a building site or dwelling. A legitimate house is anything its builders decide to erect. With the \$105 noted above as the minimum investment required to rent land and build, ownership of something passing for a home, if no one cared about its physical attributes, is within reach of a very large segment of the population; at least in theory. The gap between potential and actual ownership explains itself to some extent by the fact that physical attributes such as size and degree of protection offered by different building materials do indeed matter. Ownership of a scrap tent obtained at the cost of giving up health and other benefits flowing from rental of a cement dwelling, for example, is too high for many households. The gap also explains itself by an acute scarcity of sites available for rent, a matter we address in greater detail in the following discussion of what the home owners we interviewed perceived as the good and bad aspects of their housing circumstances.

IV. PERCEPTIONS OF SHELTER

The conditions described above might appear abominable to unaccustomed eyes. They might also appear distressing to people who must live with the circumstances every day. Still, in a city where families face limited choices in housing themselves, what is abominable in general must necessarily remain "normal". The important challenge in this context is to extend beyond generalities and to identify the priority shelter issues perceived by residents.

Neighborhood Characteristics

To this end we asked our respondents to list up to three important disadvantages that they associated with living in their respective neighborhoods, and three important advantages. Responses varied with location, in terms of the specific issues cited and in terms of the overall balance between disadvantages and advantages. In the aggregate, however, dissatisfaction seemed to exceed satisfaction by a considerable margin. While only 4% of the sample found themselves unable to list any significant disadvantages of living in their neighborhoods, some 35% saw no advantages worth noting. As a consequence, we obtained a relatively robust inventory of 215 disadvantages and a thinner listing of 125 advantages. Fortunately, each list contained sufficient repetition and similarity of response to permit compilation of 10 groupings of leading disadvantages and 9 groupings of advantages (Table 4.1).

Because we used a sampling method that for the most part deliberately sought out owners of recently-constructed dwellings in a selection of neighborhoods, one cannot impute too much significance to the relative frequency of particular groupings in the table. A disproportionate share of the dwellings were in newly-urbanizing areas on the hills and ravines rising to the south of the city, or on the swamps and plains to the north. With private development of basic urban infrastructure facilities and services usually lagging far behind construction of dwellings, disadvantages associated with flooding, dust, water supply, vermin, lack of roads, latrines, or distances to community and economic services were to be expected. But to the extent that identical or almost identical concerns appeared on both the list of disadvantages and on the list of advantages, the responses did serve to highlight several concerns to which residents accord considerable importance.

For one thing, they are sensitive to the general comfort and cleanliness offered by their immediate surroundings. Environmental attributes that are unsatisfactory are high on the list of disadvantages, while satisfactory attributes are offered a position of importance on the list of advantages. Similar parallels obtain with respect to the social climate. Unacceptable behaviors, like theft and vandalism, or estranged relations with neighbors implicit in the concern over bad spirits, are notable problems. Acceptable behaviors and good neighborly relations are notable advantages. Infrastructure services,

TABLE 4.1: DISADVANTAGES AND ADVANTAGES OF CURRENT NEIGHBORHOOD

<u>Disadvantages</u>	<u>Frequency</u> (N=215)
Flooding, mud, etc. in rainy season; dust in dry season:	19%
Difficulty in obtaining water:	18%
Mosquitos, rats, other vermin; animals; garbage:	17%
No or poor roads; far from good roads and public transport:	13%
Vandalism, theft, bad spirits:	8%
No or poor latrines; soil unsuitable for good ones:	7%
No or poor electricity, lighting:	6%
Far from churches, dispensaries, schools:	4%
Noise:	3%
Far from markets, shops:	2%
<u>Advantages</u>	<u>Frequency</u> (N=125)
Peaceful, tranquil, no thieves or vandals, no bad spirits:	17%
Good income-earning possibilities; jobs; clients:	13%
Proximity to good roads, commercial strips; public transport:	11%
Close to markets, downtown area:	10%
Clean, well-maintained; cool:	10%
Availability of water; wells:	9%
Low density, open space, room for housing expansion:	9%
Close to family and friends; good neighbors and social relations:	8%
Proximity to schools, churches, dispensaries, etc.:	3%

particularly in matters of water, latrines, roads and proximity to public transport, are noteworthy whether their characteristics are good or bad. Therefore, although the measure of what is judged to be satisfactory may vary drastically from place to place, the issues that concern residents of Port-au-Prince with respect to their neighborhoods are essentially the same as those of most people in most cities in most parts of the Caribbean and the world. This is not unexpected.

Nevertheless, there are nuances about Port-au-Prince that require mention, particularly in the context of a city where the bulk of the labor force earns income from self-employment in trade, service and manufacturing activities. For example, disadvantages associated with inadequate or distant roads and public transport, mirrored in the advantages to be gleaned from the inverse, are only partially related to the matter of access or travel. Many respondents viewed this as an income-earning concern. Location on or proximity to a well-travelled road, by vehicles or by pedestrians (they usually coincide), means a flow of potential clients. For a self-employed worker, or someone looking for a chance to initiate a business, there is tremendous advantage and opportunity to be extracted from using a house as shop, warehouse, office or factory. But success in such a venture very often requires immediate or reasonably close proximity to a concentrated flow of traffic containing potential buyers. When roads are non-existent, in poor condition, or distant, the flow is harder to access from the dwelling.

Beyond the matter of roads, income-earning potential is also a function of other neighborhood attributes such as population density, level of income, types of ongoing businesses like materials suppliers, or rate of residential expansion (e.g., workers in the construction trades, furniture-making, and related activities find considerable advantage if surrounded by demand for their goods and services). These are some of the neighborhood ingredients that underlie the frequently-cited advantage of "good income-earning possibilities." It does not stand out as a disadvantage (i.e., separate from the matter of roads) because respondents who could not extract a livelihood from their locations would not have built their houses where they did.

Another nuance, hardly unique to Port-au-Prince but worth mentioning anyway, is that in the absence of fully satisfactory neighborhoods, residents seek balances between

disadvantages and advantages. Most respondents saw pros and cons of living where they did, and because they chose to invest notwithstanding a long list of complaints, the advantages must have outweighed the disadvantages (at the time of investment at least). That is, not surprising given the conditions of housing and infrastructure in the city, inhabitants have considerable tolerance for certain kinds of discomfort so long as they can still extract some meaningful gain at the same time.

We point to this because of the potential misdirection that might result from drawing conclusions about people's preferences without simultaneously noting that some are more important than others, and that even important ones might be sacrificed in exchange for what one could call a "package" of others, each of which might seem of lesser importance when viewed separately.

Site Selection Criteria

Independent of questions pertaining to current neighborhoods of residence, we also asked respondents to list up to three criteria they would use in assessing whether or not to obtain a particular site upon which to construct a dwelling. As before, we obtained a long list of answers, 155, and found a means to pull them together into the ten groupings shown in Table 4.2.

These groupings, more but not completely independent of a respondent's current neighborhood situation, provides a closer approximation of the priority criteria that individuals might use in assessing the relative merits of a new site upon which to erect a dwelling. In this instance, proximity to water and the appropriateness of the site for construction stand out from the rest in importance.

Obviously, a proposed site for housing must meet certain minimum requirements of topography and size, and its underlying soil must have strength to support a structure whether dry or wet. As noted later, it is also helpful if that soil, extracted from a hole or trough destined to be a latrine, well or foundation, proves suitable for erecting a wattle or earth structure to shelter household members and store durable building materials while construction of a more permanent unit progresses beside it. If the durable material is cement, the capacity to not only extract sand from the soil but also have water nearby is of considerable advantage with respect to building costs.

TABLE 4.2: SITE SELECTION CRITERIA

<u>Criterion</u>	<u>Frequency</u> (N=155)
Proximity to source of water:	14%
Soil appropriate for foundations, sand; suitable topography, size:	13%
Availability:	10%
Proximity to passable road, public transport:	10%
Trees, shade, open space:	10%
Peaceful social climate:	8%
Income-generating possibilities:	6%
Security of tenure:	6%
Price:	6%
Other (e.g., electricity, space for expansion, proximity to services):	17%

The advantage of proximity to water runs much deeper than its utility in construction. As the basic medium for rehydration and cooking it is an absolutely vital input to daily sustenance. The further away the water is, the more it costs in time and (more often) money to acquire some and to eat. Because most residents of Port-au-Prince face considerable difficulty obtaining it at reasonable cost, it is not surprising to find water as the highest-ranked criterion, or to find that the distribution of water consumption among respondents was far from optimum - especially in the dry season among the 66% of households that purchased it by the bucketful from itinerant vendors, neighbors and, sometimes, at "public" standpipes (Table 4.3).

With estimates by the World Health Organization (WHO) placing minimally-adequate consumption to meet all basic health requirements in the range of 25 to 40 liters per capita per day (lcd), not that WHO standards mean much to residents of Port-au-Prince, the amounts actually consumed by respondents had considerable scope for expansion. But water was expensive. For example, a household of five consuming the average of 14 lcd (in the 10 - 20 lcd range) and spending \$0.12 per capita per day would pay \$18 per month, or 12-14% of estimated average urban income. Implicit here is a cost of about \$0.17 per bucket of 20 liters. But dry-season prices varied across the neighborhoods covered in the survey from an average of \$0.09 to \$0.25 per bucket. For the same 12-14% share of income families could consume much more or much less, depending on location. And if income was much less than the average, the question of proximity to water would, correspondingly, rise in importance. Indeed, if one could hazard a guess about the single-most crucial variable in site selection for most people, it would be the price of water at the site.

Also having priority importance in Table 4.2 relative to perceptions about current neighborhoods is the "availability" of sites, especially sites near passable roads and/or public transport. Although the value of roads and means of transport could be explained much as we did earlier, only adding here that proximity to such things is of salience in bringing construction materials and workers to a site, the emphasis on availability requires brief elaboration, especially since it ranks substantially ahead of price.

**TABLE 4.3: DRY SEASON WATER CONSUMPTION CHARACTERISTICS
(among households paying for water)**

<u>Consumption Range (liters/capita/day - lcd)</u>	<u>Daily Average (lcd)</u>	<u>Daily Expenditure (\$/capita)</u>	<u>Share of Households (%)</u>
less than 10	6.6	\$0.09	10%
10 - 20	13.7	0.12	35
21 - 30	23.1	0.11	35
31 - 40	36.6	0.11	12
41 or more	55.8	0.46	8

Our interviews suggested that above and beyond the notion of scarcity of supply within narrowly-bounded neighborhoods where individuals might prefer to live, or the economic notion of scarcity where sites are not available at prices people are willing to pay, there seems to be an absolute, urban-wide shortage of sites suitable for building relative to the demand for them. Price, as we will describe later, is not a major factor because the rent is small relative to the cost of construction and because, as for water, consumption standards in terms of land dimensions are quite modest. That simple "availability" of a site should have such importance for respondents spread across all parts of the city is further evidence of rapid population growth and demand for land pressing hard against a slower rate of expansion in supply.

Reinforcement of this idea comes from answers to our request that respondents identify locations in the city that were likely to meet their criteria and in which they would prefer to live. Although half the respondents provided names, with Petionville, Delmas/Nazon and Carrefour predominant, the other half answered the question in operational terms. The most common answers here were: "wherever I can find a plot", "anywhere", and "where I am now because people without money have no choices to make". For this half of the sample a question about preferred location was not pertinent. In their circumstances the salient issue was scarcity of sites about which choices could be made.

Together with other items in Table 4.2, this issue of scarcity goes a considerable distance towards explaining why several of the perceived disadvantages listed earlier introduce themselves into a newly-developing neighborhood in short order. The coming to market of a site suitable for construction, at a tolerable distance to (i.e., price of) water, and nearby roads will elicit immediate interest. Price, as already noted, is not usually a constraint. And security of tenure generates lesser concern because, as we describe in the next section, a combination of advance research and construction with durable materials in the midst of other dwellings provides all necessary security. Moreover, if in a state of relatively early development, the parcel surrounding a site will usually give an appearance of tranquility and openness because others will not have arrived yet to fill in all the empty spaces. Once the area begins to fill up, in much the same the manner as shown in Figure 4.1, altered drainage patterns, gouged out holes in roads, water consumption demands meeting the limits of

Figure 4.1: New Neighborhood in Process of Development



supply, and increased garbage soon make it look like any other neighborhood. Residents know that this will happen. But there is no avoiding it.

Thus the heart of the matter of site selection seems simply to be the availability of even a very small piece of suitable land, where the ingredients of suitability consist primarily of proximity to the basic wherewithal to build and live -- roads, a reasonably flat surface (or one that can be flattened without undue difficulty), subsoils that can at once yield building material and support a structure, and water -- and secondarily of consistency with income-generating requirements, such as reasonable nearness to public transport and/or a concentration of clients within the immediate area. By virtue of having located sites that satisfied enough of these criteria to warrant acquisition, our respondents were very fortunate indeed.

V. ACQUISITION OF PROPERTY AND TENURE

Whatever the role good fortune may have played, the path to property and home ownership was long. As we indicate in Table 5.1, respondents resided in the city for considerable time before acquiring their current properties. Whether their prior tenure status had been that of living free with other family members, of land or home owner, of longer-term renter, or of monthly renter, their lengths of residence in the city ranged from 17 to 23 years on average, and 3 years minimum. Along the way they had moved from one dwelling to another at an average rate of once every 6 to 12 years.

In general, theirs was a predictable course of housing mobility involving, as outlined earlier, shifts from monthly to longer-term rental and from this last to ownership, or shifts from living with family (as dependents or as guests -- a helpful way to save up funds for construction) directly to ownership. The course of mobility was less predictable among households that previously owned dwellings. Of the 12 cases providing useful information, 2 households still owned their previous dwellings and collected rents from them, and 4 sold their units and used the proceeds to acquire land and build new homes. For them the course of housing mobility was normal. Among the other prior owners, however, 2 households (one of which had squatted) had their homes "taken" by local

TABLE 5.1: RESIDENTIAL STATUS OF HOUSEHOLDS PRIOR TO OCCUPANCY OF CURRENT DWELLING

Status at Previous House	Share of Households	Years in Current House	Years in City Before Acquiring Current House (average) (minimum)		Number of House Changes Before Acquiring Current Dwelling	Frequency of House Changes (years)
lived free	14.0%	2.3	17	4	2.6	11.0
land or home owner	17.6%	3.3	20	4	3.2	12.0
12-month renter	11.8%	1.8	23	3	4.8	9.1
6-month renter	42.5%	3.3	20	3	6.9	5.9
monthly renter	14.1%	4.5	17	7	3.3	9.4

powers (i.e., stolen by Macoutes or others of the same ilk), another 2, both squatters, saw their homes demolished by similar powers, and the remaining 2, renters of state land, lost their homes by fire. The current dwellings of these six households were less in the nature of upward housing mobility and more in the nature of recoveries of lost ground.

Locating Properties

Whatever the positive or negative circumstances leading them to search for properties may have been, our data indicate that households located dwellings or land primarily through friends and acquaintances (64% of the cases), and to a lesser extent through members of their extended families (11%). Another 14% hired agents or "courtiers" to act on their behalf. The remaining 10% were not even in the market for property; they simply had the luck of inheritance, receipt of a gift, or other form of endowment.

With information about available properties thus flowing through the city in much the same fashion as other day-to-day data, such as information about prospective jobs or clients, the capacity of households to access dwellings or land is largely shaped by the size and spatial distribution of the information network to which they are attached. If they or the network are not well-connected, or if the information they receive is unsatisfactory, they have recourse to professional agents who operate in the market for smaller properties in fashions identical to real estate brokers dealing with larger holdings in what is sometimes called the "formal" market. If as many as 14% of all transactions during any given period of time are indeed brought to fruition by such agents, one may surmise that there are a large number of them at full- or part-time work in the city. Whether our respondents encountered difficulty in identifying suitable properties once they initiated the search is unknown, but one can surmise that the existence of a profession that gears itself to selling market information is likely to be helpful, and that the ability of most respondents to find property without reliance on these professionals, among other things, suggests that their particular information networks operated reasonably well.

Establishing Security of Tenure

About 65% of the households reported living on private land, and the rest on public land. Unfortunately, without a land registry to verify responses, these reports remain ambiguous. There is no reason to doubt respondent truthfulness, but the legal status of property is not always clear to those who live on it. For example, a piece of public land may have been rented to a farmer long before the city encroached upon it. Without witnesses about to contravene the statement, that farmer or his descendants could well claim ownership, and thus give the impression of a private holding. For all intents and purposes it might as well be regarded as that.

Conversely, and common practice during the last several decades, a private parcel may have been seized by government and then leased to someone as part of the "private domain of the state" (as distinct from another category called the "public domain of the state" which covers all lands ceded by the state to itself at Independence). Again, without evidence to contravene the argument, households might regard this as public land even though, either with respect to the original owner or with respect to the "someone" with the government's lease, it is essentially private. Indeed, the only instances where a report of occupancy of public land could be given substantial legal credence were for the homes built on steep hillsides (e.g., Figure 5.1), ravines (e.g., Figure 5.2), and in marshlands along the coast. By law these are non-construction zones, which no one really cares too much about, designed to protect the drainage basins and coastlines. As such, they are clearly "public." Beyond these, what is public or private is what the people believe or decide it to be. It has little practical bearing on their own tenure status.

As regards that status, six households (or 7% of home owners in the sample) claimed land ownership, four stating that they had purchased plots for an average of \$10.00 per m² and two claiming to have received them as gifts. Three in the first group and both in the second had papers to prove their claims. Implying but not claiming ownership were another twelve families (14%) who had "taken" or squatted upon the land. Not having been on it long enough to establish the legacy of ownership, their status was ambiguous.

The remaining households were either living on land owned by someone else free of charge (4%), or were among the

Figure 5.1: House Construction Down a Hillside

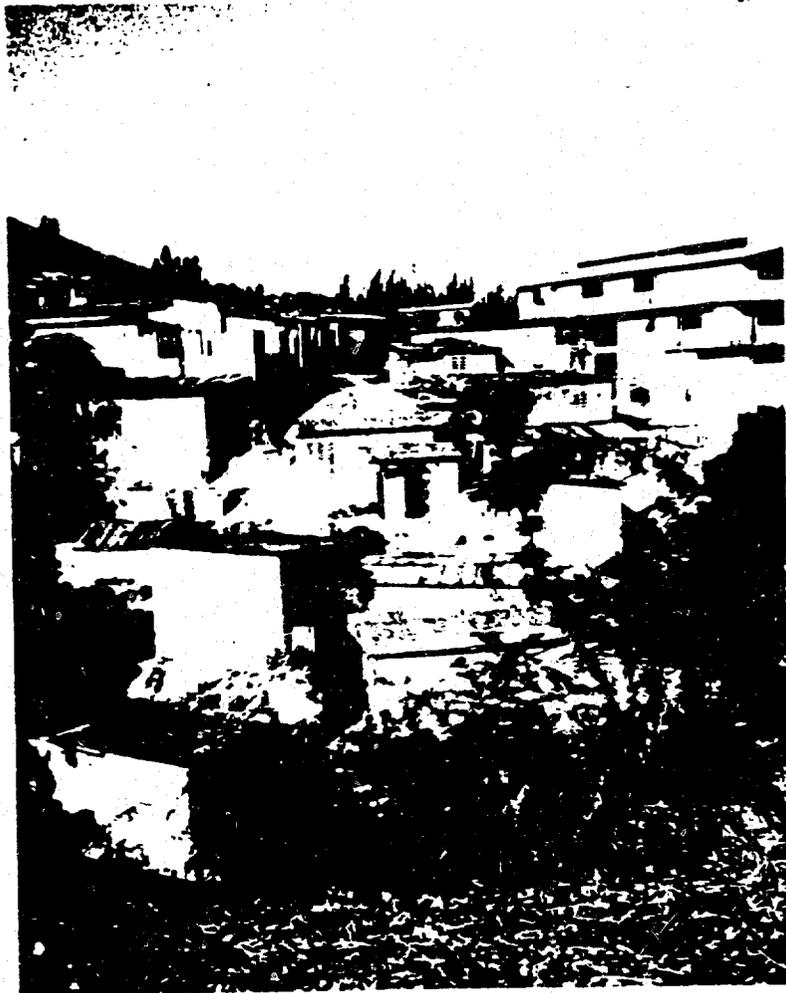


Figure 5.2: House Construction at Base of Ravine



72% leasing it from year to year at an average rent of \$70. Within this last group 56% were paying less than \$50, 22% between \$50 and \$100, and the rest more than \$100. In unit area terms this worked out to an average rent of \$1.20 per m², distributed as 17% paying \$0.50 or less, 44% paying \$0.50 to \$1.00, 12% paying \$1.00 to \$1.50, and the rest paying more.

This dominance of leaseholding in the acquisition of land finds much of its explanation in the difficulty that households have in not only finding a parcel for sale, but also, and for reasons that will become evident momentarily, in amassing the resources to simultaneously purchase land and build a dwelling on it. Even if families were to find a lot of, say 40 m² at the price of \$10 per m² noted above, the required outlay of \$400 in cash would put a significant obstacle in the way of many because the cost of erecting a rudimentary durable dwelling of 20 m² would require a further outlay of about \$600. There being many more families with access to \$600 than to \$1000, the basis for interest in leasing is clear. Moreover, leasing arrangements often contained explicit purchase options (26% of the pertinent cases) or, if they did not, others carried with them "buying price" clauses wherein the leaseholders had first claims to purchase the land if and when the owner decided to sell it. In these instances the lease constituted something of a deferred payment or simple-interest mortgage plan for purchase, with a "balloon" payment due at some specified or unspecified future date. But in most cases leases were not of this form. Rents, at least in principle, were payable in perpetuity.

But why the need to acquire land and build at the same time? Part of the answer resides in the opportunity cost of paying rent for a dwelling unit in one place while leasing a property elsewhere. In the typical scheme of things, households were paying an average of \$200 per year in dwelling unit rent prior to obtaining their properties, or the equivalent of \$17 per month. Paying \$70 in advance for a one-year land lease would have had the effect of raising rental outlays by \$5.80 per month, or 34%. That was a lot to pay for "nothing." And every monthly dwelling unit rental payment of \$17 represented a draw-down of 2.8% against the \$600 cost of building a house. Or, to simplify matters a bit, a household would pay \$200 for dwelling rent and \$70 for land rent if it did not invest the \$600 in building until a year later -- a total outlay of \$870. Alternatively, if it could complete construction within six months of obtaining the land lease it could save \$95, or 11% of the

hypothetical figure of \$870. Better yet, if it could reach a stage of partial construction sufficient to shelter household members in some sort of acceptable way within one month, the saving would be \$175 or 20%. When income is low savings of 11% or 20% tend to be very important. And the higher the amount of dwelling unit rent relative to the cost of construction, the greater the incentive to build quickly.

Another part of the answer lies in the role that having a dwelling up and occupied plays in assuring security of tenure. Before and during the survey we noted that leaseholders had for the most part made relatively substantial investments in durable construction. As discussed further below, almost 80% of the structures were in cement block or rock. To undertake such efforts households would have had to feel that they were secure on their parcels, and that landowners would not force them out at the close of an annual lease. Indeed, in response to a question about whether they feared repossession by land owners, only 12% of those who answered the question expressed such fear. In some instances, insecurity stemmed from lack of outright land ownership, while in others it was because the government "always" evicted poor people or because there were too many different individuals around claiming to be land owners. There was no obvious pattern in explanations for insecurity.

One thing clear was that many squatters did not like the question. Although constituting a very small share of the sample, squatters constituted half the total number of households that declined to answer. Because squatters avoiding the question had all erected substantial dwellings with investments ranging from \$1700 to \$3500, as distinct from the squatters investing \$140 to \$1450 who did answer the question (they were evenly split on the issue), the scale of construction suggested not only that they felt secure on their parcels, but also that several or all of them were among the locally-powerful "someones" who could invade properties without undue fear of negative repercussions. They may or may not have been former Macoutes, but their situations were consistent with the possibility that political position and connections provided all the security they needed at the time they squatted and built.

But most people did not have the luxury of political influence. Feelings of security had to arise from other sources. The most common source, reported by 27% of households, was a belief that land owners would have to pay

them damages equivalent to the replacement cost of the dwelling before they would leave. The implicit argument here was that the replacement cost of a durable unit made of cement block was high relative to the value of the underlying land, and that as a consequence it would make little sense for an owner to evict them. Thus the unit itself served as assurance of tenure. This reasoning contributes to an understanding of the need, suggested earlier, for households to build dwellings quickly and to build them of durable materials.

In this respect the price of security may be high for many households. It obliges those who might otherwise build wattle or wood homes with given budgets, and then perhaps later upgrade them as resources allow, to build smaller units with more costly materials immediately -- trading space for security. The price of security also serves as a constraint to those who have the resources to rent land but not enough to build upon it right away. A family either has the funds to rent, build and assure tenure in one swoop, or it does not. The extra investment needed to assure security therefore limits home ownership to a smaller share of the population than might otherwise be the case.

In any event, other reported sources of security included: the existence of a purchase option in the lease (9%); the very fact that the homeowner was a leaseholder (15%); having a land rent receipt in hand (4%); and a long string of other responses all conspiring to suggest that as long as a household paid its rent when due, it was inconceivable that a landowner would evict a tenant without paying damages. Or, as some suggested in different words, a landlord attempting such an action would bring upon himself a considerable amount of trouble -- not only from the tenant, but also from all the tenant's neighbors who would share with the tenant in question belief in the fundamental social convention that such things are simply not done. Implicit here is the notion that another assurance of tenure is the presence of proximate neighbors who know each other well enough to defend each other's home ownership rights should the need arise. The priority accorded to good neighborly relations, discussed in the preceding section, therefore involves considerably more than opportunities to chat.

None of this should imply that households act purely on the basis of faith in land owner behaviors and community support in crisis. Advance research is fundamental to the lowering of risk. For example, we asked dwelling renters in

our sample to list up to three factors in order of importance that would help them decide whether a prospective lease was a "good" (i.e., secure) contract. Of the 14 people who answered, six put highest priority on prior information they would obtain, from people living around the prospective site, about the property owner and the land. Another four placed such information in second rank. Other responses included: discovering whether the individual offering the lease was the true owner; checking to see whether the land was caught up in inheritance problems; meeting the land owner; verifying the land owner's papers; obtaining counsel from a lawyer, notary, or other "experienced" person; having a lease notarized; and so on.

These responses, drawn from a group of people that had no prior experience leasing land, suggested that many or most inhabitants of the city understood that there were risks involved and that research of some kind was mandatory to lower them. The responses also provided instruction on exactly what households believed those risks were likely to be: dishonest or malicious property owners; impostors; and legal entanglements making the ownership status of land uncertain.

To the extent that written law is usually little more than the readable version of commonly-accepted social convention (or at least subordinate to convention when written forms are inconsistent with convention); that unwritten laws and contracts carry considerable weight in a society still largely illiterate; that lawyers, notaries, and their papers are costly; that there is no absolute reference like a land registry to prove property ownership; and that in Haiti evictions have had a historical tendency to move ahead successfully under the influence of public or private guns irrespective of the status of legal documents and laws, the households we interviewed appeared to have done or would do everything that was possible to do within their means to assure security of tenure. Whether or not truly secure, they had every right to feel as safe on rented land as they might have felt with written titles.

Indeed, in answer to another question, over half the leaseholders said that they were not interested in purchasing the land under their houses, or any other property for that matter. In the Haitian context, there was little to gain in spending money for a piece of paper. The practice of leaseholding, properly executed, offered sufficient security to warrant investing in construction of a house.

VI. CONSTRUCTION

In the event, our sample of households acquired parcels of land that averaged 62 m^2 in size, varying from less than 25 m^2 (39% of all cases) to over 150 m^2 (11%). Between these extremes, 25% obtained 25 to 50 m^2 , 21% occupied 50 to 75 m^2 , and the rest 75 to 150 m^2 . Against this skewed distribution, the 62 m^2 average tended to exaggerate the size of typical parcels. Most were in the range of 20 to 40 m^2 .

A quarter of the dwellings that households erected on these parcels covered 25% or less of the underlying land, 19% occupied 25 to 50%, 22% covered 51 to 75%, and the remaining 34% completely covered their plots. The dwellings themselves averaged 23 m^2 in interior, habitable area. But as for plot size, the average could mislead. The typical range was 10 to 20 m^2 , or approximately half the size of land parcels (Table 6.1).

With 2 m^2 per person representing the point at which occupants have only just enough room to lie down on the floor with a few centimeters between them, Table 6.1 makes evident that almost half the households lived in very cramped quarters. Two square meters per person, or perhaps a bit less, may represent what households viewed as the absolute minimum standard of habitable area that they would be willing to occupy; at least for a while. In any case, 2 m^2 was a substantial improvement over the 1.0 and 1.4 m^2 averages for St. Martin noted in Section III. And for those in households that did not increase significantly in size in the interim, 4 m^2 was a major improvement for the many in this category reporting that their previous residences were smaller than their current ones.

Types and Costs of Construction

The dwellings fell into six more or less distinct construction categories, based on the materials used for walls, roofs, and floors, and were representative of the bulk of new housing types being erected in the city (Table 6.2).

The most costly method was construction with reinforced concrete posts (made on site) supporting a reinforced concrete roof, and using block as non-structural filler. The average unit cost of \$125 per m^2 was more than twice that

TABLE 6.1: DISTRIBUTION OF COVERED DWELLING SPACE

<u>Total Area of Dwelling</u>	<u>Share of Households</u>	<u>Living Space per Person</u>	<u>Share of Households</u>
10 m ² or less	15%	2 m ² or less	13%
10.1 to 15 m ²	24	2.1 to 4 m ²	31
15.1 to 20 m ²	23	4.1 to 6 m ²	20
20.1 to 25 m ²	11	6.1 to 8 m ²	13
25.1 to 30 m ²	10	8.1 to 10 m ²	10
30.1 m ² or more	23	10.1 m ² or more	13

TABLE 6.2: DWELLING TYPES AND UNIT CONSTRUCTION COSTS

<u>Number of Dwellings</u> ¹	<u>Construction Cost</u> ²	<u>Construction Material</u>		
		<u>Wall</u>	<u>Roof</u>	<u>Floor</u>
7	125/m ²	Block	Concrete	Cement
37	60	Block	Metal	Cement
10	30	Block	Metal	Earth
4	22	Stone	Metal	Earth
5	18	Wood	Metal	Earth or Cement
10	14	Wattle	Metal	Earth or Cement

¹ Includes only units built in last five years.

² Costs adjusted to 1987 prices for construction materials.

of the next-best alternative that did not use reinforced concrete (i.e., block wall, metal roof and cement floor). Main factors contributing to the higher unit cost were additional materials, principally cement, reinforcing bars and sand; and additional paid labor and supervision costs. Households viewed this type of highly durable housing as the ideal to which they aspired. But faced with prohibitive initial investment costs, most elected to build more simply.

The most common of the simpler approaches, adopted by half the sample households, was use of cement block walls above a cement floor to support a wooden roof structure covered by corrugated metal sheets. The average construction cost in this instance was \$60 per m². However, notwithstanding the standard nature of this method of construction, costs could vary substantially around the average.

For example, a detailed analysis of 8 dwellings of essentially the same type, and requiring an average of \$56 per m² to construct, reveals that cost could vary by 25% or more on either side of the mean, from a low of \$39 per m² to a high of \$67 per m² (Table 6.3). Some of this variation can be explained by differences in quantities of materials used for foundation, floor and walls arising from: variations in wall heights, requiring an extra course of two of block; variations in number of rooms requiring additional materials for partition walls; variations associated with use of more block and less stone for foundations (e.g., cases d and e in Table 6.3); variations associated with making blocks on site (e.g., case a) rather than hauling them in by truck; needs for more or less material due to site conditions, such as extra sand required to compensate for losses incurred through vandalism and rainstorms (e.g., case b); variations in cement-sand mixing ratios used by workers in making blocks, mortar or foundations; variations associated with decisions about whether to cover exterior or interior walls immediately with cement plaster (as did cases a, b and e); variations in decisions regarding the extent to which stone foundations were allowed to rise high enough to constitute major portions of the walls of a dwelling (in case h, half the exterior walls were upward extensions of the foundation); and similar variations in other decisions and techniques.

Such differences tended to offset each other, however. The average cost of materials for foundation, floor and walls was \$29 per m². Ignoring case h because of its special nature, the variation about this figure limited

TABLE 6.3: UNIT COSTS FOR CEMENT BLOCK DWELLINGS WITH CEMENT FLOORS

case:	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Row Average
Number of Rooms	12	3	3	3	2	2	2	1	3.9
- room size (m ²)	10	9	9	10	11	11	8	10	9.8
Total Cost	\$6,836	\$1,868	\$1,653	\$1,613	\$1,189	\$966	\$836	\$391	\$2,137
- area (m ²)	120	28	27	30	22	22	16	10	37.9
- cost per m ²	\$57.0	\$66.7	\$61.2	\$53.8	\$54.0	\$43.9	\$52.2	\$39.1	\$55.5
A. Foundation, Floor, Walls (\$/m²):									
cement blocks	6.0	11.0	12.6	18.9	14.5	9.5	10.3	6.3	11.8
portland cement	19.6	7.3	8.4	6.5	12.5	5.9	7.1	6.0	9.6
sand	4.5	8.0	3.3	2.9	3.3	6.1	5.5	4.0	4.8
stone	2.1	4.3	3.1	1.7	1.0	3.2	3.8	4.6	2.7
Subtotal	\$32.2	\$30.5	\$27.5	\$30.0	\$31.4	\$24.8	\$26.7	\$20.9	\$29.0
B. Roof (\$/m²):									
corrugated sheets	3.0	5.3	5.2	3.1	1.5	5.8	3.7	10.4	3.9
lumber	2.5	2.1	3.5	2.2	2.3	5.0	1.6	2.0	2.7
Subtotal	\$5.5	\$7.4	\$8.7	\$5.3	\$3.7	\$10.8	\$5.3	\$12.4	\$6.7
C. Openings and Binders (\$/m²):									
doors, frames, etc.	3.0	0.8	5.7	1.2	0.0	0.0	1.6	2.0	1.8
nails, locks, etc.	1.1	0.2	0.9	0.2	0.9	0.4	0.2	0.3	0.6
reinforcing rods	1.1			4.9	1.6	0.6			2.0
Subtotal	\$5.2	\$1.0	\$6.7	\$6.3	\$2.5	\$1.0	\$1.8	\$2.3	\$3.5
D. Miscellaneous (\$/m²):									
water	1.7	8.8		3.5			7.2		5.3
paint		0.4			0.5				0.5
Subtotal	\$1.7	\$9.1		\$3.5	\$0.5		\$7.2		\$4.4
Total Material Costs	\$44.5	\$48.1	\$42.9	\$45.1	\$38.1	\$36.6	\$41.0	\$35.6	\$42.3
E. Labor (\$/m²):									
masonry			15.2	5.3	9.1	7.3	9.4	1.5	9.2
framing (roof)			3.1	3.3			1.9	2.0	2.8
cabinetry (doors)					6.8				6.8
other (unallocated)	12.5	18.6							15.6
Total Labor Costs	\$12.5	\$18.6	\$18.3	\$8.6	\$15.9	\$7.3	\$11.3	\$3.5	\$13.2
Total A+B+C+E (/m²)	\$55.3	\$57.5	\$61.2	\$50.3	\$53.5	\$43.9	\$45.0	\$39.1	\$52.4
- % labor	22.6%	32.4%	29.9%	17.2%	29.7%	16.6%	25.0%	9.0%	24.8%

[Note: Totals and subtotals may not add up exactly due to rounding]

itself to a \$4 per m² range, or about 14% on either side of the mean, from \$25 to \$33 per m². That is, notwithstanding all the differences in construction, the unit cost of basic materials for this type of dwelling remained stable.

More of the variation in total unit cost was associated with roofing materials. Here the cost could vary from less than \$4 per m² to over \$10 per m², or more than 40% around the mean of \$6.70 per m². Except for case h (where the household used much of the corrugated metal to erect a fence in front of the dwelling and thereby create a courtyard), variation in the cost of metal sheeting was largely a function of the quality of metal purchased (e.g., case e purchased used sheets) and the degree of overlap between panels that households adopted for their roofs. Similarly, variations in lumber cost reflected decisions about quality (e.g., local poles versus imported lumber) and quantities necessary for longer or shorter spacing of beams, rafters and other elements of the support structure. Thus case g relied principally on poles to yield a relatively light structure while case f used a dense spacing of imported lumber to provide a more durable one.

Of considerably greater influence on unit costs were household decisions concerning the amount and quality of nails, locks and other hardware; the number and quality of wooden doors, windows and their frames; the quantity of reinforcement used for tie beams in the foundation and/or upper course of blocks (if households used any); and the quantity of reinforcement used in walls, corners and posts in preparation for laying a future reinforced concrete roof (e.g., case d). These variations resulted in cost additions ranging anywhere from \$1 per m² to almost \$7 per m². A comparable or even greater impact could sometimes arise from site conditions. Scarcity of water at building sites, especially those in newly urbanizing areas of the city, could add up to \$9 per m² to costs.

Finally, Table 6.3 suggests that the single-most important contributor to variation in cost was the amount of paid labor incorporated into the construction process. In this instance costs varied around an average of \$13 per m², from a low of less than \$4 per m² to a high of almost \$19 per m², depending upon how much of its own labor, or the unpaid labor of friends and family, a household was able or willing to invest in construction.

Summing of the lowest and highest subtotals and labor costs in Table 6.3 suggests that the cost of a dwelling of

this type could, in principle, vary from a low of \$34 per m² to a high of \$75 per m². Further skimping on the low end and additional refinements at the high end might extend the range, but the essential observation remained that cost flexibility within this type of construction made it accessible to a relatively broad spectrum of income groups. The variations also made it possible for households to substitute between dwelling size and construction quality as socioeconomic circumstances or site conditions required. For a particular budget and site constraint, houses could be smaller and of higher quality or larger and of lesser quality.

Still, there were limits. A one-room, 10 m² dwelling at \$34 per m² required an outlay of \$340. For households not quite able to spend such an amount immediately, or of such size as to require more than 10 m², the next closest approximation involved foregoing the cement floor until a future opportunity, and building with block above an earth floor. This approach to construction averaged \$30 per m² (see Table 6.2), within a range of about \$22 to \$38 per m².

A comparison between cases i and j in Table 6.4 highlights some of the ways through which costs for this type of construction (or any type for that matter) could be rendered higher or lower. In case i (which like case a in Table 6.3 had been built for rental to others as well as owner occupancy), the household purchased materials for foundation and walls in much the same manner as did those in Table 6.3 discussed above, but the saving in cement and sand that would have been required for a cement floor lowered the cost to less than \$24 per m². Further skimping on roofing materials, openings and binders, and labor brought the overall outlay, excluding water, to about \$34 per m² -- a substantial saving relative to the cases described in Table 6.3 but still not a significant saving relative to standard approaches.

In contrast, case j drew its costs down to less than \$28 per m² not only by skimping on the roof, openings and binders, and labor, but also by using sand already on the site rather than purchasing better-quality material from quarries. The trough for the foundation and the hole for the latrine offered up enough useable material for purposes of mortar. Unfortunately, even though further skimping and saving might drive costs down to the region of \$22 per m², it could not drop much further than that because of the constraining effect of the price of cement blocks. Further

TABLE 6.4: UNIT COSTS FOR OTHER DWELLING TYPES

case:	(i)	(j)	(k)	(l)	(m)	(n)	(o)
wall:	block	block	stone	wood	wood	wattle	wattle
floor:	earth	earth	earth	cement	earth	cement	earth
Number of Rooms	4	1	4	1	1	1	2
- room size (m ²)	16	9	9	8	9	9	4
Total Cost	\$2,294	\$251	\$668	\$107	\$178	\$132	\$94
- area (m ²)	65	9	37	8	9	9	8
- cost per m ²	\$35.3	\$27.9	\$18.0	\$13.4	\$19.7	\$14.7	\$11.8
A. Foundation, Floor, Walls (\$/m²):							
cement blocks	8.5	10.0	1.3				
portland cement	7.4	2.7	1.8	0.8	1.3	1.0	
sand	3.2		1.6	1.1			
stone	4.4		1.1				
lumber				4.0	2.9	2.2	3.0
Subtotal	\$23.5	\$12.7	\$5.8	\$5.9	\$4.2	\$3.2	\$3.0
B. Roof (4/m²):							
corrugated sheets	2.9	3.2	2.2	4.5	8.2	5.8	5.3
lumber	1.1	1.1	1.8	1.6	1.1	1.1	1.8
Subtotal	\$4.0	\$4.3	\$4.0	\$6.1	\$9.3	\$6.9	\$7.1
C. Openings and Binders (\$/m²):							
doors, frames, etc.	0.2	2.2	1.0	1.0	0.5	0.6	1.1
nails, locks, etc.	0.3	0.6	0.3	0.4	0.1	0.1	0.7
reinforcing rods	0.7	0.7					
Subtotal	\$1.2	\$3.4	\$1.3	\$1.4	\$0.6	\$0.7	\$1.8
D. Miscellaneous (\$/m²):							
water	1.4						
Subtotal	\$1.4						
Total Material Costs	\$30.1	\$20.4	\$11.0	\$13.4	\$14.2	\$10.8	\$11.8
E. Labor (\$/m²):							
masonry	3.7	7.4	5.5			1.1	
framing (roof)	0.3				5.6	2.8	
cabinetry (doors)							
other (unallocated)	1.1		1.4				
Total Labor Costs	\$5.2	\$7.4	\$7.0	\$0.0	\$5.6	\$3.9	\$0.0
Total A+B+C+E (/m ²)	\$33.9	\$27.9	\$18.0	\$13.4	\$19.7	\$14.7	\$11.8
- % labor	15.2%	26.6%	38.9%	0.0%	28.2%	26.5%	0.0%

(Note: Totals and subtotals may not add up exactly due to rounding)

lowering of construction costs required use of other materials for walls.

One such approach involved use of stone held in place with mortar. This is a relatively new method of construction in the city. Such houses were rarely encountered in the 1976 study of the city. Nor in 1976 was it possible to travel rural areas and see piles of rocks for sale on the roadside, let alone the large quantities observable in recent years.

How or when stone came to be viewed as suitable material for house walls eludes clear answer. Their use in the manufacture of foundations and retaining walls is traditional, as is their use in non-retaining walls to demarcate property limits. It is possible that recent expansion in building activity, and therefore in construction of stone foundations and walls, may have engendered the notion among construction workers and households that what worked underground could work as well above-ground and that all one need do, as noted earlier for case h in Table 6.3, is to raise the foundation wall to whatever height seems suitable. Moreover, stone is readily available in river beds, ravines and close below the surface of open lands. Households living near such sources of material could collect all or most of the necessary quantities on their own, or pay some casual laborer to collect it with a wheelbarrow at a cost considerably less than that demanded by truckers hauling from quarries.

Whatever the origins may be, case k in Table 6.4 highlights the cost advantages to be extracted by this method of construction when a household can collect a significant share of the required stone with its own labor. Specifically, the out of pocket cost for foundation and wall materials came to less than \$6 per m², and the outlay for the entire enterprise, including almost 40% for labor to put up the foundation and walls, was \$18 per m². This figure was close to the lower end of the range of costs associated with building in stone.

Paralleling the movement from block to stone, any further lowering of unit costs required a shift to lightweight materials, such as wood or wattle. Adoption of these methods could lower average construction costs to \$18 per m² and \$14 per m² respectively (Table 6.2). Although the cost of materials per linear meter of cement block wall tended to be about the same as with new wood, as noted in Section III, the basic cost advantages of building in wood

were that it did not require foundations; that households could reduce costs further by purchasing used or scrap planks, usually available at about a quarter the price of new lumber; that households could contribute more of their own (or friend and family) labor to construction because of the reduced skill requirements; and that any requirements for paid labor could usually limit themselves to laying cement floors or putting up roofs. Through such advantages cases l and m in Table 6.4 were able to drop construction costs to \$13 and \$20 per m^2 respectively. Similarly, cases n and o were able to use wattle to arrive at respective construction costs of \$15 and \$12 per m^2 .

In general, therefore, households had considerable latitude for selecting construction types to fit their available resources and, depending on site conditions and their preferences, to find an optimum between quantity of space and quality (or durability) of construction within fixed budget constraints. Across the range of possibilities, the same \$1000 could buy 70 m^2 of wattle housing, 33 m^2 of simple cement block housing with earth floor, 16 m^2 of better block housing with finished floor, or 8 m^2 of top-of-the-line reinforced concrete.

Construction Processes

Notwithstanding this range of options, 60% of households with less than 4 m^2 per adult, and 80% with less than 2 m^2 , had elected to go with block. They were clearly sacrificing space for durability. It may well have been that some of them preferred durability to living space and did not mind being cramped, or that some expected to expand their dwellings eventually, a matter we will come to forthwith. For many, however, choice of construction method seemed guided to a very considerable extent by the need to assure tenure; a substitution of space for security more than for durability.

Certainly, the need by households to build "something" upon newly-acquired parcels and to occupy them as quickly as possible was clear. Once a plot arrived in hand, construction moved forward briskly, with hired workers, household members, the extended family and friends contributing varying amounts of labor to the process. These variations in labor use depended to a important degree on the type of construction being pursued.

Table 6.5, for example, shows that of the 27% of houses built mainly by household members, with or without help from family and friends, 44% were made of cement block. As the reported use of hired workers increased, so too did the share of houses made with block. In many instances households may not have wanted or been able to contribute more of their own labor to construction, or might not have been able to find family or friends with the time or interest to help out, but the systemic quality of the relationship between use of hired labor and block suggests that the skills required to build with cement, particularly in regard to laying foundations, floors and walls, was less common among households (and their networks of relatives and friends) than the skills required to construct in wattle, wood, or other materials.

Or, looking at this another way and recalling a point made earlier, a decision to build with durable materials usually added a very sizeable paid labor expense to the cost of construction. Most households had to pay for the skills of carpenters to put up roofs or cabinet makers to install wooden windows and doors. But as Tables 6.3 and 6.4 indicate, even though paid labor averaged about 25% of costs no matter what type of construction was involved, unit costs for woodwork trades were usually much less than for masonry trades.

Whatever the particular arrangements of labor might have been, work on a house began immediately upon acquisition of land. Some 34% of the dwellings were done (i.e., up to the point where they might look relatively "complete" to an outside observer) within six months. Another 27% took up to a year to reach a semblance of completion, and 21% took up to two years. In only 11% of the cases did construction drag on for more than three years. This is not to suggest, however, that the dwellings went unoccupied during the erection phase, or that what looked complete was in fact complete.

On the first matter, one may note that the most common method of construction involved immediate laying of foundations, walls and a temporary (albeit often permanent-looking) roof for one room. Some 62% of dwellings went up this way, with households occupying the room as soon as the roof was in. Once in, construction would in many instances continue on extending foundations and adding rooms one by one. That part of the process could drag on for a long time.

TABLE 6.5: SOURCES OF CONSTRUCTION LABOR

<u>Construction Labor Provided Mainly By:</u>	<u>Share of Houses</u>	<u>Share of Cement Block Dwellings</u>
Household members, family and/or friends:	27%	44%
Household members and hired workers:	49	71
Hired workers only:	24	86

Immediate occupancy followed by slower extension was also a characteristic of the 13% of households that laid foundations for the whole house at once and then put up only one of several pre-planned rooms. The building of walls on the exposed foundation for additional rooms proceeded at a more leisurely pace. For other households, variations on this theme included the digging of a latrine (or well or foundation trough) from which to extract soil to put up a (temporary or permanent) wattle house; using such a house or one made of scrap for family occupancy and storage of materials accumulated gradually over time; eventual use of the materials to build a more durable structure beside or around the first house, or sometimes using it to change the walls of the existing structure one wall at a time; and building one room for immediate rental in order to use the gain to purchase materials for a more durable owner-occupied structure next door. But no matter the method of construction, every household put something up and occupied it immediately.

On the second matter, this diversity in construction processes made it difficult to specify the exact point along the way where one could consider a house complete. As long as a home owner still had land around the unit to add at least one room, and as long as it was not yet fully composed of block walls (not to mention possibilities for upgrading the flooring material), it could very well remain "in progress." With scope for expansion or upgrading, there was also scope for substantial increases in the total cost of a dwelling over time. Thus, for example, it was not surprising to discover that houses costing \$3000 or more (up to the time of the survey) took an average of 35 months to construct; those costing between \$1500 and \$3000, 20 months; those between \$500 and \$1500, 16 months; and those under \$500, 10 months.

There was considerable variation about these averages, but the pattern supported the idea that many smaller and/or flimsier shelters would gradually get bigger and stronger with the passage of time. How many was uncertain, but if land in hand represented the principal long-term constraint, and if 8 m² represented the minimum necessary area required to add one room, then 55% of sample dwellings had space to expand by at least one room. Another 11% without land for expansion had scope for upgrading. In principle, 66% of the households could still continue to invest in shelter. Such investments would in most instances take considerable time to run their courses because costs were high relative to

income and because the financing of such costs was usually a major challenge.

VII. FINANCE

Expenditures for shelter are almost as divisible as for most other basic items in the city. Viewed as "time-space packages", rudimentary shelter is available for hire by the half-day, day, week, fortnight, month, six months, and year; and for any of these temporal variants, it may also be acquired in lots of 1 m² (e.g., a corner of a room) upward. Thus something that calls itself housing, even if only of the most rudimentary variety, can be made available at terms to fit a very broad range of household budgets (though by no means all of them). However, in the retail-wholesale continuum that seems to apply to most basic goods and services, households obtaining smaller packages pay higher unit costs for housing than those with larger packages. They thus have considerable incentive to find means to finance ever-larger packages, particularly with respect to renting for longer time durations because the cost gains are more significant than gains from renting larger space. They therefore also have incentive to save for this purpose, either by accumulating the necessary amount "up front", or by borrowing the amount and then paying it back afterwards.

Unfortunately, with income low relative to the basic costs of living, households face major challenges in saving enough to shift from the particular time-space packages they already have to the next, larger level. There are always competing uses for "surplus" funds that may come their way. More food, water, school tuition, clothing, reinvestment in self-employment activities, and the like often take precedence over longer-duration rental, larger space, or better quality. Moreover, such savings as families might be able to put away or plan for are frequently threatened by misfortune, such as outlays required to treat illness. Accumulation of savings to finance rental of larger time-space packages, let alone housing purchase or construction, is ordinarily a slow and difficult process.

Many people nevertheless find themselves in positions to succeed in putting together the necessary resources. For example, all the factory workers in our sample were able to reach the upper temporal limit for rental i.e., the ability to pay 6 or 12 months rent in advance. Beyond any inherent advantages of providing greater surplus income that higher

wages might have offered, factory employment provided workers with two significant opportunities: regularity of income receipt and access to a pool of collective worker savings called "soldes".

Regularity meant that workers did not need to hold on to surplus income in order to meet unforeseen eventualities. They could part with some or all of it while resting assured that a next wage payment would be forthcoming in a week or two. If necessity called in the interim, they could borrow with confidence in their ability to reimburse the loan after receipt of the next payment. The solde, a form of saving common to many countries wherein each worker in a savings group regularly places a fixed portion of every salary payment into a common pool and then later withdraws the entire amount of funds (i.e., his or her "hand") from the pool on a regular rotation or on an irregular basis (if other members of the group agree), meant that each worker had access not only to a useful instrument for saving cash, but also to a vehicle for pulling out the relatively large amounts needed for advance payment of longer-term rent without incurring an odious debt burden.

As a hypothetical example, one may imagine a worker paying \$40 in monthly rental who desires \$160 to pay 6 months of that rent in advance (and thereby obtain a 33% discount on it) but who cannot set aside more than \$40 each month for housing. Without access to a solde or to low or interest-free loans, the worker would have to borrow at the commercial average of 20% per month. Typical terms for such a loan would require payment of \$32 each month in simple interest until return of the principal of \$160, or payment of the accumulated interest as a lump sum upon return of the principal. But with only \$8 left over after interest, the individual would have accumulated no more than \$48 at the end of 6 months to reimburse the principal or to incorporate into the next \$160 rent payment that would be due. A second loan of \$112 to pay that rent would then drive the outstanding principal to \$272, and the monthly interest payment to \$54; rendering the worker worse off than before the first loan.

Alternatively, a less harsh (but also less common) 20% loan with combined principal and interest payments for a 6-month term would require a monthly outlay of \$48. But this would be 20% more than the individual could afford to pay. In contrast, a worker with the good fortune of finding and being allowed to join a \$10 per week solde with, say, a total of 13 members (i.e., offering a regular hand of \$130

every thirteen weeks) and all willing to exercise flexibility in allocation of hands could:

- a. borrow \$160 at commercial rates and prepay rent;
- b. contribute \$10 per week to the solde and obtain a regular rotation assignment to receive hands at weeks 13, 26, 39, 52, 65, 78, etc.;
- c. collect \$260 from advance receipt of two hands at the end of 8 weeks (e.g., by giving up rights to hands at weeks 13 and 39);
- d. pay back the \$160 in principal and the \$64 in accumulated interest for two months, while pocketing the difference of \$36;
- e. collect \$130 in the normal rotation at week 26;
- f. combine that hand with \$30 of the \$36 set aside in step d to pay the next rent installment due at week 26;
- g. collect \$130 in the normal rotation at week 52;
- h. combine that hand with the \$6 left over at step f and a new loan of \$24 to make up the \$160 for rent due at week 52;
- i. collect \$130 in the normal rotation at week 65;
- j. pay back the \$24 in principal and \$29 in accumulated interest for 6 months, while pocketing the difference of \$77;
- k. collect \$130 in the normal rotation at week 78;
- l. combine that hand with \$30 of the \$77 left over in step j to pay the \$160 in rent due at week 78; and
- m. leave the solde or remain in, but in either event set aside \$27 each month (or the equivalent from each hand) to accumulate for rent, use the remaining \$13 for anything else that might be important to the household, and take pleasure in the fact that the process of improving the economic characteristics of shelter has proven possible without incurring permanent debt.

Moving from the hypothetical to the empirical, Table

7.1 highlights the importance that access to this method of finance had for the factory workers. In 6 of the 14 instances, cases f through k, annual rent payments (all those \$300 or greater) or semi-annual payments (all those less than \$300) came entirely from solde withdrawals. In another 4, cases b through e, the solde provided substantial shares of the rents, with the first three of these supplemented by loans taken against assurance of future hands. Still, the table suggests that size of earnings and luck had salient roles to play in the process, as evidenced by the ability of two workers to accumulate and store cash amounts of \$200 and \$400 in strongboxes hidden in their homes (cases l and m), of one to take an unsecured loan of \$100 at 6% monthly interest (case a), and of another to have the fortune of receiving almost \$1000 as a gift.

But whether by one set of arrangements or another, the table makes clear that capacity (and willingness) to accumulate savings for up front payment, for loan reimbursement, or for some combination of the two, is the principal means of financing both current shelter arrangements and improvements upon those arrangements. And as Table 7.2 reveals, this fact applies as readily to home purchase and construction as it does to rent.

Investment in purchase and in construction of the houses discussed in Section VI and shown in Table 7.2 ranged from a low of \$95 for an 8 m² wattle/earth structure to \$10,600 for a 70 m² reinforced concrete structure. Excepting this last, the very largest investment purchased almost entirely out of a long-term mortgage loan from ONA (the only example of formal institutional finance encountered), over half the investments involved less than \$1000; and over 80% less than \$2500.

Financing of the investments derived entirely from up front family savings in a quarter of the cases, but among most of the other 75% it came from a combination of savings and loans. Table 7.2 indicates that the value of loans as a share of total investment averaged anywhere from 24% in the high investment range of \$5000 or more, to 53% in the low range of less than \$500. Because over 70% of households depended on loans to finance their investments, there was evidence to suggest not only that access to resources outside the household was important to the process of acquiring owner-occupied housing at every scale of investment, but also that the capacity to save for direct investment or for loan reimbursement out of almost any total amount of household income was fundamental. That is, as long

TABLE 7.1: METHODS OF FINANCING ANNUAL AND SEMI-ANNUAL RENT PAYMENTS

Case	RENT amount (\$)	SAVING		CREDIT					GIFT amount (\$)	
		amount (\$)	method	Amount (\$)	Monthly Payment	Total Payment	Term (months)	Monthly Interest		Source
a	100			100	20	120	6	6.0%	commercial	
b	500	300	solde	200	40	300	open	20.0%	commercial	
c	150	120	solde	30	30	30	1	0.0%	friend/family	
d	500	100	solde	200	0	250	6	4.2%	commercial	200
e	150	70	solde							80
f	400	400	solde							
g	140	140	solde							
h	140	140	solde							
i	300	300	solde							
j	100	100	solde							
k	250	150	solde							
l	200	200	strongbox							
m	400	400	strongbox							
n	995									

TABLE 7.2: PRINCIPAL SOURCES OF FINANCE FOR HOUSING INVESTMENT

<u>Size Range</u>	<u>Investment</u>		<u>Source¹</u>		
	<u>% of Households</u>	<u>Mean</u>	<u>Savings</u>	<u>Loans</u>	<u>Loans as % of Investment</u>
\$5000 or more	7%	\$6030	\$4700	\$1200	24%
\$2500-\$4999	13%	3300	2660	921	30
\$1000-\$2499	23%	1570	980	530	43
\$500-\$999	24%	670	475	340	46
\$499 or less	33%	220	155	110	53
Average ¹	100%	\$1550	\$1140	\$640	45%

¹Figures refer only to households in each row using savings or loans.

as one avoided imposing standards on what a dwelling was supposed to look like, the level of household income seemed less pertinent to the quest for home ownership than the capacity of a household to extract savings from that income.

Savings

For the 11 households in Table 7.3 who purchased their homes, 5 did so by financing an average of \$1650 entirely with up front savings (i.e., cases a through e). In the first three instances the bulk of savings came out of slow assembly of cash hidden within the home, accumulated at a rate of \$4.90 per week over 3 years in one case. In the other two instances savings were extracted from an employer-provided savings plan and from sale of prior investment in assets; specifically, 2 houses that the individual had built years earlier.

Among the other families in the table, neglecting the \$10,600 investment supported with the ONA loan which distorts averages, mean up front savings of about \$150 constituted 55% of total investment averaging \$280. In three households savings took the form of accumulated cash while in the others it came from sales. But whether constituting smaller or larger shares of investment, savings accumulation leading to eventual purchase was more difficult, or at least more time-consuming, when households still continued to pay rent. There being no instances where families could take possession of dwellings before paying for them in full, this method of obtaining a dwelling was less common than construction.

Turning to construction, Table 7.4 notes that of the 65 households which used some up front savings, 15 financed an average investment of \$1130 entirely by this method. In 11 of the 15 households (cases a through k), 60% or more of the savings took the form of cash. Of these, 5 households reported that they had collected and saved cash in substantial amounts before building in one fell swoop, and 6 reported that they had built "bit by bit" over time by accumulating smaller bundles of cash and then periodically spending them one by one on one after another small aspect of the construction process. But whether pursuing one savings-investment procedure or the other, the process was slow. Within a range of 1 to 8 years, the accumulation of savings necessary to reach a passable stage of house completion took 26 months at an average rate of accumulation of \$7.40 per week or, if one ignored the two extreme cases

TABLE 7.3: METHODS OF SAVING FOR FINANCE OF HOUSING PURCHASE
(excludes cases not using savings and cases with missing data)

Case	Total (\$)	From Saving (\$)	X Saving in Total	CASH IN HAND			SOLDB		SALE OF GOODS		OTHER SAVING	
				amount (\$)	as X of saving	saving rate: \$/wk:months:	accumulation: method: Liquid:Build:	amount: (\$)	# of hands:	value: (\$)	item	amount: (\$)
INVESTMENT = SAVINGS:												
a	1550	1550	100%	1550	100%		x					
b	700	700	100%	700	100%	\$4.90 36	x					
c	250	250	100%	200	80%		x	50				
d	550	550	100%				x					550 1
e	5200	5200	100%						5200	1		

Average:	1650	1650	100%	815	93%							
INVESTMENT > SAVINGS:												
f	480	410	85%	410	100%	\$4.20 24	x					
f.	150	100	67%	100	100%							
g	500	100	20%	100	100%							
h	10600	500	5%	350	70%			150				
i	170	110	65%	10	9%			100				
j	100	40	40%					40	0.5			

Average:	280	150	55%	155	75%			95				
(excl. h)												

Notes: Items sold are: 1 house, 2 cattle, 3 horse, 4 goat, 5 mattress, 6 bed, 7 scrap building material, 8 foundation, 9 jewelery, 10 rural land rental, 10 sale of coffee. Other saving methods are: 1 employer-based savings plan, 2 bank account, 3 pension at \$80/month, 4 transfer of working capital, 5 accumulation of vacation pay.

Case	Total	From Saving	% Saving in Total	amount	as % of saving	saving rate \$/wk:months	accumulation method: Liquid:Build	amount (\$)	# of hands	value (\$)	acc (\$)	total (\$)	total (\$)
INVESTMENT - SAVINGS:													
a	3440	3440	100%	3440	100%	\$23.00 36	x						
b	2500	2500	100%	2500	100%	\$7.00 96	x						
c	800	800	100%	800	100%	\$2.10 96	x						
d	720	720	100%	720	100%	\$14.00 12	x						
e	500	500	100%	500	100%	\$7.00 18	x						
f	300	300	100%	300	100%	\$7.00 12	x						
g	200	200	100%	200	100%	\$1.50 36	x						
h	120	120	100%	120	100%		x						
i	95	95	100%	95	100%	\$1.30 18	x						
j	2000	2000	100%	1430	72%	\$10.00 36	x			570	2		
k	125	125	100%	70	56%	\$1.50 12	x	50	2				
l	875	875	100%	335	38%	\$7.00 12		400	3	140	4		
m	2220	2220	100%	320	14%			500	2	900	2.7		500 2
n	2810	2810	100%										2810 3
o	225	225	100%					225	3				
Average:	1130	1130	100%	835	74%	\$7.40 26		295	2.5	535			1655
INVESTMENT > SAVINGS:													
p	4535	4235	93%	4235	100%	\$28.00 36	x						
q	5000	3800	76%	3800	100%	\$75.00 12	x						
r	2500	2020	81%	2020	100%	\$35.00 14	x						
s	2290	1302	57%	1302	100%								
t	3295	795	24%	795	100%	\$2.80 72	x						
u	2000	500	25%	500	100%								
v	600	500	83%	500	100%	\$5.30 24	x						
w	890	455	51%	455	100%	\$5.00 3	x						
x	1450	450	31%	450	100%	\$2.50 48	x						
y	525	326	62%	325	100%	\$12.00 7	x						
z	360	300	83%	300	100%	\$2.50 4	x						
aa	1500	300	20%	300	100%								
ab	1000	200	20%	200	100%	\$7.00 7	x						
ac	700	200	29%	200	100%	\$4.20 12	x						
ad	250	150	60%	150	100%	\$1.00 36	x						
ae	120	100	83%	100	100%		x						
af	150	90	60%	90	100%	\$2.10 12							
ag	140	70	50%	70	100%	\$1.40 12	x						
ah	150	50	33%	50	100%	\$0.70 3	x						
ai	300	45	15%	45	100%	\$2.10 5	x						
aj	7000	6770	97%	6640	98%	\$111.00 15	x	130					
ak	600	460	77%	410	89%	\$4.20 24	x	50					
al	2000	1600	80%	1400	88%	\$30.00 12	x	200					
am	1120	975	87%	845	87%	\$13.00 16	x			130	2		
an	2500	1528	61%	1268	83%	\$17.50 18	x	260	2				
ao	3280	3120	95%	2480	79%	\$25.00 24	x	640					
ap	150	40	27%	30	75%	\$0.70 10		10	1				
aq	1200	620	52%	460	74%	\$7.00 18	x						160 4
ar	1430	905	63%	655	72%			250	5				
as	1028	600	58%	400	67%	\$5.30 18	x	200					
at	1700	1340	79%	780	58%	\$5.00 38	x	560	4				
au	388	208	54%	108	52%	\$0.50 60	x			100	2		
av	1600	1200	75%	540	45%	\$3.50 36	x	200		400	2.4		60 2
aw	6000	4500	75%	2000	44%	\$42.00 12	x						2500 4
ax	815	315	39%	115	37%	\$38.00 1	x			200	2		
ay	292	130	45%	30	24%			100	5				
ba	1600	960	60%	210	22%	\$18.00 36	x	250		500	8.9		
bb	2000	500	25%	100	20%					400	1		
bc	700	600	86%	100	17%			600	6				
bd	450	400	89%	50	13%			350					
be	1000	800	80%	80	10%	\$7.00 3		720	6				
bn	8000	7200	90%			\$20.00 84	x						7200 1
bi	5000	1000	20%					1000					
bf	3730	3090	83%					1850	4	1240	1		
bm	3000	1000	33%					1000	1				
bj	1090	270	25%					270	3				
bl	800	400	50%							400	10		
bg	455	400	88%							400	2.3		
bh	400	180	45%				x						180 5
bh	295	195	66%					75	3	120	5.6		
Average:	1750	1145	65%	845	80%	\$16.20 12		435	3.6	390			2020

Notes: Items sold are: 1 house, 2 cattle, 3 horse, 4 goat, 5 mattress, 6 bed, 7 scrap building material, 8 foundation, 9 jewelery, 10 rural land rental, 10 sale of coffee. Other saving methods are: 1 employer-based savings plan, 2 bank

that took 96 months (cases b and c), 22 months at \$8.00 per week.

The process of accumulation, and this comment applies equally to the 50 other households in Table 7.4 to be discussed in a moment, was usually irregular. In many instances households were able to set aside a fixed amount each week or month. But in more cases monies became available from transient earnings. That is, cash would be held back or spent on construction whenever small but unanticipated surges raised income to levels that exceeded normal needs and expectations. Examples included wage raises and bonuses; extra profits from self-employment activities in trade, manufacturing or services; extraction of surpluses from per diems paid for work outside the city; and odd jobs that might come up from time to time. Households seemed to have a sense of the difference between permanent and transient income streams, and used the latter as the primary vehicle to accumulate cash for housing investment.

Beyond cash, and similar to the process for home purchasers, other means of saving that eventually directed themselves to construction were the *solde*, providing almost \$300 out of an average of 2.5 hands, sale of animals and scrap building materials (i.e., the "carcass" of the house from which the family moved) providing about \$540 on average, and other sources that included funds in a bank account and a pension.

Personal savings comprised 65% of the average total investment of \$1750 among the 50 households in Table 7.4 who built their dwellings with a combination of up front savings and loans. Here cash constituted 100% of the invested savings for 20 households, and from 10% to 98% for 21. The remainder relied exclusively on other savings instruments.

Among respondents providing necessary data, about 40% accumulated cash into larger amounts for eventual one-time construction while the rest pursued the bit by bit approach. Between them, the families accumulated or invested an average of \$845 in cash over a 12-month period at a rate of \$16 per week (or \$12 per week if one neglected case aj where there were 6 working adults in the household). This \$845 figure was almost identical to the cash average of the 15 households discussed earlier that used only up front savings, as were the total savings invested (i.e., \$1130 and \$1145). However, the larger group of 50 families in the lower portion of Table 7.4 were generally able to accumulate their cash more quickly and, correspondingly, to complete

their dwellings a bit more rapidly.

Helping the group along in this was participation of 20 households in soldes, providing them with an average of \$435 from 3.6 hands, disposal of accumulated assets of all types (but primarily houses, materials and animals) averaging \$390 in value by 10 families, and other savings sources such as partial liquidation of self-employment working capital, a bank account, accumulated vacation pay, and an employer-organized savings plan.

In all these variations on a theme about saving there were essentially only two noticeable differences in averages between the 15 households in the upper portion of the table and the 50 in the lower portion. The latter saved cash more quickly, and made larger housing investments. Their capacity to obtain loans made the larger investments possible. But because the basic relationship between loans and their reimbursement is more or less immutable, as highlighted in the earlier discussion of the loan-solde relationship for rental, the observation seemed to imply that access to loans, as in most places, could be facilitated by demonstrated capacity for (relatively) substantial saving per unit of time.

Loans

Whatever all the factors contributing to loan access and use might actually have been, the fact remained that 75% of the home owners relied on credit to some lesser or greater degree to purchase or complete construction of their homes. As shown in Table 7.5, which indicates a total of 111 transactions because over half the households borrowed more than once, loans varied in size from less than \$50 to \$2000 (i.e., neglecting the large ONA mortgage loan mentioned earlier); with almost 85% of them less than \$500 in value. Considering the onerous characteristics of commercial loans already discussed and revealed again in the table, it is not entirely surprising that only 38% of the transactions carried interest. Had (high) interest-bearing loans been the only means of obtaining external resources, many or most sample households would not have been able to purchase or build as quickly or as substantially.

Indeed, Table 7.6 indicates that although the 38% of commercial transactions represented 48% of the total value of credit, ignoring the one large ONA loan drops the share to 30% (i.e., \$8440 out of \$28,190). Still, 30% of a total

TABLE 7.5: SIZE DISTRIBUTION OF HOUSING LOANS

<u>Loan Size</u>	<u>Average</u>	<u>Share of Total</u> (N=111)	<u>Share With Interest</u> (Avg=38%)	<u>Average Monthly Interest Rate</u>
\$1000-\$2000	\$1350	6%	43%	20%
500 - 999	600	10	27	10
250 - 499	340	12	31	6
100 - 249	140	39	33	11
50 - 99	60	20	32	28
Less than \$50	28	13	73	25

TABLE 7.6: SOURCES AND CHARACTERISTICS OF HOUSING LOANS

Type of Loan	Number of Loans	(%)	Amount			Total Value	(%)	Monthly Payment (% of principal)	Average Term (months)	Average Monthly Interest
			min	max	average					
Commercial Sources:										
commercial	21	18.9%	\$40	\$1,000	\$280	\$5,880	15.4%	27.5%	7.0	21.40%
pawnshop	12	10.8%	\$10	\$140	\$50	\$600	1.6%	23.0%	na	18.10%
materials supplier	8	7.2%	\$45	\$500	\$245	\$1,960	5.1%	19.0%	7.0	0.00%
OMA	1	0.9%			\$10,000	\$10,000	26.2%	1.4%	120.0	0.83%
Subtotal:	42	37.8%				\$18,440	48.3%			
Non-Commercial Sources:										
friend	41	36.9%	\$12	\$2,000	\$350	\$14,350	37.6%	22.5%	12.0	0.00%
family	18	16.2%	\$40	\$800	\$170	\$3,060	8.0%	0.0%	6.0	0.00%
someone overseas	2	1.8%	\$100	\$130	\$115	\$230	0.6%			
employer	6	5.4%	\$50	\$300	\$200	\$1,200	3.1%	20.0%	7.0	0.00%
pastor/priest	1	0.9%			\$110	\$110	0.3%	9.1%	12.0	0.75%
non-governmental org.	1	0.9%			\$800	\$800	2.1%			1.17%
Subtotal:	69	62.2%				\$19,750	51.7%			
TOTAL	111	100.0%				\$38,190				

Note: Averages for monthly payment and loan term may not correspond exactly to each other across rows because averages are highly skewed by extreme values.

credit value remains substantial, and among the several sources within this category, the most common were commercial enterprises offering non-collateralized loans to borrowers they knew and with whom they usually had successful prior transactions for other purposes. Within a range of \$40 to \$1000, the average loan size here was \$280 (or \$160 if one neglected a single household that borrowed \$1000 three successive times). Conditions of these loans required monthly payment of simple interest, or combined principal and interest, equivalent to 28% of principal over a 7-month average term at a monthly interest rate of 21%.

Households used pawnshops 12 times in order to obtain \$10 to \$140 (or \$50 on average). These loans carried an average simple interest rate of 18% requiring monthly payment equivalent to 23% of principal. The loans had no specified term. As long as a borrower paid the interest regularly, the shop did not dispose of the articles given to it as collateral. But because the value of the articles, such as gold, televisions, radios, fans, furniture, heaters, pots, buckets, and cloth exceeded the loan amount by an estimated factor of 2, families had considerable incentive to pay back the loans within 6 to 8 months (unless their purpose in using pawnshops was only to liquidate certain assets very rapidly). Beyond 8 months cumulative interest payments would begin to exceed the value of items on deposit.

Building materials suppliers were also important. Their loans averaged \$245 in a range from \$45 to \$500, and required reimbursement in full within an average of 7 months at monthly payments averaging 19% of principal. These were cash rather than in-kind credits, and were provided by suppliers of certain materials so that clients could purchase other, complementary inputs and thereby be in positions to purchase the supplier's materials immediately. These loans carried no explicit interest, although it is possible that the price of materials sold to borrowers contained a premium with implicit interest.

Most credit, however, came from non-commercial sources that charged little or no interest, primarily from local friends and family, and to a lesser extent from employers. Although some respondents who borrowed from friends reported that they reimbursed loans within an average of 12 months, either by paying it back in one lump sum or through monthly installments amounting to a mean of 22% of loan value, most stated that they paid such loans back "whenever" they were able to, implying that there was no time limit for

reimbursement. No matter the degree of friendship involved, such openness was difficult to imagine in a place where commercial interest rates and therefore opportunity costs of capital were so high. Subsequent investigations suggested that although the time limit for reimbursement was indeed flexible, custom and expectations were that the loan would be repaid within 6 months to a year, or perhaps 18 months, but definitely before the passage of 24 months. If necessary, a borrower would seek out a loan from another friend in order to pay back the first one rather than risk losing the friendship.

The tangible risk of abrogating a friendship by not paying back a loan is high, especially where the friend, at one moment in time at least, evidently has surplus resources at his or her disposal. In a very poor country where the flow of income and circumstance are unpredictable, one does not disconnect oneself from scarce sources of potential assistance. The borrower cannot tell when another investment or emergency might require a further loan. Much like the personal relationship that binds clients with their bankers in most societies, it is better to borrow elsewhere, beg or steal than to end a relationship that cannot easily find replacement.

Looking at the same thing from the lender's point of view, when surplus funds happen to be at hand, one does not refuse a request from someone close to borrow some of those funds. This is especially the case if that someone has already proven a capacity to repay by one means or another, such as having assembled and invested their own savings in a dwelling. One does not refuse such a low-risk request because one cannot predict when roles and relationships might reverse themselves. Obviously, the borrower has means to save, and therefore offers good prospects of being in a position to lend should the need arise, particularly after the housing project is complete.

Extending the argument, if role reversals are common over time, the charging of interest makes no sense. If in the role of borrower one would not want to pay it, then one cannot logically ask for it in the role of lender. That is, the perceived opportunity cost of levying interest is greater than the amount to be derived from interest proceeds. And the matter of using interest to cover inflation also takes care of itself through reversing of credit flows. If costs are rising steeply, a \$100 loan in one direction one year follows itself with a \$120 loan in the opposite direction the next year, and so forth. Over

time, real values are maintained. The logic underpinning loans from immediate or extended family members, comprising 18 transactions with an average loan size of \$170 repayable within 6 months, is similar.

As for the flow of information about land and for the husbanding of construction labor, the upshot here is that households do not usually operate as completely self-contained economic units. They function as participants in a network of close familial and social relations from which they both draw and contribute knowledge, resources, support, etc. This characteristic is sufficiently common to most countries that it requires no further explication. The point it highlights for present purposes is that it is not so much the specific act of borrowing that makes home ownership more or less readily accessible to households, but the good fortune of being at once able to save and to be tied into a system of relationships with other savers who from time to time can come up with resources to meet specific credit needs.

The system of relationships can sometimes extend itself to include individuals living overseas (2 cases), employers who can extract repayment from wages (6 cases), the clergy (1 case), and non-governmental organizations with which individuals may have contact (1 case). But the heart of the financial system rests with friends and family within the country. Unfortunately, even if one could conceive of a network linking all households together, such as a national system of deposit-gathering banks or savings associations, Haiti does not produce enough surplus savings to finance home ownership for a great many of them.

This scarcity of resources is most manifest in commercial interest rates. Such rates are not necessarily usurious. They are no more acceptable than 2 m² per adult of living space or consumption of less than 20 lcd of water, but the kind of extreme poverty that yields such scant figures is the same that makes resources extraordinarily scarce and therefore also extraordinarily productive. In most instances of (very) small-scale trade or manufacturing, an entrepreneur worthy of the name should be able to borrow at 30% per month and still turn a respectable profit (i.e., get a higher return on investment than the interest rate). As long as there are many who can borrow at such rates and still see profit in doing so, the rates remain consistent with the productivity of capital. Unfortunately, housing does not often provide benefits of such magnitude.

Commercial loans of the kinds available on the market were therefore unable to serve as primary sources of financing for a great many families. Among the 56 households in Table 7.7 providing comparable data, only 14 borrowed mainly from commercial lenders (i.e., cases a through n). But for these households the interest they elected to pay appeared consistent with expected returns to their investments. Their situations paralleled that of the worker in the hypothetical rental upgrading example described at the outset of this section. Smaller, one-time loans of households e through j were taken shortly before semi-annual rents of \$90 to \$120 came due. By combining savings accumulated for that rent with the loans, they quickly rented land and put up sufficient portions of their dwellings to shelter members. Since they were already saving \$15 to \$20 monthly for rent, paying \$12 to \$14 in interest while using the balance to slowly build up principal was not a major challenge. Over the next 12 to 24 months they produced sufficient surplus to reimburse the loan and complete construction of their dwellings. The logic underpinning larger loans seemed similar, with the added aspect that several borrowed to complete additional rooms that they eventually rented out on longer-term bases. Such rents were always considerably larger than the amount borrowed. Thus households could face moments where monthly returns to investment in housing were 20% or better, and at these moments commercial loans made good sense if they could get them.

For households unable to pursue their investments with such precision timing, and/or lacking the successful prior relationships with commercial lenders necessary to get loans, the only market alternative was pawnshops. As Table 7.7 notes, however, families never used pawnshop loans as their first source of borrowing. The risk of losing valuable assets was too high. It was a supplementary source that might be used once to finish some small portion of construction for which funds had run out, as in cases n, v, ab, an, and aw; or that might be called upon for the same purpose more than once over time, as in cases k and bc. Leaving aside the risk factor, something similar might be said about materials suppliers, i.e., cases l, r, u, av and ax; although in a few instances suppliers could be primary sources of borrowing (i.e., cases ay, az and ba).

Thus, under the circumstances, external investment resources had to come primarily from the network of family and friends, and 33 of the 56 households in the table, or about 60%, had the good fortune to be appropriately

TABLE 7.7: PATTERNS OF CREDIT ACQUISITION FOR HOUSING FINANCE
(excludes cases with missing data and cases not using credit)

Primary Sources	Total Investment	From Credit	% Credit in Total	Loan #1		Loan #2		Loan #3		Loan #4		Loan #5	
				\$	from								
Commercial:	a 5000	3000	60%	1000	1	1000	1	1000	1				
	b 700	500	71%	300	1	200	1						
	c 1030	430	42%	200	1	150	1	80	1				
	d 215	200	93%	100	1	60	1	40	1				
	e 250	100	40%	100	1								
	f 140	70	50%	70	1								
	g 150	70	47%	70	1								
	h 170	60	35%	60	1								
	i 150	60	40%	60	1								
	j 100	60	60%	60	1								
	k 3730	625	17%	500	1	60	2	30	2	20	2	15	2
	l 1200	580	48%	440	1	140	10						
	m 2000	500	25%	300	1	200	3						
	n 150	110	73%	100	1	10	2						
Friend:	o 3295	2000	61%	2000	3								
	p 3000	2000	67%	2000	3								
	q 6000	1500	25%	1300	3	200	3						
	r 2000	1500	75%	1000	3	500	10						
	s 5000	1200	24%	700	3	500	3						
	t 1450	1000	69%	600	3	400	3						
	u 1090	820	75%	700	3	120	10						
	v 1600	640	40%	500	3	140	2						
	w 525	525	100%	525	3								
	x 815	500	61%	350	3	150	3						
	y 500	400	80%	400	3								
	z 800	400	50%	140	3	125	3	100	3	20	3	15	3
	aa 890	400	45%	150	3	150	3	100	3				
	ab 1700	360	21%	300	3	60	2						
	ac 4535	300	7%	200	3	100	4						
	ad 1000	280	28%	130	3	100	9	50	9				
	ae 1000	200	20%	200	3								
	af 525	200	38%	100	3	50	3	50	3				
	ag 400	180	45%	180	3								
	ah 3280	160	5%	160	3								
	ai 160	100	63%	100	3								
	aj 100	100	100%	100	3								
	ak 150	50	33%	50	3								
	al 450	50	11%	50	3								
Family:	am 800	800	100%	800	4								
	an 1430	525	37%	400	4	125	2						
	ao 2500	480	19%	200	4	180	4	100	4				
	ap 1600	400	25%	100	4	100	4	100	4	60	4	40	4
	aq 7000	230	3%	230	4								
	ar 390	180	46%	80	4	50	4	50	4				
	as 1120	140	13%	140	4								
	at 150	100	67%	100	4								
	au 600	100	17%	100	4								
Other:	av 455	155	34%	110	6	45	10						
	aw 2500	850	34%	800	7	52	2						
	ax 10600	10100	95%	10000	8	90	3	10	3				
Supplier:	ay 1500	1200	80%	400	10	300	11	300	11	200	11		
	az 8000	800	10%	500	10	300	3						
	ba 600	140	23%	140	10								
Employer:	bb 300	255	85%	255	11								
	bc 290	160	55%	90	11	40	2	30	2				
	bd 700	100	14%	50	11	50	3						
Average:	\$1,710	\$680	46%	\$530		\$180		\$145		\$75		\$25	

Credit Source:

1. commercial
2. pawnshop
3. friend
4. family
6. pastor/priest
7. non-governmental org.
8. ONA
9. someone overseas
10. materials supplier
11. employer

connected. The table nevertheless indicates that 12 of the 33 families (i.e., cases q, s, t, x, z, aa, ac, ad, af, ao, ap, and ar) borrowed from friends and family more than once. The data are not completely clear on this matter, but it seemed more often than not that households borrowed more than once from the same friends or family members. That is, one successful loan paved the way the next in much the same fashion as in commercial transactions; lowering the lender's exposure to risk of non-reimbursement, and the borrower's to risk of soured relations. Notwithstanding the depth of a connecting social relationship, it was better to be safe than sorry.

Providence

Luck, as mentioned several times, plays an important role in bringing households in contact with income and profit surges, sales, remunerative borrowing connections and other rarities of life. Beyond these, it has an important effect on finance of ownership by providing gifts from family and friends (and one employer), and lottery winnings. Table 7.8 indicates that 13 households used gifts to finance an average of 26% of their housing investments, and that one of these plus two others financed 32% of their investments with lottery winnings. In addition, two households excluded from this and all preceding tables received homes as inheritances.

Except for case f, where it paid for the entire dwelling, gifts did not exercise major influence on ownership. They could make a house larger or more durable, or could speed the acquisition process, but by and large the range of \$15 to \$520 was not large enough to make a difference to whether or not a household became an owner. The same may be said about lottery winnings. That is, although gifts of \$95 or more and lottery winnings of \$600 or more might have been sufficient by themselves to purchase or construct a dwelling, almost all the households found means to extend their investments considerably beyond the value of their gift and lottery receipts. Or, looking at this another way, the fact that only one family financed a dwelling entirely with a gift suggested that most households in the city receiving gifts and winnings were unlikely to use them for housing purposes unless they had already reached the income and interest level required for investment. There were plenty of other expenditure priorities which could profitably use the fruits of providence.

TABLE 7.8: OTHER METHODS OF HOUSING FINANCE
(excludes cases with missing data)

Cases	Total Investment	From Gifts	% Gifts in Total	Gift #1 \$ from	Gift #2 \$ from	Gift #3 \$ from	Gift #4 \$ from	Lottery \$ (%)
a	1000	520	52%	400 9	120 4			
b	3295	500	15%					
c	2000	400	20%	400 4				
d	2290	390	17%	180 11	150 11	60 11		600 26%
e	2500	120	5%	60 4	60 4			
f	295	100	34%	100 3				
g	95	95	100%	95 3				
h	160	60	38%	60 3				
i	360	60	17%	60 4				
j	400	40	10%	40 4				
k	890	35	4%	15 4	10 4	5 4	5 4	
l	120	20	17%	20 3				
m	215	15	7%	10 4	5			
n	2000							1000 50%
o	5000							1000 20%
Avg.	\$1,375	\$180	25%	\$120	\$70	\$35	\$5	\$870 32%

For sources of gifts, see legend box Table 7.7.

Finance of ownership therefore turns again and again on the matter of demonstrable capacity for substantial saving, and on the fundamental reality that most families in the city find this capacity difficult to demonstrate when costs of basic needs such as water, food, rent and schooling are high relative to income. For a house of their own, not to mention the challenge of shifting from higher- to lower-cost rental accommodations, such families need not only effort and luck, but also public and private interventions that can lower the threshold above which effort and luck yield their beneficial effects on the economic and physical characteristics of shelter.

VIII. CONCLUSIONS

One challenge facing those who concern themselves with the issue of home ownership in Port-au-Prince is that of delineating an appropriate place for it within the seemingly endless list of basic needs and wants warranting attention and address. In a city and country of such grinding poverty it is difficult to argue that ownership has, or should have, higher priority than other household investment needs for food, water, reinvestment in ongoing trade, service and manufacturing activities, curative health services, education for children, emigration and a host of other eminently productive things. When we asked the dwelling renters in our sample to list up to three things they would do with \$2000 in lottery winnings, half the 36 answers (some provided less than three responses) had nothing to do with housing. Ten involved investment in a self-employment activity in trade or manufacturing, 6 involved financing of emigration, and 2 involved opening a bank savings account. Ownership did not present itself as something to obtain with a very substantial windfall.

Within the shelter sector, it is also difficult to claim that ownership has or should have greater importance to families than renting of more dwelling space enclosed by more protective materials in less-crowded neighborhoods with better public health conditions and cheaper water. This is not to imply that families would not like to possess property or that they do not have the resources for it, but when weighed against wants for more or better of everything else of vital importance about housing, most seem unable or unwilling to withstand the opportunity costs and risks that

may be involved.

One hundred dollars is the current floor price for ownership among households willing to live in a tiny wattle box. The same amount can rent a year of more space enclosed by cement blocks offering a superior flow of benefits in the form of protection of inhabitants and productive possessions from the elements, spread of illness, theft, fire, spoilage by rodents, and other risks. Recalling the staged process of housing mobility we outlined in Section III, what seems to matter to more households is not just ownership, but ownership of a dwelling meeting certain minimum perceived requirements for space (including space for rental to others -- 20% of owners in the survey had one tenant and another 7% had 2 or 3), durability and, through the costs of these, for security of tenure. If they cannot come to own such a dwelling, most seem to believe that it is better to rent a similar one. Putting this another way, serious interest in the possibility of ownership presents itself when longer-term renters, without other compelling expenditure priorities, reach the point where the economics of their rental payments are in the same vicinity as the economics of buying or building a house with similar or better characteristics.

Thus, among the renters responding to our question about what they would do with a \$2000 windfall, the distribution of the other half of answers was: buy land, 5; buy a house (on rented land), 2; and rent land and build a house, 11. These answers came mostly from individuals in Table 7.1 paying highest rents (i.e., \$200 or more semi-annually and \$400 or more annually). They had reached the limits of what the rental market had to offer and were ready to move on to the next stage. We speculate that the same query among people with lower income and paying lower rents would have revealed a larger proportion giving housing secondary priority. Also, conceding the bias in our question (i.e., selecting \$2000 meant that respondents could immediately imagine ownership of a quality dwelling), we speculate that a lower figure, say, \$500, would have elicited more interest in longer-term rental of better accommodations.

To our sense of things the circumstances of the urban population suggest that broadening access to ownership should not be viewed as an end in itself. Rather, it should be seen one of several interrelated means to achieve a more pressing socioeconomic development objective: that of increasing the health and productivity of the population

and, through the associated lowering of medical outlays, lowering of losses to productive goods and equipment, and maintenance of physical and mental capabilities (i.e., capabilities that are reduced during each episode of illness), of raising income.

Promotion of ownership in this framework should therefore gear itself to the purposes of accelerating the rate of growth in the share of owner- and renter-occupied dwellings made of durable materials (i.e., cement block or its equivalent), and of gradually increasing the size of dwellings and lowering neighborhood population densities (i.e., at least up to the point of diminishing returns to health). The practical implication here is that efforts should be made to lower the unit costs of land and construction, and/or to lower the financial barrier to housing investment by establishing suitable credit mechanisms.

Basic complementary actions should include doing whatever can be done with effect to increase the rate of conversion of peripheral urban land to residential use by lower-income households, lowering the price of water to increase consumption and/or raise the amount of income disposable for other things, and maintaining adequate neighborhood sanitary conditions to reduce the frequency of associated illnesses.

Unfortunately, in Haiti as elsewhere, there is a tremendous gap between what "should" be done and what "can" be done within a reasonable time period. Nowhere is this more evident than in the challenge of providing basic public infrastructure and services.

Public Infrastructure and Services

Problems of infrastructure and basic services, and paths to their potential solution, have in recent years been amply researched, discussed and documented by government organizations responsible for particular facilities and services, and by their donor agency partners. Updates and other adjustments may be necessary to correct plans based on inaccurate or superannuated estimates of household income and expenditure, demographic expansion, and spatial distribution of the population, but most of the technical and managerial things that need doing with respect to waste collection and disposal, storm drainage, water supply, vector control (i.e., mosquitoes, rats, etc.), and roads to

open up new areas to residential development (e.g., Delmas II and III) have been identified and planned.

With possible exception of roads, where projects to build new ones or expand existing ones have foundered on costs of expropriation (e.g., widening of the Carrefour road) or on land speculation by public officials responsible for their planning and construction (e.g., Delmas II -- an event that reportedly caused the German government to cancel its proposed financing of the artery), infrastructure and service plans and programs have been stymied by institutional obstacles that have shown themselves very slow to change. Flowing from the specific to the general, one such obstacle is selective fiscal weakness that does not permit adequate financing of recurrent costs (including debt service) of current facilities and services, let alone expanded ones.

Although state monopolies in cement and flour production, telephone service and power supply have remained profitable for years, CAMEP has suffered from a lack of political will or technical capacity to impose and collect higher user charges to finance expanded water operations. Similarly, although quite proficient at levying all manner of import and export duties, charges for many types of state services (insurance, license fees, passport fees, etc.), and even a limited personal and corporate income tax, and notwithstanding much talk and much expenditure for consultants to examine the matter, there is still no such thing as a property tax to pay for other basic urban services and facilities such as garbage collection and drainage. Absence of a land or home registry may confound the possibility, but a limited property tax on occupants of larger structures, be they owners, renters or squatters, is technically feasible. Lack of political will to introduce such a tax is the central issue.

Another obstacle is technical inexperience and behavioral irresponsibility at all levels of urban service provision and management. This is related to the underdevelopment in Haiti of the idea that government should be a supplier of services to the population in general rather than a provider of patronage to favored constituents through public jobs and contracts. In turn, this underdevelopment is related to the absence of a broad democratic polity with power to make demands and to impose its will for improved services upon the state (and through the state, upon donor agencies that finance the state). That is, facilities and services are not only poorly run, there

does not yet exist the kind of sociopolitical dynamic that might produce "natural" incentives for gains in experience and improvements in performance which could eventually register as betterment in the eyes of most households.

Service improvements over the last decade, such as they have been, are largely testimony to the beneficial effects of capital investment (e.g., garbage trucks, larger drainage channels, expansion of source supplies of water and distribution lines, etc.), and of a few foreign technical assistants brought in to pave the way for and to complement the capital works. As in the recent case of garbage trucks, departure of the assistants is almost invariably followed by the falling into disrepair of the invested capital and a corresponding deterioration of service.

Compromised by population growth as it may have been, the water supply system has not suffered quite the same fate largely because it has been bolstered with IDB, WHO/PAHO, World Bank and other assistants on a continuous basis for over a decade, and because financing of capital works has been contingent upon cooperative government response to key recommendations put forward by the assistants. In this particular experience it has become clear that there is little lacking in the Haitian capacity to do most of the things that need to be done to provide services in a reasonably effective manner. All the assistants added were a list of required actions and a powerful incentive for CAMEP personnel to carry them out. The trouble is that there are no comparable incentives internal to state organizations, or internal to the individuals employed by the agencies (e.g., little sense of "professionalism" or "public" service). This is a cultural phenomenon that cannot change quickly without external pressure (i.e., from outside the state apparatus) to render its practice untenable.

For a city of 1.6 million people still growing at a considerable pace, such obstacles present a very serious challenge. Ignoring the possibility of dramatic change in political organization in a near future, the only obvious way for facilities and services to maintain historical gains is to retain Haitian or expatriate technical and managerial assistants in positions of real influence (i.e., tied to donor funding) within public agencies on a permanent basis. And the only obvious way to increase the chances of making major improvements in the services is to add more assistants with more control over an ever-increasing range of service activities within and among government agencies.

This is tantamount to suggesting that important segments of the state apparatus be further "colonized" by donor agencies, and that the "shadow government" function of donor agencies, in place for over a decade, be extended and deepened. Although more palatable under the label of "assistance", this sort of approach is not outside the realm of possibility for certain donors (e.g., some years ago the World Bank and IMF commandeered Indonesia, and made a heroic attempt to do the same with Haiti's Ministry of Finance). And notwithstanding considerable pride in sovereignty throughout Haitian society, the approach has long since been accepted by government as the means by which it can continue to do what it does while leaving the business of service provision to foreign organizations.

Because of principle (e.g., government "must" take responsibility for service management), because of limits upon mandate (e.g., banks finance only capital investment; they do not operate urban services), or because of Haiti's unimportance on the world political scene (i.e., besides Haitians in the country and a few scattered communities outside, there are no strong constituencies about to press donor agencies to do this or that), most agencies remain reticent about deepening their involvement in the delivery of services. As they have for almost twenty years, donors nevertheless continue to inch their way in this direction. The situation of basic urban services is therefore not intractable, but dramatic improvements in their management does not appear likely for quite some time.

Such improvements as may take place soon will continue to depend on the impacts of capital works, and in this regard the most important project at hand is implementation of a 1984 master plan for water supply to be financed by the World Bank. Besides improvement in supply to already built-up areas, the plan envisages gradual extension of service into the sparsely populated plain north-northeast of the present Delmas road; the only direction in which the city can expand with relative ease. With water one can imagine a sizeable increase in demand for residential plots by higher income groups, pressure by these groups to have the state resurrect its plans for Delmas II or III and thereby ease the problem of access to the plots, and then an influx of lower-income households to take advantage of the water and roads and to put pressure on vacant lands to open up for their benefit. This is the usual progression.

The usual progression would also convert the present

vacant space, shown in Figure 8.1, into the dense residential space shown in Figure 8.2 -- an open area that filled up completely with several hundred households in Categories I and II, as well as some in III, within two years of its conversion to residential use by an organized invasion several years ago. What was important in that invasion was that all houses were of cement block or of reinforced concrete, all were larger than houses built elsewhere during the same period by the respective income categories (a consequence of larger plot size offered by the land's "developers"), and that although the structures left no more space between them than in any other neighborhood, population density was and remains significantly lower than in adjoining areas.

If implementation of the water plan proceeds quickly (i.e., opening up the plain at a rate exceeding population growth), if a major thoroughfare precedes it or follows close on its heels, and if market forces make a good share of the land available for rent by households in Categories I and II, the surface area in question is so large that it may become possible to witness a comparable decline in overall residential density and an increase in dwelling space (i.e., through an increase in size of new dwellings, a decline in household size, or a combination of both). Also, through the possibility of a lessening in competition between households in Categories I and II for the same space in already built-up areas, it may also be possible to witness a lowering of land and dwelling rents in those areas (or at least a lowering of the rate of increase in rents), associated rises in real income, and increased consumption of or investment in other necessities; including extension and upgrading of houses by owners and increases in the number of owners.

These are, of course, speculations. What will happen as a consequence of implementation is as uncertain as the date at which the works will begin (the World Bank keeps delaying approval of financing) and the speed at which they effort will progress once begun. What seems absolutely certain is that in the near term the opening up of the plain with water and roads is the only hope the city has for significant improvement in the economic and physical characteristics of shelter.

Other important services, such as garbage removal, storm drainage control through protection of hillsides, basins and ravines, and vector eradication, dependent as they are on the speed with which foreign agencies slouch toward taking greater charge of them, cannot but progress

Figure 8.1: The Plain North-Northwest of Delmas



Figure 8.2: Nazon Area Two Years After Land Invasion



very slowly (if at all) in newer and older areas of the city. Chances for reconstruction of the land registry and for imposition of property taxes, as indirect means to begin to control land use, to pay for urban services and to expand the market for sale and purchase of land, also appear dim.

Land Development

The invasion mentioned above nevertheless highlights the potential benefit that organized (and legal) land development might be able to render in older or newer areas of the city, especially if linked with site improvements like a few access roads and a few private water connections and public standpipes (which the area in Figure 8.2 does not have).

This idea is not new. Under the rubric of "sites and services", it was the linchpin of shelter improvement proposals put forward by the United Nations project in 1976. The project recommended that over the ensuing ten years government develop and sell 40,000 plots on 225 hectares of state land in the vicinity of Cite Soleil to accommodate 180,000 people, half the lots with nothing on them and most of the rest with floors and foundations only, at an estimated cost of \$2.3 million. The cost of purchasing land in the same vicinity, estimated at \$5 per m² at the time, would have added \$11 million and driven the price of lots to about \$350 each. This figure seemed exorbitant relative to estimated dwelling construction costs of \$500 and to an assumption in the project that target households could afford to expend no more than \$50 to \$75 yearly for land and construction. The idea of renting plots to households being absent, the project felt that no-charge use of state lands was a preferable approach.

Although several donor agencies, including the UNCDF, UNDP, KFW and World Bank offered to finance all or part of such an undertaking, the government, through the EPPLS and its predecessor, refused to pursue the matter directly. Senior officials, behaving little different from their counterparts elsewhere and exhibiting the culture of their class, were not interested in financing "slums". Improvement provided by government had to "look like" improvement. There was no way to do that but have the state build homes complete. In the event, government and donors spent almost \$30 million (about \$20 million in 1976 dollars) to build the 7900 houses discussed in Section III. Even though charging rent-purchase prices ranging from 25% to 50% of actual cost,

if charging occupants anything, payment collections by the EPPLS have from the outset rarely been as high as 50% of amounts due.

With the same or similar officials in the EPPLS today as over the last decade, it is hard to judge the chances for state approval of a rekindled "sites and services" proposal, or to assess prospects for effective financial management of such a project if approved.

Making such judgments is difficult because the state did in fact pursue the equivalent of a "sites without services" land development scheme in the Cite Soleil area indirectly. A series of public decisions over the decade to incorporate into the area the coastal shipping port, extensions of four major drainage channels (to reduce frequency of flooding upstream but accomplishing the same thing within the area), 30,000 people made homeless by fires in the downtown, most of the EPPLS housing projects, and limited water service, in combination with decisions to lease state lands to Macoute and military officers (for releasing to others), were important causal factors in the spectacular growth of population from 20,000 in 1976 to 250,000 today.

Except for dispensing with suggested standards for plot size and public facilities and services, the government accomplished more or less the same thing as proposed by the United Nations project, and by doing so probably kept the overall rate of shelter conditions from falling faster than it actually did among Category I households, the vast majority of the population in the area. Between the experiences of high cost and limited impact of housing projects, and the experiences of profitable land development (i.e., to the holders of government leases) in Cite Soleil, some officials may now be more receptive to the idea of a more direct approach to land development, with or without services.

Turning to the private sector, there is evidence that market and other forces are driving a growing real estate development industry. Besides the obvious fact that the city could not have expanded nearly as much as it did without one, the evidence lies in telltale indicators such as growth in the number of enterprises developing serviced lots for Category III and IV households (e.g., Tecina and others), growth in the number of "invader-developers" laying out sites for rent to families in Categories I, II and III, and the presence of a sizeable share of owners in our sample

with tenants. Unfortunately, notwithstanding what appears to be the possibility of handsome returns to investment, the problem remains that growth in land supply has not and is not keeping pace with population growth in Categories I and II.

We find cause for this in several factors, including the earlier-noted absence of mechanisms such as a property tax to encourage land conversion and the absence of water to put pressure on land through market forces. Two others seem of special importance here. One is cultural. Members of the social classes with access to means necessary to acquire and develop land at scale are so isolated from the daily realities of lower-income households that they do not see the profitability of investing in that market. Or, if they do, their personal inexperience of what it takes to make a profit in the market leads them to see considerable risk and to therefore heavily discount the rate of probable return. One individual, for example, new to the business and building several units for sale at \$8000 each (therefore focussing on Categories III and IV but we introduce the case to illustrate the risks of inexperience), did not understand the vital importance of water. Without proximity to water, and with similar houses closer to water selling for the same price elsewhere, the builder found considerable difficulty marketing the houses.

Faced with a narrow market in Category IV, and with growing experience in land development among entrepreneurs, we expect this cultural obstacle to gradually give way to more interest in Category III, then II, and, if their culture will permit them to see that "slums" are the way most people live and therefore also the main path to profit, perhaps eventually I. But movement along the learning curve will probably be slow.

Finance

The other factor constraining both land and housing development is financial. With competitive commercial interest rates of 20% to 30% monthly available to Category I and II households coexisting with bank rates of 1% to 2% and with quasi-bank rates of 2% to 4% (i.e., rates charged by lenders who borrow from banks at the lower rates) for households in Categories III and IV, the city has what appears to be a segmented capital market that parallels the cultural segmentation noted a moment ago.

That is, commercial finance terms available to actual

or prospective entrepreneurs who are currently members of Categories I and II, and who likely know both the level of profit that can be made and how to go about making it, are inconsistent with the return to land (or housing) development. Profit potential is good, but it is not anywhere near enough to pay interest of 20% to 30% per month. In a socioeconomic stratum offering low probabilities for accessing interest-free loans from family and friends, and much lower probabilities of obtaining loans to develop land at scale (i.e., more than one lot or house at a time), they are unable to put their potential talents to work with necessary capital. All the owners we interviewed were developers of a sort, and the challenge they faced in amassing the wherewithal to build just one house on one lot is ample evidence of the nature of resource scarcities in their segments of the economy.

Efforts to address the matter of finance have thus far centered on the BCI. Though moving an ever-increasing number of housing loans since its inception in 1984, the BCI's capacity to imagine direct development or finance of land or housing development for lower-income households, something it agreed to do with a special fund provided by USAID, has made only limited progress. The BCI has defined its basic target group as households with at least \$300 in monthly income (i.e., in Category IV). For its lower-income group obligation it managed to drop its minimum standard from houses costing over \$10,000 to those costing about \$8000 before abandoning the idea of direct involvement altogether (in favor of an arrangement with an intermediary organization, Mennonite Economic Development Associates - MEDA, that we will come to forthwith).

Factors contributing to the BCI's inability to move beyond the bounds of the 10% of the population making up its self-defined market are several. Drawn from the same culture and class as EPPLS officials, the BCI's Board members also did not see that they should be in the business of directly financing "slums". To do the job "right" meant finance of "good" houses, and since lower-income people could not afford such houses, the BCI's obligation to shareholders prevented it from providing necessary subsidies. Such "social" housing was a responsibility of the state and not of a private mortgage bank.

Also, as members of a class isolated from the bulk of the population, the Board could not easily see the profit potential to borrowers (or to itself if it were to set up a subsidiary land or housing development enterprise), could

not see how to minimize risk of default by borrowers that it had no prior business dealings with, could not accept the idea of lending to anyone but land owners having proper documentation of their titles, and so on. As a practical matter, the BCI behaved in a manner no different than any other public or private institution run by and for the service of the class might have done.

Something of a major breakthrough took place in recent times when the BCI and USAID agreed to an arrangement whereby MEDA would receive a share of the lower-income housing allotment to establish an experimental revolving fund for housing finance; at no risk to the BCI or to MEDA. Having for several years operated a reasonably successful credit scheme for small-scale trade and manufacturing enterprises run by families in Categories I and II, and in the process having come to learn about assessing the profitability of proposed investments, assessing the soundness and character of borrowers, keeping risks to a low level, and chasing after delinquent accounts through the courts, MEDA presented itself as an ideal vehicle to serve as cultural and operational bridge between the BCI and lower-income households.

This program, only just getting underway, is nonetheless experimental because the logic of mortgage lending is not the same as business lending, and there is much learning for MEDA to acquire in uncovering appropriate mechanisms of operation. For example, in business lending the combination of fixed and working capital requirements establishes something of a permanent relationship between lender and borrower. As we described in Section VII with respect to multiple borrowing, and as is true in most commercial borrower-bank relationships, the need to maintain a line of potential credit is the most powerful positive incentive that borrowers have to repay their debt in full and on time. MEDA being one of the very few bank-like operations in town offering relatively large sums on good terms, few borrowers are willing to give up such a relationship (though economic and political turmoil may yield default in spite of good intentions).

Borrowers of funds for housing, unless they are developers and have in mind operating a permanent business of acquiring and selling properties (a type of borrower that MEDA has much interest in locating), have one-time interests in credit. Once their houses are up and occupied, they do not need to maintain relationships with their bankers. Minimization of risk in this instance would appear to

require staged lending until a last installment completes the structure for occupancy (e.g., separate loans for foundations and floors, walls, roof, finishing, etc., with each tranche tied to maintenance of reimbursement schedules for previous ones), but this approach may drag the construction process out too long.

An alternative is selection of borrowers with larger plots and who have interests in expanding a basic dwelling over time, and in adding rental units in the process. And then there is the possibility of MEDA (or other organizations for their own purposes) establishing a general savings service for individuals and groups (e.g., soldes) and then tying housing loans to performance in prior deposits to accounts. Beyond these possibilities, there is also the challenge of discovering (politically) practical methods of legal and cost-effective repossession of units on rented land. The situation is complex. What is important here is that with MEDA there is a good chance of eventually discovering what does and does not work, and why. Hopefully, the learning will pave the way for larger operation and for diffusion of the idea to other organizations in the future.

In general, however, we think it important to introduce a reminder here that while improvements in housing finance and the positive things that should flow from it may eventually help a great many families, overall conditions will remain constrained by the rate of growth of real income and the capacity of households to extract from that growth not only savings, but also enough savings to finance housing in addition to all the other investments that they deem worthy of financing. Perhaps more so than in other cities where income and growth of income are higher, there are a lot of these other things in Port-au-Prince.

Construction

The evolution of the construction sector over the last decade has revealed considerable progress, particularly with respect to efficient technical use of cement. In 1976 most cement blocks for lower-income homes tended to be made on site with hand packing of material into metal molds and hand vibration of each block one at a time prior to drying in the sun. Variations in masons' skills could often yield production variations ranging from 35 to 55 blocks per bag of cement, and poor planning for rain and wind could often wipe out several days' worth of block production. For houses with reinforced cement posts and roofs, quantities of steel

and thicknesses of cement around them (coffered roofs were very rare) were gross exaggerations of minimum quantities needed to assure durability -- even for resistance to major earthquakes.

Today most blocks are made in neighborhood factories that spring up (and eventually close down) wherever there is a concentration of building activity. Usually protected by high walls and some kind of overhang, the factories employ simple electro-mechanical sifters (for sand), mixers and vibrators to produce consistent blocks with minimum use of cement. Small or large trucks, wheelbarrows and even mules assure delivery to nearby sites. They also produce a wider variety of items, such as decorative block to serve as windows and precast reinforced posts. Beyond the need to make foundations as before, the function of masons for simple houses has in the process come to focus exclusively on ordering blocks, mixing mortar, and constructing the walls. Similarly, use of steel and cement for reinforced posts and roofs has diminished considerably, and coffering has become more common. Though there is probably scope for further technical improvement, the path of technical evolution over the last decade suggests to us that any needed refinements will introduce themselves autonomously.

The question of whether there are feasible ways to use cement more efficiently than by making blocks, thereby reducing the unit cost of durable structures, eludes answer at this time. In Jamaica, block construction is reportedly more costly than casting of cement walls (i.e., pouring a lightweight cement-sand mixture into plank/plywood forms along the length of walls and thus raising the wall in increments of 20 to 30 centimeters at a time). Such a process, which appears to depend for its success on skilled use of reinforcing and electro-mechanical vibration of the cement as it is being poured, and which is not too unlike the casting of cement roofs in Haiti (they do not benefit from vibration after pouring), is unknown in Port-au-Prince. Some research of this technique, of its costs, and of the means by which it could be introduced to Haiti may be in order.

But in the immediate the matter of construction costs will remain tied up with the price of cement, and therefore with government policies influencing the price. Until smuggling began to influence the price in 1982-84, the government held a monopoly in domestic production. With fiscal troubles a constant bother, enterprises such as the cement plant had a duty to maximize public revenues rather

than productive capacity. With prices high and use of capacity low, costs were elevated and net revenues possibly lower than they might have been with lower prices and more efficient use of productive plant. In any event, ex factory prices of domestic cement remained 50% to 90% higher than potential landed prices for imports. Such a market was ripe for contraband, but because smuggling in Haiti was and remains a form of patronage for "friends" of the state, including public officials, the continuing need to draw revenues from the plant made import prices only marginally competitive with those of the plant. The situation was "controlled", so to speak. The kind of open competitive market with dramatic lowering of prices that imports might have engendered, except for one brief period in 1986-87, did not manifest itself.

Confounding the matter more recently has been deterioration in the trade balance and in the corresponding foreign exchange value of Haitian currency; about 35% lower today than just a few years ago. Price has risen substantially as a consequence for imports and for domestic production (i.e., reflecting the costs of imported energy requirements).

Cement is still cheaper than wood (which would also have to be imported in quantity if it were to become a common building material), but the nature of the situation is that construction costs are higher than they might otherwise be with a better trade balance, with more competition between imports and domestic production, and with a public policy that viewed cement less as a means of revenue production and more as a means of supplying the population with a vital ingredient with which it can produce a basic need to protect itself and raise income. As in so many other matters where the state has a vital stake, until something approximating democracy allows the population to influence the form of public policy, maintenance of the budget will retain precedence over promotion of progress, and government will remain as always a major hindrance to the lowering of housing costs.

Final Observations

As an interesting intellectual exercise, we could at this point add to the things we have already discussed in this section and depend on the passive voice to produce a robust if not comprehensive list of actions that "should" or "ought" to be implemented to improve shelter in Port-au-

Prince. It goes without saying that public services, especially in matters of water supply, sanitation, drainage, roadway construction and maintenance, urban planning, and land management could all stand substantial improvement; and that reconstitution of the land registry, revision and enforcement of laws and regulations, promoting speedy land dispute resolution through courts, using the cement plant for developmental purposes, and so forth will prove helpful in the long run.

For the private sector, it also goes without saying that it would be nice if mortgage banking were to extend its reach into the population we have concerned ourselves with, if cooperative materials purchasing associations were to establish themselves, if developers of land and housing types of the kind we have described were to present themselves to the BCI or to MEDA, or if new technology found a way to lower the construction costs of simple but durable housing.

Unfortunately, such a listing would make our work inconsistent with Haitian realities because the harsh circumstance is that only a very few of these things are feasible in the short or even medium term. Our experiences in the sector instruct us that such progress as we might hope for will be as slow in the future as they have shown themselves in the past.

But no matter their limited effect, we draw optimism about the future from institutional dynamics that have introduced themselves over the decade. For us, it is important to know that the World Bank, an organization with considerable expertise of the matter as it might apply to Haiti, has moved into the water supply sector; that the IDB has maintained its involvement with storm drainage, allowing it to apply its lessons of experience to extensions of the system as the city grows; that the UNCHS, UNCDF, UNDP and KFW maintain ongoing interest in shelter and in the idea of "sites with or without services"; that the GTZ has provided important albeit expensive instruction in the challenge of putting together a land registry; that USAID has shown interest in discovering means to intervene in what it calls the "informal" housing sector; that the BCI has discovered the potential utility of collaborating with an "intermediary" organization such as MEDA (and that MEDA has found a reason to collaborate with the BCI); and that through these and many other similar instances there are growing numbers of Haitians inside and outside government learning more about the nature of urban life among their

lower-income co-citizens and about ways to improve that life. To our way of thinking, these things are much too important to be discounted by claims that they all fall short of what is necessary. The glass is either half full or half empty. We prefer to believe that it is slowly filling up.

We also believe, at last offering ourselves the luxury of producing what looks something like a tangible "recommendation", that the next several years will offer the city a major opportunity to reverse the historical trend towards physical degeneration. That opportunity, as we implied earlier, lies in the vast unused area north-northwest of the Delmas road, running from the airport to Freres and covering 3000 to 5000 hectares; of which at least 1500 to 2500 may be suitable for residential development. At an average density of 400 people per hectare, that surface can eventually accommodate 600,000 to 1 million people. The city is slowly expanding in that direction already. It could do so more quickly with water and roads, and it could do so more efficiently for the benefit of all income categories if land and housing development had a bit of organisation and advance planning to help the process along.

To coin a pertinent term, it would be "nice" if all the organizations identified above and others with interests and experience in various aspects of shelter and urban development could find it within their means to sit down with each other and with the government (at the same time and at the same place) to examine the feasibility of initiating an "integrated urban development program" for the area in question, and of adjusting their currently independent plans for water, drainage, roads, land registration, etc. accordingly. Whether such a program is feasible remains to be seen. As we've said, a meeting to discuss it would be nice.

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