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**The Dynamics of Housing Demand
in the Philippines:
Income and Lifecycle Effects**

Marife M. Ballesteros



PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

This study is part of the PIDS project on housing and examines the housing consumption pattern of households in the Philippines. Results show that while income is a major factor in housing demand, other factors such as lifecycle, price of housing and financing availability also affect demand.

The author is a PIDS Research Fellow who specializes in housing and urban development issues.

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Table of Contents

	ABSTRACT.....	v
I.	INTRODUCTION.....	1
II.	KEY FEATURES OF THE HOUSING MARKET IN THE PHILIPPINES.....	3
III.	TENURE CHANGE AND HOUSING IMPROVEMENTS: SOME DESCRIPTIVE STATISTICS.....	6
	a. General Trends in Housing Consumption.....	6
	b. Housing Consumption by Income Group.....	10
	c. Housing Consumption by Lifecycle	12
IV.	ESTIMATES OF HOUSING DEMAND PARAMETERS.....	21
	a. The Model.....	21
	b. Demand Estimates by Location.....	25
	c. Demand Estimates by Type of Household.....	28
V.	HOUSING AFFORDABILITY AND HOUSING OPTIONS.....	31
VI.	CONCLUDING STATEMENTS.....	37
VII.	REFERENCES.....	73

List of Tables, Figures and Appendixes

TABLE

1	Key Features of the Housing Market in the Philippines.....	5
2	Tenure Trends in the Philippines, 1985-1997 (in proportion of total households).....	7
3	Housing Improvement by Tenure, Philippines, 1985-1997 (in percentage point change).....	9
4	Tenure Trends by Income Group, Poor vs. Non-poor Households, Philippines, 1985 and 1997 (in proportion to total households).....	11
5	Housing Improvement by Income Group, 1985-1997 (in percentage point change).....	13
6	Tenure Trends by Lifecycle, Philippines, 1985-1997 (in percentage point change).....	14
7	Housing Improvement by Lifecycle, 1985-1997 (in percentage point change).....	17
8	Probability of Homeownership.....	27
9	Income and Price Elasticity by Income Group.....	29
10	Income Elasticity by Lifecycle.....	30
11	Average Housing Expenditure and Loan Amortization.....	34
12	Distribution of Renter-Households by Monthly Rent, 1997 (in percent).....	36

FIGURE

1	Interval Estimates of Owner Income Elasticities.....	26
2	Interval Estimates of Renter Income Elasticities.....	26
3	Percentile Distribution of Families, by Income Level.....	32
4	Household Expenditure Pattern, Philippines, 1985-1997.....	33

APPENDIXES

1	Housing Improvements by Tenure (in proportion of HH).....	39
2	Tenure Trends by Income Group, Poor vs. Non-poor Households, Philippines.....	45
3	Housing Improvements, Poor vs. Non-Poor Households, Wall Materials, 1985-1997.....	47
4	Housing Improvements, Poor vs. Non-Poor Households, Type of Toilet Facility, 1985-1997.....	48
5	Housing Improvements, Poor vs. Non-Poor Households, Source of Water Supply, 1985-1997.....	50
6	Distribution of Households by Lifecycle and Tenure, Philippines, 1985-1997.....	52
7	Housing Improvement By Lifecycle, Wall Materials.....	60
8	Housing Improvement By Lifecycle, Toilet Facility.....	62
9	Housing Improvement By Lifecycle, Source of Water Supply.....	66
10	Estimated Parameters of Housing Demand Functions.....	70
11	Percentage Distribution of Household Expenditure.....	71

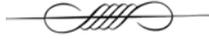
Abstract

This paper examines the housing consumption pattern of Philippine households. Two basic issues are examined: *one*, how is housing demand associated with income and demographic changes? and *two*, does the housing consumption pattern of households suggest the presence of significant housing market imperfections or capital market imperfections in the country?

The results show that while income is a major factor in housing demand, other factors such as lifecycle, price of housing and financing availability also affect demand. Estimates of income elasticity show that the demand for housing is highly responsive to a change in income, but housing adjustments are confined to basic improvements in housing facilities with minimal change on tenure.

The path toward acceptable housing is constrained due to several factors: *first*, the ratio of unit housing cost to income is rapidly rising; *second*, there are few low-cost alternatives to homeownership in the formal market; and *third*, innovative housing finance is limited and the microfinance schemes available suffer from liquidity problems and bureaucratic delays. Thus, government has to address the problems of housing in a broader context. The issues are not only confined in providing households income transfers through subsidies or in giving access to housing and security of tenure but also in looking at the larger issue of urban development.

I



Introduction

Housing demand analysis is primarily a question of how households adjust their housing consumption given factors that place them out of equilibrium. Housing adjustments maybe done by relocating to another unit, by modifying existing units or by tenure change. The decision on housing adjustment depends on a number of factors, which stems from the peculiar attributes of housing as a tradeable good (e.g. location specificity, heterogeneity, “neighborhood” effects, etc.), the characteristic of the households and the nature of the housing market. The attributes of housing are inherent, thus, differences in demand among households or across cities and countries are primarily due to household characteristics and the way the housing market operates within a city or country.

Attempts to provide a model that incorporates all factors affecting housing choice have been difficult (Smith et al. 1988). While some have succeeded in providing a dynamic model that considers household characteristics with investments, financing, and supply of housing in the market, the empirical test is difficult due to data unavailability. Thus, much of empirical literature on the demand for housing services has assumed a simple one-period model. Given this limitation, this investigation of housing demand focuses on the effects of household characteristics and treats conditions on the housing market as exogenous. Two issues are examined: *one*, how is housing consumption associated with income and demographic changes? *two*, does the housing consumption pattern of households suggest the presence of significant housing market imperfections or capital market imperfections?

The discussion proceeds as follows. Section 2 presents key characteristics of the Philippine housing market that may have major

The Dynamics of Housing Demand in the Philippines

influence on housing demand. Sections 3 and 4 present evidences of housing consumption pattern using household surveys conducted from 1985 to 1997. Section 3 provides some descriptive statistics on household tenure change and housing improvements while Section 4 discusses the estimates of housing demand parameters using the basic demand model. In section 5, the issue of housing affordability is further discussed. The last section gives a summary of results and provides some policy implications.

II



Key Features of the Housing Market in the Philippines

The Philippine housing market reveals a tremendous gap between the demand and supply of housing. At the root of this housing shortage is the fact that the majority of households are unable to pay for the cost of housing and land. The minimum housing cost of P150 thousand per unit is 3.8 times the yearly wages of an unskilled laborer in 1997. Likewise, a P250 thousand unit housing is 3.1 times the annual income of an employee earning a median income of P6,700 per month. This ratio is expected to be on the rise given the high rate of increase of housing prices in the country. Average annual housing price appreciation in the Philippines (i.e. Manila) is 32 percent per year, the highest among other major cities in Asia (HABITAT and World Bank 1993).¹

The high rate of increase in land prices is a major factor in house price appreciation (Strassman and Blunt 1993; Ballesteros 2000). Grimes (1976) suggested that as an international rule, housing for low-income families would require that 100m² of land should cost as much as gross national product (GNP) per capita. In Manila, however, the 1990 price (P1000/sq m) of a site outside the metropolis was 5.2 percent of the national GNP per capita. On the outskirts of the NCR, raw agricultural land costs only P60 per sq m (0.3 percent of GNP) but the price rises by 2.5-3.0 times when the same land is zoned for

¹ Annual rate of change of house prices was measured as an annual average of the percentage increase in house prices over the five-year period 1986-1990. These years correspond to a boom in the real estate industry likewise experienced in Bangkok, Hongkong, Singapore and Kuala Lumpur. The rate of change in housing price in these countries in the same period was 26 percent, 18 percent, 6 percent and 14 percent, respectively.

urban use. It rises further by 5.3-6.7 times the zoned land price when such area is developed (UNCHS and WB 1993).

The high cost of urban land in the country is due to constraints in the supply side of the market (Ballesteros 2000). *First*, poor planning and infrastructure developments limit the supply of housing land. *Second*, administrative bottlenecks in land and housing developments due to contradicting land laws, unclear standards and overlapping turfs cause delays in obtaining development permission. *Third*, problems on property rights, e.g. fake titling, delays in agreements of road rights of way, landgrabbing, etc. further increase transaction costs in land development. *Fourth*, land ownership is highly concentrated and low land and property tax in the country encourage holding land idle. All the above scenarios limit the supply of urban lands and increase the cost of servicing land, thus, causing phenomenal rates of increase in urban land prices.

Another feature of the housing market in the country is the lack of long-term financing for housing which could provide a way to offset the high unit cost of housing relative to income. Like most developing economies, the secondary financial market in the country is undeveloped. Long-term funds for housing are constrained and highly dependent on funds from government social security systems. Moreover, government housing finance programs have been unsustainable. One reason is graft and corruption in the approval and release of loans for the low-income sector. It has been reported that payments are released to participating housing developers with no existing household beneficiary. Another reason is poor subsidy transfer mechanisms. Loans to targeted beneficiaries have been released based on formula lending (i.e. loan amount is computed as a percentage of income) which does not recognize borrowers' probable lack of capacity to pay or incur additional indebtedness (Llanto 1998). In addition, there is less incentive for developers and lending institutions to be prudent since the loan is automatically taken out from them (Llanto 1998). The government thus assumes the full credit risk on these loans.

The rental housing market for low-income households in the Philippines is also not developed. Government housing programs

Key Features of the Housing Market in the Philippines

mainly emphasize homeownership. While most families would prefer home-ownership, not all families can afford it. Other households are more mobile and prefer renting to ownership. The rental market could thus serve as a “staging area” for these families. On the other hand, the rent control law has not been effective in providing low rents for low-income families since non-poor households also have access to low rents (Ballesteros 2002).

Table 1. Key Features of the Housing Market in the Philippines

Feature	Underlying Causes
High unit housing cost relative to income	Low wages, high unemployment Construction cost rising faster than wages High rate of increase of urban land prices
High rate of increase in urban land prices	Scarcity due to limited infrastructure developments, Scarcity due to Institutional problems (e.g. property rights, bureaucratic bottlenecks) Holding of idle lands due to low land and property tax
Lack of long-term financing and unsustainable housing finance	Undeveloped secondary markets Graft and corruption Poor subsidy transfer mechanism
Undeveloped rental housing market for low-income households	Government bias on homeownership Rent control law

III



Tenure Change and Housing Improvements: Some Descriptive Statistics

The absence of a panel data for households in the Philippines makes it difficult to give an accurate measure of the mobility and path toward acceptable housing of households. Nonetheless, the trends in dwelling conditions and improvements are provided herein to give some indirect measures.

A. General Trends in Housing Consumption

There has been an increase in homeownership in the Philippines between 1985 and 1997 (Table 2). In 1985, 58.1 percent of households in the Philippines are homeowners. This proportion increased to 64.5 percent in 1997. The increase in homeownership is observed to be strong in the key urban cities, specifically Metro Manila and Metro Cebu. Comparatively, the trend on homeownership for the same period is slow in Davao City and in rural areas.

A clear pattern in all areas is the significant proportion of housing by informal means. This “informal” category encompasses a variety of arrangements, such as living with relatives, living in place of business or living on a working farm (the last two examples refer to institutional housing). Also included under this category are the illegal occupants of dwellings (without permission) and those living in natural habitat (e.g., caves). Those informal dwellers living with relatives or in place of business represent the tenure condition of one-fifth of households in the Philippines. There has been a significant increase of these types of informal dwellers in Metro Cebu and Davao City while the proportion has remained the same in Metro Manila. On the other hand, the proportion of informal dwellers that occupy housing illegally, shows increasing trend specifically in key urban

Table 2. Tenure Trends in the Philippines, 1985-1997 (in proportion of total households)

	1985	1991	1994	1997
Philippines	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	58.1	62.9	65.4	64.5
Rent house/room including lot	7.2	6.9	6.0	6.3
Own house, rent lot	6.6	5.5	4.2	4.0
Own/rent-free house, rent-free lot with consent of owner	26.1	22.3	21.6	22.0
Own/rent-free house, rent-free lot without consent of owner	2.0	2.3	2.7	3.2
Urban	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	50.1	58.3	61.6	60.1
Rent house/room including lot	17.4	13.2	11.4	12.3
Own house, rent lot	10.3	6.7	5.3	5.0
Own/rent-free house, rent-free lot with consent of owner	19.4	19.0	18.5	18.0
Own/rent-free house, rent-free lot without consent of owner	2.9	2.8	3.2	4.6
Rural	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	63.0	67.4	69.1	68.6
Rent house/room including lot	1.0	0.8	0.8	0.9
Own house, rent lot	4.4	4.3	3.2	3.1
Own/rent-free house, rent-free lot with consent of owner	30.1	25.6	24.7	25.6
Own/rent-free house, rent-free lot without consent of owner	1.4	1.9	2.2	1.9
IICR	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	41.2	45.5	49.4	50.0
Rent house/room including lot	32.4	30.7	27.6	25.9
Own house, rent lot	9.8	6.6	4.2	3.8
Own/rent-free house, rent-free lot with consent of owner	13.7	13.2	14.0	13.4
Own/rent-free house, rent-free lot without consent of owner	2.9	4.0	4.8	6.9
Metro Cebu	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	38.8	45.7	54.5	44.2
Rent house/room including lot	14.8	14.4	12.0	9.3
Own house, rent lot	12.8	11.1	13.4	11.9
Own/rent-free house, rent-free lot with consent of owner	11.2	26.1	13.4	20.5
Own/rent-free house, rent-free lot without consent of owner	22.4	2.7	6.7	14.0
Davao City	100.0	100.0	100.0	100.0
Own or owner-like possession of house & lot	53.9	61.5	55.8	54.6
Rent house/room including lot	15.8	11.6	8.0	11.1
Own house, rent lot	9.7	3.9	5.8	8.0
Own/rent-free house, rent-free lot with consent of owner	19.7	19.3	25.8	24.6
Own/rent-free house, rent-free lot without consent of owner	1.0	3.7	4.5	1.7

Source: National Statistic Office (NSO), Family Income and Expenditure Survey (FIES)

Tenure Change and Housing Improvements

Table 3. Housing Improvement by Tenure, Philippines, 1985-1997 (in percentage point change)^a

	Own or owner-like possession of house and lot	Rent house/ room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner	Total
Philippines						
Strong Wall	21.9	26.8	27.4	23.4	27.1	23.9
Makeshift Wall	-1.5	0.8	-2.4	-3.2	-2.5	-1.8
Water-sealed Toilet	10.9	3.7	12.7	15.7	14.7	12.2
No Toilet	-1.6	-1.5	-3.4	-2.9	-7.3	-2.5
Own use, Faucet, Community Water System	4.3	-8.3	5.9	2.0	-0.9	2.8
Peddled Water	0.4	0.8	-0.6	1.9	7.9	0.8
Urban						
Strong Wall	17.4	26.9	27.9	28.4	32.6	23.4
Makeshift Wall	-0.5	0.7	-1.6	-4.0	-6.6	-1.3
Water-sealed Toilet	3.6	3.1	10.3	13.7	10.0	6.3
No Toilet	-0.2	-1.1	-1.4	-3.1	-8.7	-1.4
Own use, Faucet, Community Water System	-0.1	-9.0	5.0	-0.2	-8.9	-1.7
Peddled Water	-0.2	0.8	-0.9	2.6	9.5	0.6
Rural						
Strong Wall	19.8	23.6	26.5	17.8	14.4	20.3
Makeshift Wall	-2.1	2.2	-3.5	-3.2	0.0	-2.4
Water-sealed Toilet	10.3	7.7	15.8	12.7	16.0	11.9
No Toilet	-1.0	-5.2	-6.2	-1.0	-1.9	-1.8
Own use, Faucet, Community Water System	0.7	-5.8	6.7	-0.1	4.4	0.7
Peddled Water	0.2	-0.1	-0.2	0.9	1.6	0.4
ICR						
Strong Wall	20.5	27.0	37.2	35.5	47.1	26.8
Makeshift Wall	0.9	1.8	0.1	-0.4	-10.0	1.1
Water-sealed Toilet	3.5	3.9	2.9	13.3	10.7	4.8
No Toilet	-0.8	-1.2	-3.1	-3.0	-5.9	-1.4
Own use, Faucet, Community Water System	-2.9	-13.4	9.4	-8.8	-19.9	-7.2
Peddled Water	-2.1	1.5	-2.0	8.4	12.7	1.2
Metro Cebu						
Strong Wall	10.9	28.7	16.4	22.1	11.6	15.2
Makeshift Wall	-3.8	3.7	-2.4	-10.8	-1.7	-2.9
Water-sealed Toilet	-12.1	-0.7	-0.9	6.0	-0.5	-4.6
No Toilet	4.1	3.5	-0.5	-16.9	-6.4	-1.5

Table 3 (continued)

	Own or owner-like possession of house and lot	Rent house/ room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner	Total
Own use, Faucet, Community Water System	-17.3	-13.5	-10.5	25.6	-6.7	-7.9
Peddled Water	5.4	3.7	1.1	-8.7	23.0	5.3
Davao City						
Strong Wall	26.1	38.4	18.2	41.4	76.9	30.5
Makeshift Wall	-1.5	-8.2	-4.1	-3.5	0.0	-3.1
Water-sealed Toilet	19.7	5.0	-10.7	17.5	35.8	13.7
No Toilet	4.1	4.4	3.1	14.0	23.1	6.9
Own use, Faucet, Community Water System	19.4	-8.9	-15.2	-2.2	53.3	7.6
Peddled Water	-0.9	-16.5	-3.3	6.0	23.6	-1.7

^a See Appendix 1 for details.

compared to only 23 percent in 1985. Toilet facilities also improved with 51 percent using water-sealed toilets compared to 36 percent in 1985. These types of improvements in dwelling conditions have been more pronounced in key urban cities.

B. Housing Consumption by Income Group

Homeownership as expected is comparatively higher among non-poor households, i.e. households above the poverty thresholds (Table 4).² However, poor households showed greater improvement in tenure status. In 1985, only 51.8 percent of poor families were homeowners. This proportion increased by about 10-percentage point in 1997. Comparatively, only a two percentage point increase is noted among non-poor households for the same period. There has been a decline in the total number of informal dwellers specifically those who live with relatives and in work areas although the number of

² Households were grouped based on the computed poverty threshold by region/city. This yielded a better classification of households by income over classification using income deciles. Poverty threshold considers regional differences in terms of prices and consumption patterns.

Table 4. Tenure Trends by Income Group, Poor vs. Non-poor Households, Philippines, (in proportion to total households)^a

	1985						1997					
	Total	Own or owner-like Possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner	Total	Own or owner-like possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines												
Poor	100.0	51.8	4.0	7.1	34.7	2.4	100.0	62.0	1.9	3.8	28.9	3.4
Non-poor	100.0	63.1	9.8	6.2	19.2	1.6	100.0	65.7	8.4	4.1	18.7	3.0
Urban												
Poor	100.0	39.4	12.5	13.3	30.4	4.4	100.0	53.1	5.7	6.6	28.0	6.6
Non-poor	100.0	55.4	19.8	8.8	13.9	2.1	100.0	61.6	13.8	4.7	15.8	4.1
Rural												
Poor	100.0	58.8	0.6	4.6	36.4	1.6	100.0	65.2	0.5	2.8	29.2	2.3
Non-poor	100.0	69.4	1.5	4.2	23.7	1.2	100.0	71.2	1.2	3.4	22.7	1.5
NCR												
Poor	100.0	29.3	31.2	12.1	21.3	6.0	100.0	37.4	22.7	2.8	19.8	17.3
Non-poor	100.0	44.7	32.8	9.1	11.4	2.0	100.0	50.9	26.1	3.9	12.9	6.2
Metro Cebu												
Poor	100.0	20.9	13.4	11.9	20.9	32.8	100.0	39.7	7.0	15.4	19.6	18.3
Non-poor	100.0	48.1	15.5	13.2	6.2	17.1	100.0	44.6	9.5	11.6	20.6	13.7
Davao City												
Poor	100.0	47.1	10.9	10.3	30.2	1.6	100.0	41.6	6.8	13.4	38.2	-
Non-poor	100.0	57.8	18.6	9.3	13.7	0.6	100.0	56.3	11.7	7.3	22.8	1.9

^a See Appendix 2 for details.

households in illegally occupied dwellings or squatter areas has increased. An increase in illegal dwellings is noted among the non-poor households, which maybe indicative of the rising difficulty of obtaining housing from the formal sector even among non-poor families. This finding is also apparent in urban areas, specifically Metro Manila.

In Metro Manila, although there has been an increase in homeownership for both poor and non-poor households between 1985 and 1997, the increase in the proportion of households in illegally-occupied dwellings has also been sizeable. Among the poor households, the proportion of households in illegally-occupied dwellings in 1985 increased three times its level in 1997. This trend is also observed among non-poor households. The increase may have come from new households, from renter-households (house and lot or lot only) or from households under some informal dwelling arrangements.

The trends for Metro Cebu and Davao City show a decline in the proportion of homeownership even among the non-poor households, although the decline is relatively small. In Davao City, we find a comparatively insignificant proportion of illegal dwellers compared to Metro Cebu and NCR.

Housing improvements have generally been on the upward trend for all households, whether poor or non-poor (Table 5). There remain, however, poor water supply connections in all areas, which as earlier indicated, is primarily due to the poor water infrastructure in the country. Although there has been an increase in water outreach for poor communities under the privatization program of the MWSS and through LGU initiated water projects, providing households their own piped water through a community water system would still require much work (ADB 2000).

C. Housing Consumption by Lifecycle

The proportion of homeownership is highest among married headed households than households whose heads are unmarried, separated or widowed (Table 6). The household size is shown to have an impact on tenure where larger-sized households, whether house-

Table 5. Housing Improvement by Income Group, 1985-1997 (in percentage point change)

	Wall Material		Toilet Facility		Source of Water Supply	
	Strong	Makeshift	Water-sealed	None	Own use, faucet, community water system	Peddler
Philippines						
Poor	16.2	-3.1	5.5	-1.0	-2.8	-0.2
Non-poor	21.1	-0.5	9.7	-0.5	1.7	1.3
Urban						
Poor	17.4	-2.6	2.2	1.1	-7.2	-1.1
Non-poor	17.2	0.3	1.2	0.3	-6.2	1.3
Rural						
Poor	16.1	-3.2	7.3	-2.1	-0.7	0.3
Non-poor	20.5	-1.5	12.8	0.0	1.1	0.5
IICR						
Poor	23.1	11.1	5.5	1.0	-14.4	4.9
Non-poor	20.4	3.0	0.8	-0.7	-12.3	2.1
Metro Cebu						
Poor	9.0	1.5	-19.8	15.6	-4.3	13.5
Non-poor	5.4	-0.5	-13.9	1.5	-17.9	5.3
Davao City						
Poor	45.7	-4.5	9.2	20.2	4.2	-4.8
Non-poor	15.6	-1.1	4.1	5.9	-1.9	-0.6

^a See Appendix 3 to 5 for details.

hold heads are married or unmarried/separated/widowed, tend to have lesser capacity for homeownership than smaller-sized households.

The trends in tenure status by lifecycle show increases in the proportion toward homeownership for different household types. This trend is more pronounced among married-headed than single-headed households. However, illegal housing is more common among married-headed households.

Both single and married-headed households show increasing trend toward illegal dwellings. Illegal housing used to be uncom-

The Dynamics of Housing Demand in the Philippines

Table 6. Tenure Trends by Lifecycle, Philippines, 1985-1997 (in percentage point change)^a

	Own or owner-like possession of house and lot	Rent house/ room, including lot	Own house, rent lot	Own/ rent-free house, w/ consent of owner	Own/ rent-free house, w/o consent of owner
Philippines					
single/separated, hysize=1	-1.2	1.8	3.2	-8.3	4.5
single w/hysize>1	-0.6	1.5	-0.9	0.5	-0.5
separated, hysize>1	13.9	-8.1	-2.2	-5.2	1.5
married, hhead<30, hsize< or =3	2.6	5.0	-1.5	-7.5	1.4
married, hhead<30, 3<hsize<6	9.4	0.4	-5.3	-6.0	1.6
married, hhead<30, hsize 6+	8.9	-1.7	-3.0	-5.3	1.1
married, hhead 30-39, hsize< or =3	3.2	2.2	-4.2	-0.8	-0.3
married, hhead 30-39, 3<hsize<6	9.3	-2.3	-3.1	-4.9	1.0
married, hhead 30-39, hsize 6+	11.8	-3.0	-3.1	-7.3	1.7
married, hhead 40-49, hsize< or =3	6.4	-0.6	-1.9	-6.3	2.4
married, hhead 40-49, 3<hsize<6	7.0	-1.9	-2.5	-3.3	0.7
married, hhead 40-49, hsize 6+	5.0	-1.0	-4.0	-1.9	1.9
married, hhead 50+, hsize< or =3	0.7	0.0	-1.6	-0.6	1.5
married, hhead 50+, 3<hsize<6	3.9	-0.5	-1.0	-2.7	0.4
married, hhead 50+, hsize 6+	5.4	-1.7	-2.1	-3.3	1.7
Urban					
single/separated, hysize=1	-3.3	-4.0	4.3	-2.6	5.6
single w/hysize>1	3.8	-3.5	-2.9	2.2	0.5
separated, hysize>1	22.2	-12.4	-4.2	-8.5	2.8
married, hhead<30, hsize< or =3	11.3	1.8	-5.9	-9.5	2.1
married, hhead<30, 3<hsize<6	13.4	-7.0	-8.8	2.2	0.3
married, hhead<30, hsize 6+	16.6	-5.3	-7.1	-2.6	-1.6
married, hhead 30-39, hsize< or =3	11.1	0.5	-6.8	-5.3	0.6
married, hhead 30-39, 3<hsize<6	10.8	-7.5	-4.5	-0.4	1.6
married, hhead 30-39, hsize 6+	14.2	-10.7	-6.3	-0.8	3.7
married, hhead 40-49, hsize< or =3	6.0	-11.8	-4.1	6.6	3.3
married, hhead 40-49, 3<hsize<6	13.9	-6.9	-3.1	-4.7	0.9
married, hhead 40-49, hsize 6+	9.9	-4.5	-8.1	-0.6	3.3
married, hhead 50+, hsize< or =3	7.9	-3.4	-3.7	-3.2	2.5
married, hhead 50+, 3<hsize<6	7.2	-3.3	-3.3	-0.2	-0.4
married, hhead 50+, hsize 6+	7.0	-4.6	-4.7	-0.2	2.4
Rural					
single/separated, hysize=1	7.8	-1.7	2.4	-11.7	3.1
single w/hysize>1	-1.5	1.6	1.1	0.9	-2.0

Tenure Change and Housing Improvements

Table 6 (continued)

	Own or owner-like possession of house and lot	Rent house/ room, including lot	Own house, rent lot	Own/ rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
separated, hysize>1	2.0	-3.9	1.2	1.4	-0.8
married, hhead<30, hsize< or =3	2.7	-0.2	0.0	-3.3	0.8
married, hhead<30, 3<hsize<6	10.8	0.2	-3.8	-9.1	1.9
married, hhead<30, hsize 6+	6.0	-3.2	-1.2	-4.7	3.0
married, hhead 30-39, hsize< or =3	0.5	-2.1	-2.3	5.1	-1.3
married, hhead 30-39, 3<hsize<6	9.8	-0.4	-2.1	-7.5	0.2
married, hhead 30-39, hsize 6+	11.9	-0.7	-1.9	-9.6	0.2
married, hhead 40-49, hsize< or =3	9.9	3.0	-1.1	-12.9	1.1
married, hhead 40-49, 3<hsize<6	3.2	-0.3	-2.2	-0.8	0.2
married, hhead 40-49, hsize 6+	3.2	-0.1	-2.0	-1.6	0.5
married, hhead 50+, hsize< or =3	-2.2	0.4	-1.2	2.2	0.8
married, hhead 50+, 3<hsize<6	3.1	-0.1	-0.2	-3.3	0.6
married, hhead 50+, hsize 6+	4.5	-0.1	-0.2	-5.1	0.9
NCR					
single/separated, hhsize=1	21.4	-32.9	1.1	-2.2	12.6
single w/hhsize>1	9.3	-11.1	-4.9	4.1	2.7
separated, hysize>1	23.9	-11.6	-7.9	-8.9	4.4
married, hhead<30, hsize< or =3	14.3	4.2	-11.5	-9.3	2.3
married, hhead<30, 3<hsize<6	6.0	-10.4	-5.2	6.7	2.9
married, hhead<30, hsize 6+	22.6	-3.8	-6.5	-7.4	-4.9
married, hhead 30-39, hsize< or =3	9.3	2.7	-4.6	-7.7	0.3
married, hhead 30-39, 3<hsize<6	4.5	-5.7	-3.0	3.7	0.5
married, hhead 30-39, hsize 6+	11.1	-20.4	-4.3	3.7	9.9
married, hhead 40-49, hsize< or =3	22.3	-26.9	-7.6	6.8	5.5
married, hhead 40-49, 3<hsize<6	16.3	-9.2	-2.5	-5.6	1.0
married, hhead 40-49, hsize 6+	7.3	-5.1	-8.8	-0.1	6.7
married, hhead 50+, hsize< or =3	10.1	-7.6	-3.9	0.3	1.1
married, hhead 50+, 3<hsize<6	6.4	-2.9	-4.4	-2.4	3.3
married, hhead 50+, hsize 6+	6.7	-6.0	-5.3	-1.2	5.9
Metro Cebu					
single/separated, hhsize=1	15.0	-18.1	9.2	-6.1	0.0
single w/hhsize>1	-34.5	6.6	-2.0	3.0	27.0
separated, hysize>1	8.3	-50.0	0.0	16.7	25.0
married, hhead<30, hsize< or =3	0.9	44.5	3.6	-24.9	-24.1

The Dynamics of Housing Demand in the Philippines

Table 6 (continued)

	Own or owner-like possession of house and lot	Rent house/ room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
married, hhead<30, 3<hsize<6	12.7	-17.5	5.6	26.9	-27.7
married, hhead<30, hsize 6+	25.9	-60.9	0.0	27.1	7.9
married, hhead 30-39, hsize< or =3	20.2	30.1	-20.7	-12.8	-16.8
married, hhead 30-39, 3<hsize<6	3.4	-5.7	-3.1	2.5	2.8
married, hhead 30-39, hsize 6+	10.1	-20.5	0.6	21.1	-11.3
married, hhead 40-49, hsize< or =3	-44.4	0.0	15.7	25.9	2.8
married, hhead 40-49, 3<hsize<6	-22.2	8.0	9.1	29.6	-24.6
married, hhead 40-49, hsize 6+	11.8	-4.5	-10.3	8.3	-5.4
married, hhead 50+, hsize< or =3	6.4	-20.0	18.7	-16.3	11.2
married, hhead 50+, 3<hsize<6	17.2	-1.7	9.7	-3.7	-21.5
married, hhead 50+, hsize 6+	-1.8	-6.7	-6.9	15.0	0.5
Davao City					
single/separated, hsize=1	-14.1	25.6	0.0	-11.5	0.0
single w/hsize>1	-23.9	-5.4	0.0	29.3	0.0
separated, hsize>1	20.8	-53.8	27.1	5.9	0.0
married, hhead<30, hsize< or =3	-39.4	15.6	9.4	14.3	0.0
married, hhead<30, 3<hsize<6	26.7	-19.9	-8.0	-6.4	7.6
married, hhead<30, hsize 6+	66.7	-50.0	0.0	-16.7	0.0
married, hhead 30-39, hsize< or =3	5.9	-14.7	0.0	8.8	0.0
married, hhead 30-39, 3<hsize<6	6.0	3.2	-12.2	5.6	-2.6
married, hhead 30-39, hsize 6+	-16.5	-3.4	11.8	11.7	-3.7
married, hhead 40-49, hsize< or =3	16.0	-13.9	-16.7	14.6	0.0
married, hhead 40-49, 3<hsize<6	12.8	-14.3	6.5	-7.4	2.4
married, hhead 40-49, hsize 6+	-16.4	3.2	1.7	10.0	1.5
married, hhead 50+, hsize< or =3	-17.5	-8.5	3.6	18.9	3.6
married, hhead 50+, 3<hsize<6	1.4	-2.2	-8.8	9.6	0.0
married, hhead 50+, hsize 6+	8.4	-5.0	-1.9	-1.5	0.0

^a See Appendix 6 for details.

mon among single-headed households, but we find a rise in the proportion of single-headed households in illegal type of dwellings.

The effects of lifecycle are more pronounced in specific localities. In NCR, while the proportion of homeownership is rising for all types

of households, single-headed households are mainly renter-households. Homeownership is highest among married-headed individuals where the household head is at least 50 years of age.

Informal dwellings without consent of owners are increasing for all types of households. It is observed that from 1985 to 1997, the conditions of housing by single-headed households have worsened. Similar conditions have been observed in other metropolitan areas, i.e. Cebu and Davao City. Informal dwellings are on the rise, specifically, illegal housing among single- and married-headed families. In highly urbanized areas like Metro Manila, Cebu and Davao, housing options in the formal market have become limited even among single-headed households with no dependents. The situation could thus be worse for households with dependents.

Improvements in housing are the apparent trend in housing consumption for both single- and married-headed households (Table 7). Between 1985 and 1997, housing facilities are much better, particularly in regard to wall material and toilet facilities.

Table 7. Housing Improvement by Lifecycle, 1985-1997 (in percentage point change)^a

	Wall Material	Toilet Facility	Source of Water Supply
	Strong	Water-sealed	Own use, faucet, community water system
Philippines			
single/separated, hsize=1	24.2	9.3	8.9
single w/ hsize>1	22.3	14.4	4.1
separated, hsize>1	19.5	12.0	1.3
married, hhead<30, hsize< or =3	32.2	23.8	5.1
married, hhead<30, 3<hsize<6	24.2	10.3	1.3
married, hhead<30, hsize 6+	25.7	14.5	1.8
married, hhead 30-39, hsize< or =3	20.4	3.3	0.5
married, hhead 30-39, 3<hsize<6	24.6	11.5	0.5
married, hhead 30-39, hsize 6+	20.1	9.7	1.5
married, hhead 40-49, hsize< or =3	33.2	17.9	9.4
married, hhead 40-49, 3<hsize<6	26.7	13.9	4.8
married, hhead 40-49, hsize 6+	20.9	8.1	1.8
married, hhead 50+ , hsize< or =3	21.0	14.2	4.7
married, hhead 50+ , 3<hsize<6	24.6	12.8	3.6
married, hhead 50+ , hsize 6+	22.8	11.0	0.3

The Dynamics of Housing Demand in the Philippines

Table 7 (continued)

	Wall Material	Toilet Facility	Source of Water Supply
	Strong	Water-sealed	Own use, faucet, community water system
Urban			
single/separated, hsize=1	25.3	-7.5	1.8
single w/ hsize>1	22.8	7.1	-5.0
separated, hsize>1	24.1	4.8	-1.7
married, hhead<30, hsize< or =3	27.0	11.7	-0.8
married, hhead<30, 3<hsize<6	29.8	8.1	-5.6
married, hhead<30, hsize 6+	28.9	15.3	-2.8
married, hhead 30-39, hsize< or =3	25.7	4.4	-1.7
married, hhead 30-39, 3<hsize<6	23.3	5.3	-3.8
married, hhead 30-39, hsize 6+	23.2	4.7	-1.2
married, hhead 40-49, hsize< or =3	27.3	13.1	3.5
married, hhead 40-49, 3<hsize<6	23.9	5.6	1.7
married, hhead 40-49, hsize 6+	22.8	6.1	-1.0
married, hhead 50+, hsize< or =3	23.2	8.2	2.5
married, hhead 50+, 3<hsize<6	17.2	4.7	-2.7
married, hhead 50+, hsize 6+	22.9	4.9	-4.7
Rural			
single/separated, hsize=1	10.2	6.9	3.4
single w/ hsize>1	15.5	15.5	3.8
separated, hsize>1	7.9	19.2	0.2
married, hhead<30, hsize< or =3	28.7	22.9	2.2
married, hhead<30, 3<hsize<6	15.8	5.9	0.3
married, hhead<30, hsize 6+	18.3	8.1	-0.5
married, hhead 30-39, hsize< or =3	9.4	-4.0	-4.1
married, hhead 30-39, 3<hsize<6	22.1	13.2	-0.1
married, hhead 30-39, hsize 6+	15.8	8.7	-0.3
married, hhead 40-49, hsize< or =3	32.9	15.4	5.8
married, hhead 40-49, 3<hsize<6	24.6	16.2	0.7
married, hhead 40-49, hsize 6+	16.4	5.7	-0.4
married, hhead 50+, hsize< or =3	16.1	12.6	0.9
married, hhead 50+, 3<hsize<6	26.1	14.3	2.1
married, hhead 50+, hsize 6+	21.0	14.1	1.4
ICR			
single/separated, hsize=1	25.9	-5.8	-13.1
single w/ hsize>1	14.9	3.0	-7.0
separated, hsize>1	21.9	7.1	-19.2

Tenure Change and Housing Improvements

Table 7 (continued)

	Wall Material	Toilet Facility	Source of Water Supply
	Strong	Water-sealed	Own use, faucet, community water system
married, hhead<30, hsize< or =3	35.2	9.3	-7.3
married, hhead<30, 3<hsize<6	36.4	1.0	-12.6
married, hhead<30, hsize 6+	34.0	15.2	2.3
married, hhead 30-39, hsize< or =3	36.0	3.0	-14.8
married, hhead 30-39, 3<hsize<6	24.2	7.8	-8.8
married, hhead 30-39, hsize 6+	21.3	1.4	-11.0
married, hhead 40-49, hsize< or =3	27.2	16.6	-6.6
married, hhead 40-49, 3<hsize<6	33.1	2.0	-5.0
married, hhead 40-49, hsize 6+	33.1	7.4	-7.0
married, hhead 50+ , hsize< or =3	17.5	-0.6	3.4
married, hhead 50+ , 3<hsize<6	14.7	4.7	-6.8
married, hhead 50+ , hsize 6+	29.1	5.1	-4.3
Metro Cebu			
single/separated, hhsize=1	64.4	-23.3	36.7
single w/ hhsize>1	9.3	-29.6	-9.9
separated, hhsize>1	-32.0	-39.8	-1.7
married, hhead<30, hsize< or =3	19.5	16.2	10.4
married, hhead<30, 3<hsize<6	18.1	-3.2	6.2
married, hhead<30, hsize 6+	11.6	17.2	15.0
married, hhead 30-39, hsize< or =3	52.5	42.5	23.7
married, hhead 30-39, 3<hsize<6	8.3	-0.2	0.2
married, hhead 30-39, hsize 6+	28.9	-3.8	-11.7
married, hhead 40-49, hsize< or =3	38.0	-56.3	-39.0
married, hhead 40-49, 3<hsize<6	10.3	11.8	-39.6
married, hhead 40-49, hsize 6+	14.3	-17.9	-5.3
married, hhead 50+ , hsize< or =3	69.6	39.5	16.7
married, hhead 50+ , 3<hsize<6	26.5	1.9	2.2
married, hhead 50+ , hsize 6+	-1.2	-16.1	-36.3
Davao City			
single/separated, hhsize=1	0.0	0.0	34.6
single w/ hhsize>1	47.1	24.1	23.9
separated, hhsize>1	20.5	-3.0	-3.8
married, hhead<30, hsize< or =3	37.5	-10.1	-56.4
married, hhead<30, 3<hsize<6	41.3	-1.2	8.0
married, hhead<30, hsize 6+	-23.7	33.3	66.7

The Dynamics of Housing Demand in the Philippines

Table 7 (continued)

	Wall Material	Toilet Facility	Source of Water Supply
	Strong	Water-sealed	Own use, faucet, community water system
married, hhead 30-39, hsize< or =3	41.2	32.4	5.9
married, hhead 30-39, 3<hsize<6	41.2	6.3	8.1
married, hhead 30-39, hsize 6+	50.7	28.2	8.0
married, hhead 40-49, hsize< or =3	59.0	18.7	-1.4
married, hhead 40-49, 3<hsize<6	48.9	24.8	46.9
married, hhead 40-49, hsize 6+	27.3	12.5	8.9
married, hhead 50+, hsize< or =3	-4.6	1.2	-17.2
married, hhead 50+, 3<hsize<6	17.4	0.7	-8.4
married, hhead 50+, hsize 6+	42.3	19.0	7.7

^a See Appendix 7 to 9 for details.

in the savings rate or an increase in consumption of other household goods (e.g. clothing, food, recreation). The price term has been the source of greatest difficulty in housing demand equations. This difficulty stems from two sources (Ingram 1984): (a) measuring the variation in unit price of housing considering that housing is multidimensional and have different attributes in a single-purchase; and (b) a household faces a schedule of prices that is affected not only by the quantity of housing but location as well (i.e., a household may choose more quantity of housing but higher transport cost). There are different ways to measure the unit price of housing, to wit: indices of construction materials and rental prices, land and housing values, work place based price index (i.e. price variation is computed as the variation in expense by workplace for a given quantity of housing). In the absence of data on land and house prices in the FIES data set, we estimated price elasticity using construction and rental price indices at the provincial level. However, the data did not yield significant estimates. We further estimated housing prices using hedonic estimation, as follows:

(3) Hedonic Equation

$$\ln R = a + \sum b_i X_i + u_{t=1}$$

X_1 = type of construction materials

X_2 = source of water supply

X_3 = type of toilet facilities

Given the data set, the hedonic estimates of housing prices have been limited to the above factors. Thus, the variation in housing price has been largely explained by differences in the type of housing while the price effect due to location differences has been confined to regional areas. The price data provided significant results for estimates using Philippine total but regional/city estimates yielded poor results since location differences have not been captured in variation of housing prices. The price variable was thus omitted in the expenditure demand functions for regional estimates.

country. In the last decade, econometric analyses of housing demand specifically in developing countries, have grown. This development provided greater understanding of the variation in data, model specifications and variable definitions in demand estimations. Comparatively, there are very few of such studies done in the Philippines. The initial attempt to estimate a demand function for housing in the Philippines was that of Angeles (1985). Malpezzi and Mayo (1987) estimated a similar housing demand function using data from a household survey conducted in Metro Manila in 1984. Geron and Llanto (2001) applied a simple demand model omitting price variation (i.e. assuming no intra-metropolitan variation in prices and thus variation is primarily due to quantities) using data from the FIES. Following the demand models used in these studies, the paper extended analysis to include demand by different categories of households and for specific housing attributes. This study also takes into consideration locational variations in demand compared to the aggregate parameters employed by earlier studies.

B. Demand Estimates by Location

Income has been a major determinant of housing demand. Housing demand is noted to be income elastic. Income elasticity of housing demand shows estimates greater than unity for both owners and renters (Figures 1 & 2). There is an observed variation in income elasticity among renters in different areas but point estimates generally suggest elastic demand. This finding implies that housing expenditure is highly responsive to a change in income whereby households will tend to use increases in income primarily for housing. Based on the housing consumption pattern of households, additional incomes will be most likely spent on improvements of housing facilities.

Figure 1. Interval Estimates of Owner Income Elasticities

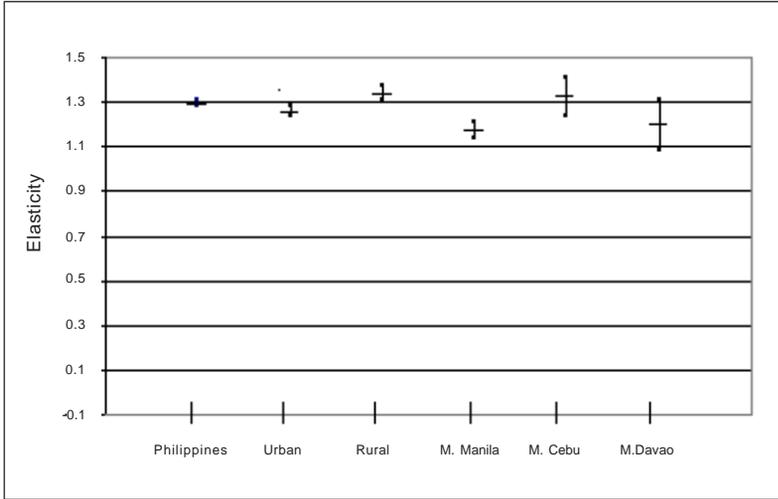
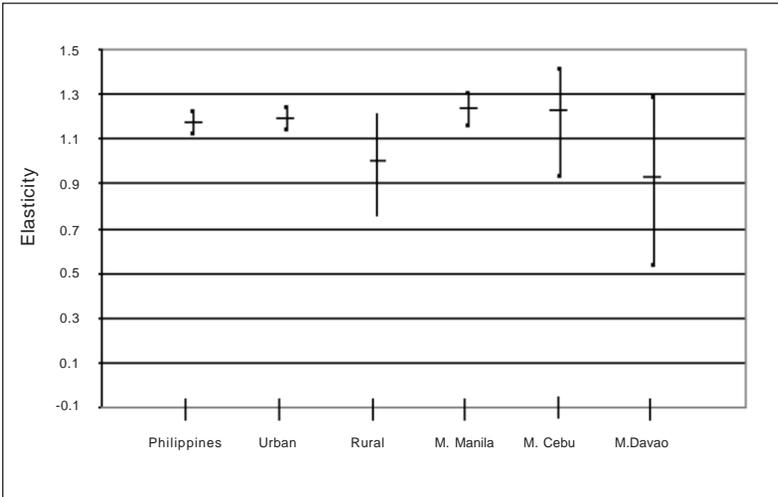


Figure 2. Interval Estimates of Renter Income Elasticities



Note: See Appendix 10 for details.

tured the effects of location differences on prices, the results reflect a rental housing market that caters largely to higher-income households. Thus, it is not surprising that informal housing exists (e.g. rent-free) and that conditions of doubled-up or multi-family dwellings are common.

C. Demand Estimates by Type of Household

Estimates of income elasticity by income categories show that elastic demand for both poor and non-poor households (Table 9).³ Inelastic demand is observed primarily among renters, although as mentioned earlier, the behavior of renters is diverse.

Comparing poor and non-poor households across cities show that in Metro Manila poor households display inelastic demand. Poor households in Metro Manila tend to spend less on housing for a percent change in income compared to poor households in Metro Cebu and Davao. This is indicative of the differences in levels of poverty between Manila and other key cities in the country. In all key cities, housing is a major problem, however, the poor in Manila have less access to other basic needs (e.g. food, clothing) as compared to their counterparts in Cebu and Davao.

Classifying households by lifecycle, yielded different income elasticity estimates between single- and married-headed households (Table 10). Housing expenditures of married-headed households tend to be more responsive to change in income compared to single-headed households. This may be because married-headed households tend to be less mobile than single-headed households. The difference is more pronounced in Metro Manila than in Cebu or Davao. In the latter cities, both single and married-headed households displayed income elastic demand.

³ Poor households are households whose incomes fall below a poverty threshold income within a region. The poverty threshold is based on prices and consumption patterns within the region.

Table 9. Income and Price Elasticity by Income Group ^a

	Owners				Renters			
	Intercept	Income (E)	Price (E)	Adjusted R ²	Intercept	Income (E)	Price (E)	Adjusted R ²
Philippines								
Poor	-7.080 (0.254)	1.314 (0.028)	-0.041 (0.027)	0.376	-5.315 (1.040)	1.042 (0.126)	0.336 (0.086)	0.536
Non-Poor	-6.698 (0.090)	1.298 (0.009)	-0.138 (0.012)	0.661	-5.884 (0.312)	1.197 (0.028)	-0.201 (0.034)	0.551
Urban								
Poor	-6.704 (0.388)	1.333 (0.045)	-0.257 (0.035)	0.419	-5.116 (1.166)	1.053 (0.133)	0.217 (0.102)	0.466
Non-Poor	-5.086 (0.104)	1.195 (0.010)	-0.307 (0.011)	0.650	-5.666 (0.326)	1.199 (0.028)	-0.303 (0.035)	0.543
Rural								
Poor	-6.319 (0.355)	1.234 (0.037)	-0.080 (0.039)	0.310	n.s.	n.s.	n.s.	0.352
Non-Poor	-6.624 (0.232)	1.290 (0.021)	-0.189 (0.032)	0.493	-4.241 (1.664)	0.975 (0.152)	0.138 (0.157)	0.363
NCR								
Poor	-0.575 (2.007)	0.937 (0.202)	-	0.193	n.s.	n.s.	n.s.	0.017
Non-Poor	-3.313 (0.212)	1.178 (0.018)	-	0.667	-4.598 (0.429)	1.253 (0.038)	-	0.524
Metro Cebu								
Poor	-12.574 (5.112)	2.075 (0.515)	-	0.336	n.s.	n.s.	n.s.	n.s.
Non-Poor	-4.698 (0.514)	1.303 (0.047)	-	0.6914	n.s.	n.s.	n.s.	n.s.
Metro Davao								
Poor	-26.152 (6.188)	3.683 (0.666)	-	0.620	n.s.	n.s.	n.s.	n.s.
Non-Poor	-3.382 (0.678)	1.152 (0.063)	-	0.634	n.s.	n.s.	n.s.	n.s.

^a Income group based on poverty threshold by region.

n.s. = not significant due to lack of sample households.

- = no results due to minimal variation in hedonic price data.

() = data in parentheses refer to standard deviation.

The Dynamics of Housing Demand in the Philippines

Table 10. Income Elasticity by Lifecycle

Lifecycle	Urban	Rural	Metro Manila	Metro Cebu	Metro Davao
single/separated, hhsz=1	0.98	0.77	1.17	-	-
single w/ hhsz>1	0.99	0.87	0.93	-	-
separated, hhsz>1	1.07	0.86	0.98	1.09	0.82
married, hhead<30, hsz<=3	1.02	0.92	1.13	-	-
married, hhead<30, 3<hsz<6	1.10	1.12	1.01	1.00	-
married, hhead<30, hsz 6+	0.91	1.08	0.81	-	-
married, hhead 30-39, hsz<=3	1.07	1.05	1.00	-	-
married, hhead 30-39, 3<hsz<6	1.05	1.03	0.95	1.09	1.25
married, hhead 30-39, hsz 6+	1.12	1.11	1.00	1.05	-
married, hhead 40-49, hsz<=3	1.09	1.12	1.05	-	-
married, hhead 40-49, 3<hsz<6	1.08	1.08	1.02	1.24	0.84
married, hhead 40-49, hsz 6+	1.11	1.09	0.95	0.96	0.94
married, hhead 50+, hsz<=3	1.03	1.04	0.96	-	0.74
married, hhead 50+, 3<hsz<6	1.03	1.11	0.98	1.27	1.32
married, hhead 50+, hsz 6+	1.09	1.02	1.09	1.32	0.86

- not significant due to lack of sample data

V



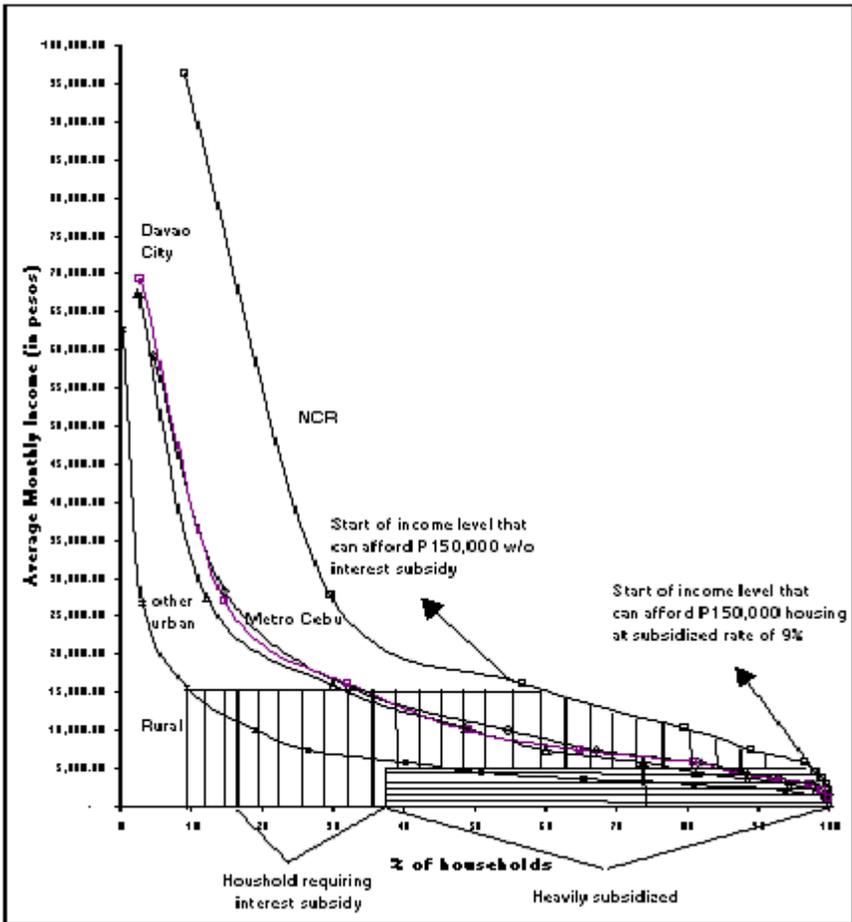
Housing Affordability and Housing Options

Housing demand is shown to be largely associated with income. For this reason, housing affordability has often been measured in terms of the proportion of income that a household must or is willing to spend on housing. However, the demand estimates also show that there are underlying factors such as lifecycle, price of housing and financing availability that impact on housing affordability.

We tried to capture the interaction of these factors by looking into the distribution of households by average incomes in specific locations. These income levels are matched with housing expenditure patterns and financing availability to come up with some indication of housing affordability.

The distribution of households based on average incomes shows that urban households receive more income than rural households (Figure 3). Metro Cebu and Davao City approximate the distribution in most urban areas. On the other hand, households in Metro Manila are apparently richer than households in other locations. About 57 percent of households in Metro Manila have an average annual household income between P150,000 and P250,000 while in other urban areas about 60% of households have incomes between P80,000 and P100,000. These income levels are way above the poverty threshold income in Metro Manila and urban areas which are P14,000 and P12,577, respectively. Thus, in terms of income we find that in urban areas, most households are middle-income earners.

Figure 3. Percentile Distribution of Families, by Income Level

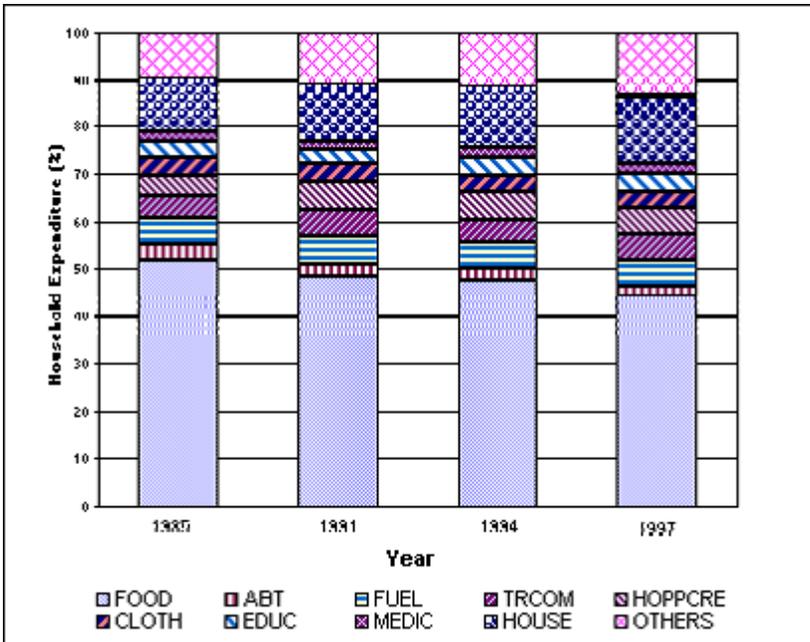


The income available for housing is, however, minimal. The expenditure pattern of households shows that at least 50 percent of income is spent on food (Figure 4). Housing expenditure represents 10 to 20 percent of total expenditures with low-income households spending more in proportion to higher-income households. Food and housing expenditures combined represent 70 to 80 percent of household income. This leaves only a small amount of income for

expenditures on other basic needs (e.g. clothing, fuel, transport, education). Households thus have limited capacities to shift from non-housing to housing expenses. Increase in housing expenditures is possible through an increase in income or through income transfers (e.g. subsidies).

What are the households' options in terms of available housing in the market? The minimum low-cost housing unit under government programs costs P150,000. If households provide an equity of 25 percent, the loan amount required to obtain the P150,000 unit house would be about P112,500. Loan amortization for this loan would amount to about P800 per month for 30 years at a subsidized rate of 9 percent (Table 11). This leaves out 62.5 percent of households from the formal housing market for the entire Philippines; 40 percent of households in the urban areas; and 81 percent of households in rural

Figure 4. Household Expenditure Pattern, Philippines, 1985-1997



Note: See Appendix 11 for details.

Table 11. Average Housing Expenditure and Loan Amortization

Income Class	Monthly Housing Expenditure						Housing Loan (Formal Sector) ^a			
	Philippines	Urban	Rural	NCR	Metro Cebu	Davao City	Loan Amount	Interest Rate	Loan Amortization	
									25	30 ^b
under 10,000	66.93	64.85	67.21	-	-	-	50,000	9	419.60	402.31
10,000-19,999	123.97	151.21	118.21	300.00	338.38	209.46	60,000	9	503.52	482.77
20,000-29,999	175.37	214.71	166.11	493.89	325.58	413.01	70,000	9	587.44	563.23
30,000-39,999	240.15	298.95	221.97	701.05	462.59	243.22	80,000	9	671.36	643.70
40,000-49,999	309.55	370.09	282.67	671.16	454.49	368.75	90,000	9	755.28	724.16
50,000-59,999	416.16	494.77	368.34	784.17	567.85	535.46	100,000	9	839.20	804.62
60,000-79,999	571.02	640.72	477.73	892.71	674.11	537.72	150,000	9	1,258.80	1,206.93
80,000-99,999	786.92	811.83	633.23	1,177.04	932.36	686.73	200,000	12	2,106.44	2,057.22
100,000-149,999	1,181.19	1,177.75	930.49	1,591.23	1,349.15	1,050.43	250,000	12	2,633.05	2,571.53
150,000-249,999	1,944.81	1,859.21	1,348.70	2,583.36	2,013.54	1,754.04	300,000	16	4,076.67	4,034.28
250,000-499,999	3,509.75	3,022.89	2,551.33	4,519.08	3,680.47	2,869.02	350,000	16	4,756.12	4,706.66
500,000 & over	13,873.00	6,142.86	4,345.71	20,462.03	8,962.95	7,224.09	400,000	16	5,435.56	5,379.04
							450,000	16	6,115.01	6,051.42
							500,000	16	6,794.45	6,723.80

^a Based on HDMF schedule of loan amortization and interest for housing loan.

^b Monthly loan amortization of a P150,000 loan for 30 years at 16 percent interest rate computed at P2,017.

areas (refer to Figure 3). In the case of rural areas, it may be argued that the cost of housing is cheaper.

The number of families unable to afford homeownership in the formal sector further increases when the low savings capacity of households is taken into account. Providing the required equity portion of housing loans has been a major constraint for most households. While government programs and other private developers have waived the equity requirement, the implication is that households have to borrow the full amount of P150,000 and pay monthly amortization of about P1,206.93 at subsidized interest rates of 9 percent. At a market interest rate of 16 percent, wherein monthly loan amortization becomes P2,017, a P150,000 unit would then be accessible only to households with annual incomes of at least P250,000.

The situation varies by location. In Metro Manila, we find that only about 3 percent of households would be unable to avail of the loan amortization for a P150,000 housing unit at subsidized rate. The proportion is higher for Metro Cebu and Davao City but households in these cities are comparatively better off compared to other areas in the country. This is apparently the result of better income-generating activities of households in highly urbanized cities.

The above findings show that subsidizing interest rates alone is not sufficient to allow poor households access to formal and decent housing. There has to be a significant reduction in the costs of housing or other low-cost housing alternatives have to be considered.

With the constraint on homeownership, alternative housing for most households is the informal sector, where about 30 percent of households dwell. The rental housing market has not been an alternative for most households and this is probably due to high rents. The distribution of renter-households show that about 50 percent pay monthly rents of at least P1,000 (Table 12). The proportion is higher in key urban cities specifically, Metro Manila. This rent value is more than sufficient to pay for the monthly amortization of a P150,000 housing unit.

The Dynamics of Housing Demand in the Philippines

Table 12. Distribution of Renter-Households by Monthly Rent, 1997 (in percent)

Monthly Rent	Philippine	Urban	Rural	NCR	Metro Cebu	Metro Davao
Total	100.0	100.0	100.0	100.0	100.0	100.0
<50	0.3	0.1	2.5	-	-	-
50-99	1.1	0.8	5.5	0.5	-	1.8
100-149	1.5	1.1	6.5	0.3	0.7	3.5
150-199	1.4	0.9	6.9	0.1	-	-
200-299	4.8	3.1	25.9	0.7	7.5	10.2
300-499	10.3	10.0	13.8	5.7	17.5	27.9
500-699	14.7	14.7	15.4	13.3	25.2	22.0
700-999	12.2	12.8	4.7	12.2	8.5	11.4
1000+	53.7	56.5	18.9	67.2	40.6	23.2

Source: FIES 1997

Another alternative housing is homeownership through microfinance schemes. These schemes are showing signs of success in providing homeownership specifically for the poor. The Community Mortgage Program for instance, provides loan amortization of only P185 per month, which is well within the capacity to pay of poor households. Available long-term financing at subsidized interest rate and the incremental housing scheme have made possible the low monthly amortization of microfinance schemes.

Incremental housing is a scheme whereby housing is acquired in progression. The usual mode is to initially secure tenure by buying undeveloped land and later, the household acquires another loan for land and housing development. This scheme has been acceptable specifically among informal urban dwellers occupying private and public lands. While it has made significant contributions in terms of security of land tenure, progression to land and housing development has been very slow. The success of the program has also been slowed down by low loan recovery, bureaucratic delays and conflicts within the community organization (PADCO 1993).

Appendix 1. Housing Improvements by Tenure (in proportion of HH)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
Philippines												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	44.6	66.5	56.8	83.5	29.5	56.9	21.7	45.1	23.2	50.3	38.1	62.0
Light	52.5	32.1	39.9	12.3	66.1	41.0	72.3	52.1	64.1	39.5	57.9	35.8
Makeshift	2.9	1.4	3.3	4.1	4.5	2.1	6.0	2.8	12.6	10.2	4.0	2.2
Type of Toilet Facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	56.5	67.5	80.8	84.6	55.6	68.3	34.7	50.4	36.5	51.2	52.1	64.3
Closed pit	16.5	12.2	8.4	7.3	18.3	10.3	19.0	12.7	12.5	13.7	16.6	12.0
Open pit	14.5	9.6	2.7	1.6	8.9	6.9	19.0	12.4	20.3	9.0	14.6	9.6
Others (pail system, etc.)	3.1	3.0	4.1	4.3	3.5	4.2	4.8	4.9	4.7	7.5	3.7	3.7
None	9.3	7.7	3.9	2.4	13.6	10.2	22.5	19.6	25.9	18.6	13.0	10.5
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	18.0	22.4	54.1	45.9	21.7	27.6	10.4	12.4	15.3	14.4	18.8	21.6
Shared, faucet community water system	14.8	17.6	20.7	27.2	28.2	28.5	19.2	24.6	26.5	30.1	17.5	20.6
Own use, tubed/piped well	21.9	19.4	7.2	5.3	11.3	7.9	11.1	10.3	8.9	6.5	17.0	15.6
Shared, tubed/piped well	15.4	17.5	8.6	12.4	17.7	19.9	20.9	24.9	19.1	22.2	16.6	19.0
Dugwell	16.8	11.8	2.6	2.3	12.3	7.5	23.4	14.9	19.8	9.6	17.3	11.6
Spring, river, stream, etc.	10.0	9.1	0.9	0.7	3.1	2.7	12.4	9.1	6.6	5.7	9.4	8.2
Rain	1.5	0.4	0.4	0.1	0.3	1.1	1.1	0.3	0.4	0.1	1.2	0.4
Peddler	1.5	1.9	5.5	6.3	5.5	4.9	1.6	3.5	3.5	11.4	2.1	3.0

Appendix 1 (continued)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
Urban												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	62.7	80.2	57.5	84.4	32.6	60.5	31.2	59.6	23.9	56.5	51.5	74.9
Light	34.8	17.9	38.9	11.4	62.6	36.3	60.5	36.2	56.7	30.8	44.0	21.9
Makeshift	2.4	1.9	3.6	4.3	4.8	3.2	8.2	4.2	19.3	12.7	4.5	3.2
Type of toilet facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	77.5	81.1	82.5	85.6	62.9	73.2	52.5	66.2	45.8	55.7	71.1	77.4
Closed pit	10.3	7.8	7.8	6.9	17.8	9.5	14.6	9.8	10.1	12.3	11.5	8.4
Open pit	5.4	4.2	2.2	1.1	5.7	4.0	12.7	7.2	15.3	7.6	6.6	4.5
Others (pail system, etc.)	2.8	3.2	4.3	4.3	3.8	4.8	5.3	5.1	5.2	9.4	3.7	4.0
None	3.9	3.7	3.2	2.1	9.9	8.5	14.8	11.8	23.7	15.0	7.1	5.7
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	41.0	40.9	56.8	47.9	31.5	36.5	24.7	24.5	27.9	18.9	39.2	37.6
Shared, faucet community water system	15.3	16.5	20.4	27.1	28.7	25.4	28.9	28.3	39.1	32.9	20.9	21.1
Own use, tubed/piped well	19.7	17.5	6.3	5.1	9.5	7.8	9.0	9.4	6.8	4.5	13.9	13.4
Shared, tubed/piped well...	12.0	13.5	7.6	11.2	14.2	15.6	19.5	20.3	9.1	21.4	12.8	14.9
Dugwell	6.3	5.6	2.2	1.8	7.3	6.7	10.3	8.1	10.2	5.9	6.6	5.6
Spring, river, stream, etc.	1.5	2.5	0.5	0.3	1.2	1.4	3.1	2.5	0.5	0.4	1.6	2.1
Rain	0.5	0.2	0.3	0.1	0.1	-	0.4	0.1	-	0.1	0.4	0.1
Peddler	3.6	3.4	5.8	6.6	7.6	6.7	4.2	6.8	6.4	15.9	4.6	5.2

Appendix 1 (continued)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
Rural												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	35.9	55.6	49.6	73.3	25.0	51.5	18.0	35.8	22.4	36.7	29.9	50.3
Light	61.1	43.4	50.4	24.5	71.0	47.9	76.9	62.3	73.2	58.8	66.3	48.5
Make-shift	3.1	1.0	-	2.2	4.0	0.6	5.1	1.9	4.5	4.4	3.7	1.3
Type of Toilet Facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	46.4	56.7	63.6	71.3	45.3	61.1	27.7	40.3	25.2	41.2	40.6	52.5
Closed pit	19.5	15.7	14.6	12.3	19.0	11.5	20.7	14.6	15.6	16.9	19.7	15.3
Open pit	18.9	13.9	8.3	7.2	13.6	11.3	21.5	15.7	26.5	11.9	19.5	14.1
Others (pail system, etc.)	3.2	2.8	2.4	3.2	3.2	3.4	4.6	4.7	4.0	3.2	3.6	3.3
None	12.0	11.0	11.1	5.9	18.9	12.7	25.6	24.6	28.7	26.8	16.6	14.8
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	6.9	7.6	25.9	20.0	7.8	14.5	4.7	4.6	-	4.4	6.4	7.1
Shared, faucet community water system	14.7	18.6	24.0	28.2	27.5	33.0	15.3	22.3	11.0	24.1	15.5	20.2
Own use, tubed/piped well	22.9	20.9	16.6	8.3	13.8	8.0	11.9	10.8	11.5	10.9	19.0	17.6
Shared, tubed/piped well	17.0	20.7	18.6	28.4	22.7	26.2	21.4	27.8	31.2	24.1	18.8	22.8
Dugwell	22.0	16.7	6.8	8.1	19.4	8.7	28.6	19.3	31.4	17.6	23.8	17.1
Spring, river, stream, etc.	14.1	14.3	4.8	4.8	5.6	4.6	16.1	13.3	14.1	17.2	14.2	13.7
Rain	2.0	0.5	1.1	-	0.5	2.6	1.3	0.4	0.8	0.1	1.7	0.6
Peddler	0.5	0.7	2.2	2.1	2.6	2.4	0.6	1.5	-	1.6	0.6	1.0

Appendix 1 (continued)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
MCR												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	68.5	89.0	59.2	86.3	44.8	82.0	44.7	80.2	19.6	66.8	58.5	85.3
Light	28.3	6.9	36.4	7.6	49.5	12.2	45.5	10.4	48.1	11.0	36.0	8.1
Makeshift	3.1	4.1	4.3	6.1	5.6	5.7	9.8	9.4	32.2	22.2	5.5	6.6
Type of Toilet Facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	83.4	86.9	84.0	87.9	74.3	77.3	69.6	82.9	52.7	63.3	79.9	84.6
Closed pit	7.2	6.4	7.1	6.9	12.7	11.2	9.0	7.3	9.8	11.2	8.0	7.2
Open pit	2.7	1.4	1.0	0.4	0.8	2.6	6.7	1.8	16.0	3.6	2.9	1.4
Others (pail system, etc.)	5.0	4.4	5.4	3.6	6.4	6.3	8.8	5.2	7.0	13.3	5.9	5.0
None	1.6	0.8	2.4	1.2	5.7	2.6	5.9	2.9	14.5	8.6	3.2	1.8
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	59.5	56.6	64.0	50.6	42.6	52.0	42.2	33.4	39.0	19.1	56.3	49.2
Shared, faucet community water system	16.1	18.0	21.2	28.3	31.1	23.1	34.1	32.7	36.7	34.8	22.3	24.0
Own use, tubed/piped well	7.3	7.3	2.8	3.5	5.1	3.3	1.6	5.1	2.9	4.0	4.7	5.6
Shared, tubed/piped well	4.3	8.1	3.7	8.4	2.7	8.8	11.6	10.9	6.1	14.6	5.0	9.0
Dugwell	3.2	2.5	1.1	0.7	3.8	-	2.5	1.5	4.5	3.9	2.5	1.9
Spring, river, stream, etc.	-	-	-	-	-	-	-	-	-	-	-	-
Rain	-	-	-	-	-	-	-	-	-	-	-	-
Peddler	9.6	7.5	7.1	8.5	14.8	12.8	8.0	16.4	10.9	23.6	9.1	10.3

Appendix 1 (continued)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
Metm Cebu												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	67.1	78.0	44.8	73.5	36.0	52.4	27.3	48.4	45.5	57.0	50.5	65.7
Light	27.6	20.5	55.2	22.8	56.0	42.0	54.5	48.2	45.5	35.6	42.3	30.0
Makeshift	5.3	1.5	-	3.7	8.0	5.6	18.2	7.4	9.1	7.4	7.1	4.2
Type of Toilet Facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	81.6	69.5	79.3	78.6	76.0	75.1	59.1	65.1	61.4	60.9	73.5	68.9
Closed pit	2.6	5.6	6.9	3.8	-	9.6	9.1	15.2	6.8	8.9	4.6	8.3
Open pit	6.6	7.1	3.5	4.1	12.0	0.8	4.5	3.8	9.1	9.8	7.1	5.8
Others (pail system, etc.)	-	4.5	3.5	3.2	-	3.0	-	5.5	2.3	6.4	1.0	4.7
None	9.2	13.3	6.9	10.4	12.0	11.5	27.3	10.4	20.5	14.0	13.8	12.3
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	47.4	30.0	41.4	27.9	32.0	21.5	4.5	30.1	29.5	22.9	35.7	27.8
Shared, faucet community water system	21.1	16.7	34.5	18.2	20.0	32.9	31.8	25.2	54.5	20.3	31.6	21.0
Own use, tubed/piped well	13.2	11.8	13.8	14.1	8.0	7.2	9.1	10.2	2.3	3.8	9.7	10.0
Shared, tubed/piped well	14.5	12.0	-	22.5	32.0	16.3	27.3	18.7	6.8	23.1	14.3	16.4
Dugwell	1.3	14.0	6.9	10.2	-	12.9	4.5	5.5	-	2.4	2.0	10.1
Spring, river, stream, etc.	2.6	10.1	-	-	-	-	4.5	0.8	2.3	-	2.0	4.6
Rain	-	-	-	-	-	-	-	-	-	-	-	-
Peddler	-	5.4	3.5	7.1	8.0	9.1	18.2	9.5	4.5	27.5	4.6	9.9

Appendix 1 (continued)

	Own/Amortizing Owners		Rent House/ Room		Own House/ Rent		Being Occupied free with Consent		Being Occupied free without Consent		All Households	
	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997	1985	1997
Davao City												
Wall Construction Material	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strong	62.1	88.2	42.5	80.9	63.2	81.4	32.5	74.0	-	76.9	52.7	83.2
Light	33.9	9.3	47.5	17.3	32.7	18.6	60.5	22.6	100.0	23.1	41.8	14.4
Makeshift	4.0	2.5	10.0	1.8	4.1	-	6.9	3.4	-	-	5.5	2.4
Type of Toilet Facility	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water-sealed	65.4	85.2	80.0	85.0	87.2	76.4	44.1	61.6	41.1	76.9	64.8	78.5
Closed pit	13.2	3.7	7.5	1.8	4.3	2.5	11.0	1.4	58.9	-	11.4	2.7
Open pit	19.1	6.7	5.0	7.1	8.5	8.8	41.9	18.4	-	-	19.9	9.7
Others (pail system, etc.)	2.2	0.4	7.5	1.8	-	4.9	3.0	1.6	-	-	2.9	1.2
None	-	4.1	-	4.4	4.3	7.4	3.0	17.0	-	23.1	1.0	7.9
Source of Water Supply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own use, faucet, community water system	43.3	62.7	47.5	38.6	36.8	21.6	27.9	25.7	-	53.3	39.9	47.4
Shared, faucet community water system	12.8	13.2	17.5	43.1	24.6	21.1	10.1	28.7	41.1	-	14.4	20.8
Own use, tubed/piped well	6.5	1.7	-	1.8	-	-	2.0	1.4	-	-	3.9	1.5
Shared, tubed/piped well...	4.9	6.9	7.5	11.3	12.3	26.5	11.6	22.4	58.9	23.1	7.9	13.0
Dugwell	6.5	2.8	2.5	1.8	8.2	14.2	12.7	0.8	-	-	7.2	3.1
Spring, river, stream, etc.	9.2	5.8	2.5	-	10.0	7.3	16.5	2.9	-	-	9.5	4.5
Rain	12.8	3.9	2.5	-	-	4.4	17.3	10.1	-	-	10.7	4.9
Peddler	4.0	3.1	20.0	3.5	8.2	4.9	2.0	8.0	-	23.6	6.5	4.8

Appendix 2. Tenure Trends by Income Group, Poor vs. Non-poor Households, Philippines

	1965						1991					
	Total	Own or owner-like possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner	Total	Own or owner-like possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines												
Poor	100.0	51.8	4.0	7.1	34.7	2.4	100.0	60.7	2.7	5.5	28.5	2.6
Non-poor	100.0	63.1	9.8	6.2	19.2	1.6	100.0	64.3	9.8	5.5	18.2	2.1
Urban												
Poor	100.0	39.4	12.5	13.3	30.4	4.4	100.0	55.9	6.3	7.5	26.6	3.7
Non-poor	100.0	55.4	19.8	8.8	13.9	2.1	100.0	59.3	16.4	6.3	15.5	2.4
Rural												
Poor	100.0	56.8	0.6	4.6	36.4	1.6	100.0	63.7	0.4	4.2	29.7	2.0
Non-poor	100.0	69.4	1.5	4.2	23.7	1.2	100.0	70.8	1.2	4.5	21.8	1.8
NCR												
Poor	100.0	29.3	31.2	12.1	21.3	6.0	100.0	35.3	25.4	6.8	21.9	10.5
Non-poor	100.0	44.7	32.8	9.1	11.4	2.0	100.0	47.0	31.5	6.6	11.8	3.0
Metro Cebu												
Poor	100.0	20.9	13.4	11.9	20.9	32.8	100.0	42.0	6.0	17.9	34.1	-
Non-poor	100.0	48.1	15.5	13.2	6.2	17.1	100.0	46.3	15.7	10.0	24.9	3.1
Davao City												
Poor	100.0	47.1	10.9	10.3	30.2	1.6	100.0	58.3	5.4	4.2	28.6	3.6
Non-poor	100.0	57.8	18.6	9.3	13.7	0.6	100.0	62.3	13.2	3.9	16.9	3.7

Appendix 2. (continued)

	1994						1997					
	Total	Own or owner-like possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner	Total	Own or owner-like possession of house and lot	Rent house/room, including lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines												
Poor	100.0	62.3	1.9	4.0	28.7	3.1	100.0	62.0	1.9	3.8	28.9	3.4
Non-poor	100.0	67.1	8.3	4.4	17.8	2.5	100.0	65.7	8.4	4.1	18.7	3.0
Urban												
Poor	100.0	58.8	5.0	5.3	26.7	4.3	100.0	53.1	5.7	6.6	28.0	6.6
Non-poor	100.0	62.5	13.4	5.3	15.9	2.8	100.0	61.6	13.8	4.7	15.8	4.1
Rural												
Poor	100.0	64.1	0.3	3.3	29.7	2.6	100.0	65.2	0.5	2.8	29.2	2.3
Non-poor	100.0	73.5	1.2	3.0	20.4	1.9	100.0	71.2	1.2	3.4	22.7	1.5
NCR												
Poor	100.0	37.3	28.4	6.6	17.1	10.6	100.0	37.4	22.7	2.8	19.8	17.3
Non-poor	100.0	50.4	27.5	4.0	13.7	4.3	100.0	50.9	26.1	3.9	12.9	6.2
Metro Cebu												
Poor	100.0	55.1	10.1	8.1	18.5	8.2	100.0	39.7	7.0	15.4	19.6	18.3
Non-poor	100.0	54.4	12.3	14.2	12.6	6.5	100.0	44.6	9.5	11.6	20.6	13.7
Davao City												
Poor	100.0	39.7	-	3.6	54.1	2.6	100.0	41.6	6.8	13.4	38.2	-
Non-poor	100.0	58.4	9.3	6.2	21.4	4.8	100.0	56.3	11.7	7.3	22.8	1.9

Appendix 3. Housing Improvements, Poor vs. Non-Poor Households, Wall Materials, 1985-1997

	1985				1991				1994				1997			
	Total	Strong	Light	Makeshift	Total	Strong	Light	Makeshift	Total	Strong	Light	Makeshift	Total	Strong	Light	Makeshift
Philippines																
Poor	100.0	18.7	75.1	6.2	100.0	34.8	61.2	4.0	100.0	33.6	62.6	3.8	100.0	34.9	62.0	3.1
Non-poor	100.0	53.5	44.2	2.2	100.0	72.2	26.2	1.6	100.0	71.4	26.6	2.0	100.0	74.6	23.6	1.7
Urban																
Poor	100.0	25.1	65.7	9.2	100.0	44.7	50.4	4.8	100.0	41.7	53.2	5.1	100.0	42.5	50.9	6.6
Non-poor	100.0	64.8	33.1	2.1	100.0	82.9	15.2	1.9	100.0	80.0	17.8	2.2	100.0	82.0	15.6	2.4
Rural																
Poor	100.0	16.1	78.9	5.0	100.0	28.6	68.0	3.5	100.0	29.5	67.4	3.1	100.0	32.1	66.1	1.8
Non-poor	100.0	44.2	53.4	2.4	100.0	58.1	40.8	1.1	100.0	59.3	39.1	1.6	100.0	64.7	34.4	0.9
NCR																
Poor	100.0	29.8	53.3	16.9	100.0	70.3	15.5	14.2	100.0	57.5	23.9	18.6	100.0	52.8	19.1	28.1
Non-poor	100.0	67.1	30.8	2.1	100.0	90.1	6.8	3.1	100.0	86.8	9.3	3.9	100.0	87.5	7.3	5.1
Metro Cebu																
Poor	100.0	26.9	59.7	13.4	100.0	33.9	60.1	6.0	100.0	34.6	57.1	8.2	100.0	35.8	49.2	15.0
Non-poor	100.0	62.8	33.3	3.9	100.0	75.1	21.7	3.2	100.0	65.7	29.7	4.5	100.0	68.2	28.5	3.3
Davao City																
Poor	100.0	23.2	67.1	9.7	100.0	60.1	30.4	9.5	100.0	53.6	34.1	12.4	100.0	68.9	26.0	5.2
Non-poor	100.0	69.5	27.4	3.1	100.0	84.5	13.6	1.9	100.0	82.9	15.5	1.5	100.0	85.1	12.9	2.0

Appendix 4. Housing Improvements, Poor vs. Non-Poor Households, Type of Toilet Facility, 1985-1997

	1985						1991					
	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc)	None	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc)	None
Philippines												
Poor	100.0	34.9	19.0	20.2	4.6	21.3	100.0	37.1	19.9	16.6	4.0	22.4
Non-poor	100.0	65.8	14.7	10.1	3.0	6.4	100.0	68.3	12.9	6.9	3.9	8.0
Urban												
Poor	100.0	50.2	16.7	12.7	5.5	14.8	100.0	45.3	18.7	11.7	5.4	18.9
Non-poor	100.0	81.7	8.8	3.5	2.9	3.1	100.0	79.0	9.5	3.1	4.4	4.1
Rural												
Poor	100.0	28.7	20.0	23.3	4.2	23.9	100.0	31.9	20.7	19.8	3.0	24.6
Non-poor	100.0	52.8	19.5	15.6	3.0	9.1	100.0	54.2	17.5	11.9	3.1	13.3
NCR												
Poor	100.0	63.4	13.7	6.4	9.3	7.2	100.0	62.1	9.1	4.0	13.0	11.8
Non-poor	100.0	84.9	6.4	1.9	4.8	2.0	100.0	85.3	6.6	1.3	4.8	2.0
Metro Cebu												
Poor	100.0	49.3	11.9	11.9	3.0	23.9	100.0	20.0	26.0	6.0	18.1	29.9
Non-poor	100.0	86.0	0.8	4.7	-	8.5	100.0	64.7	5.4	1.3	22.4	6.3
Davao City												
Poor	100.0	41.3	13.9	36.3	5.9	2.7	100.0	24.4	49.4	17.3	-	8.9
Non-poor	100.0	78.2	10.0	10.6	1.2	-	100.0	67.3	25.1	3.4	0.9	3.3

Appendix 4 (continued)

	1994						1997					
	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc)	None	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc)	None
Philippines												
Poor	100.0	36.9	19.9	17.8	3.6	21.7	100.0	40.4	17.8	17.7	3.9	20.2
Non-poor	100.0	75.5	9.4	6.4	2.1	6.7	100.0	75.5	9.3	5.8	3.6	5.9
Urban												
Poor	100.0	48.7	14.9	14.1	4.1	18.2	100.0	52.4	14.5	12.1	5.1	15.9
Non-poor	100.0	85.1	5.7	3.2	2.0	4.0	100.0	82.9	7.0	2.9	3.8	3.5
Rural												
Poor	100.0	31.0	22.4	19.7	3.4	23.5	100.0	36.0	19.0	19.8	3.4	21.8
Non-poor	100.0	61.8	14.7	10.8	2.2	10.4	100.0	65.6	12.3	9.7	3.2	9.2
NCR												
Poor	100.0	72.8	8.1	4.0	8.7	6.4	100.0	68.8	10.8	3.6	8.5	8.3
Non-poor	100.0	93.1	3.2	1.0	1.5	1.3	100.0	85.7	6.9	1.2	4.7	1.4
Metro Cebu												
Poor	100.0	28.4	16.5	18.5	4.1	32.6	100.0	29.5	4.9	14.6	11.5	39.5
Non-poor	100.0	55.6	12.4	10.0	7.2	14.9	100.0	72.2	8.6	5.0	4.1	10.1
Davao City												
Poor	100.0	38.0	5.2	47.1	-	9.6	100.0	50.4	4.7	17.0	5.0	22.9
Non-poor	100.0	85.5	4.4	5.0	2.0	3.1	100.0	82.3	2.5	8.7	0.7	5.9

Appendix 5. Housing Improvements, Poor vs. Non-Poor Households, Source of Water Supply, 1985-1997

	1985									1991								
	Total	Own use, faucet community water system	Shared, faucet community water system	Own use, tubed/ piped well	Shared, tubed/ piped well	Dugwell	Spring, river stream, etc.	Rain	Peddler	Total	Own use, faucet community water system	Shared, faucet community water system	Own use, tubed/ piped well	Shared, Tubed/ piped well	Dugwell	Spring, river stream, etc.	Rain	Peddler
Philippines																		
Poor	100.0	7.7	19.5	11.3	20.6	23.2	142	1.4	2.1	1000	7.9	21.8	10.5	23.2	20.5	13.8	0.6	1.8
Non-poor	100.0	27.6	16.0	21.6	13.3	12.6	5.7	1.1	2.1	1000	30.9	18.2	16.8	14.6	11.0	5.0	0.6	2.8
Urban																		
Poor	100.0	19.3	29.4	10.2	21.1	10.2	3.4	0.4	5.9	1000	13.1	24.9	10.4	24.3	16.0	7.4	0.4	3.4
Non-poor	100.0	48.3	16.5	15.8	8.7	4.7	0.7	0.4	3.9	1000	45.2	18.5	13.8	10.7	5.8	1.7	0.2	4.0
Rural																		
Poor	100.0	3.1	15.4	11.7	20.4	28.5	18.5	1.7	0.6	1000	4.6	19.8	10.5	22.5	23.3	17.8	0.7	0.8
Non-poor	100.0	9.8	15.5	26.4	17.2	19.0	9.8	1.7	0.6	1000	12.0	17.8	20.8	19.8	17.9	9.4	1.1	1.1
NCR																		
Poor	100.0	31.7	37.4	4.1	9.8	2.9	-	-	14.0	1000	28.1	39.2	2.8	8.9	42	-	-	16.9
Non-poor	100.0	63.7	17.8	4.9	3.6	2.4	-	-	7.6	1000	63.1	19.8	3.9	4.3	1.9	0.0	-	7.0
Metro Cebu																		
Poor	100.0	13.4	48.3	6.0	23.9	3.0	4.5	-	6.0	1000	4.0	22.0	-	45.9	4.0	14.0	-	10.0
Non-poor	100.0	47.3	25.6	11.6	9.3	1.6	0.8	-	3.9	1000	35.3	20.7	12.9	19.1	2.8	2.2	-	6.9
Davao City																		
Poor	100.0	17.3	19.0	5.4	8.4	10.1	14.2	17.4	8.1	1000	18.5	32.1	8.3	20.8	4.2	3.0	8.9	4.2
Non-poor	100.0	52.8	11.8	3.0	7.6	5.5	6.9	6.9	5.6	1000	55.5	16.9	4.7	9.0	2.9	3.7	4.2	3.1

Appendix 5 (continued)

	1994									1997								
	Total	Own use, faucet community water system	Shared, faucet community water system	Own use, tubed/ piped well	Shared, tubed/ piped well	Dugwell	Spring, river stream, etc	Rain	Peddler	Total	Own use, faucet community water system	Shared, faucet community water system	Own use, tubed/ piped well	Shared, Tubed/ piped well	Dugwell	Spring, river stream, etc	Rain	Peddler
Philippines																		
Poor	100.0	7.1	22.8	11.5	23.7	18.9	13.9	0.7	1.5	100.0	5.0	23.6	10.4	23.8	19.3	15.6	0.4	1.9
Non-poor	100.0	31.4	19.2	18.2	15.4	8.6	3.9	0.6	2.7	100.0	29.4	19.2	18.1	16.8	8.1	4.7	0.3	3.4
Urban																		
Poor	100.0	12.4	26.0	11.7	25.9	13.5	7.1	0.3	3.0	100.0	12.1	29.1	11.0	24.1	12.3	6.2	0.3	4.8
Non-poor	100.0	44.1	18.9	14.4	12.7	4.7	0.9	0.4	3.8	100.0	48.1	19.4	13.9	12.9	4.2	1.2	0.1	5.2
Rural																		
Poor	100.0	4.4	21.2	11.3	22.5	21.7	17.3	0.9	0.7	100.0	2.4	21.6	10.1	23.7	21.8	19.1	0.5	0.9
Non-poor	100.0	13.3	19.7	23.5	19.2	14.2	8.0	0.9	1.1	100.0	10.9	19.0	23.6	22.1	13.3	9.4	0.6	1.0
NCR																		
Poor	100.0	33.3	37.5	2.7	9.2	4.6	-	-	12.8	100.0	17.3	42.0	2.3	14.8	4.7	-	-	18.9
Non-poor	100.0	61.2	20.9	3.9	4.8	2.6	0.0	-	6.6	100.0	51.4	22.7	5.9	8.6	1.7	-	-	9.7
Metro Cebu																		
Poor	100.0	6.1	26.4	2.1	24.3	20.5	14.4	2.1	4.1	100.0	9.1	27.4	3.7	18.5	10.2	11.6	-	19.5
Non-poor	100.0	35.0	21.3	8.4	19.0	8.4	2.6	1.0	4.2	100.0	29.4	20.5	10.5	16.2	10.1	4.1	-	9.1
Davao City																		
Poor	100.0	4.4	41.2	-	11.5	14.8	14.0	7.8	6.2	100.0	21.5	32.4	3.0	14.2	13.5	6.0	6.0	3.3
Non-poor	100.0	63.2	20.0	3.9	5.9	1.1	1.2	2.4	2.3	100.0	50.9	19.2	1.2	12.9	1.7	4.3	4.8	5.0

The Dynamics of Housing Demand in the Philippines

Appendix 6. Distribution of Households by Lifecycle and Tenure, Philippines, 1985-1997

	Total	1985 Tenure Status				
		Own or owner-like possession of house	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of	Own/ rent-free house, rent-free lot w/o consent
Philippines						
single/separated, hysize=1	100.0	54.2	12.7	0.9	32.2	-
single w/ hysize>1	100.0	64.8	13.7	3.8	15.1	2.6
separated, hysize>1	100.0	48.8	19.1	6.3	23.9	2.0
married, hhead<30, hsize< or=3	100.0	47.0	10.4	5.6	35.3	1.7
married, hhead<30, 3<hsize<6	100.0	44.1	9.3	7.6	36.4	2.6
married, hhead<30, hsize 6+	100.0	45.1	11.2	7.0	35.4	1.4
married, hhead 30-39, hsize< or=3	100.0	52.1	13.6	7.2	24.8	2.3
married, hhead 30-39, 3<hsize<6	100.0	49.6	11.4	6.7	30.0	2.3
married, hhead 30-39, hsize 6+	100.0	48.6	7.6	7.0	34.5	2.4
married, hhead 40-49, hsize< or=3	100.0	54.6	9.7	5.5	28.3	1.8
married, hhead 40-49, 3<hsize<6	100.0	57.6	9.6	6.5	24.2	2.1
married, hhead 40-49, hsize 6+	100.0	58.0	5.5	8.8	25.7	2.0
married, hhead 50+, hsize< or=3	100.0	70.7	2.9	5.3	20.6	0.5
married, hhead 50+, 3<hsize<6	100.0	67.7	4.4	5.6	20.3	2.0
married, hhead 50+, hsize 6+	100.0	65.9	5.4	7.1	20.1	1.6
Urban						
single/separated, hysize=1	100.0	45.8	27.6	-	26.6	-
single w/ hysize>1	100.0	55.5	25.8	5.9	10.5	2.3
separated, hysize>1	100.0	39.4	28.5	7.2	22.9	1.9
married, hhead<30, hsize< or=3	100.0	28.8	29.7	10.9	29.1	1.6
married, hhead<30, 3<hsize<6	100.0	30.3	27.2	11.4	26.1	5.0
married, hhead<30, hsize 6+	100.0	33.1	23.4	12.5	27.3	3.7
married, hhead 30-39, hsize< or=3	100.0	37.2	28.3	9.5	22.9	2.1
married, hhead 30-39, 3<hsize<6	100.0	41.5	24.0	8.7	22.7	3.1
married, hhead 30-39, hsize 6+	100.0	40.6	21.0	11.3	24.4	2.7
married, hhead 40-49, hsize< or=3	100.0	47.5	27.2	8.8	13.9	2.6
married, hhead 40-49, 3<hsize<6	100.0	47.0	20.4	7.8	21.6	3.3
married, hhead 40-49, hsize 6+	100.0	49.4	13.5	14.3	20.0	2.9
married, hhead 50+, hsize< or=3	100.0	63.8	10.1	8.8	16.2	1.0
married, hhead 50+, 3<hsize<6	100.0	60.5	11.2	9.7	14.8	3.7
married, hhead 50+, hsize 6+	100.0	61.7	11.6	10.7	13.9	2.1
Rural						
single/separated, hysize=1	100.0	59.0	4.2	1.4	35.4	-
single w/ hysize>1	100.0	74.7	0.8	1.5	20.0	3.0
separated, hysize>1	100.0	62.6	5.3	4.8	25.3	2.0
married, hhead<30, hsize< or=3	100.0	54.7	2.3	3.4	37.9	1.7
married, hhead<30, 3<hsize<6	100.0	50.4	1.1	5.8	41.2	1.6
married, hhead<30, hsize 6+	100.0	52.2	3.8	3.7	40.3	-
married, hhead 30-39, hsize< or=3	100.0	62.6	3.2	5.5	26.2	2.4
married, hhead 30-39, 3<hsize<6	100.0	55.6	2.0	5.3	35.4	1.7
married, hhead 30-39, hsize 6+	100.0	52.4	1.3	4.9	39.2	2.2
married, hhead 40-49, hsize< or=3	100.0	58.6	-	3.7	36.3	1.4
married, hhead 40-49, 3<hsize<6	100.0	65.6	1.5	5.5	26.2	1.2
married, hhead 40-49, hsize 6+	100.0	63.1	0.8	5.6	29.0	1.4
married, hhead 50+, hsize< or=3	100.0	73.2	0.2	3.9	22.3	0.3
married, hhead 50+, 3<hsize<6	100.0	71.9	0.4	3.2	23.5	1.0
married, hhead 50+, hsize 6+	100.0	69.2	0.4	4.2	25.0	1.2

Appendix 6 (continued)

	1985 Tenure Status					
	Total	Own or owner-like possession of house	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of	Own/ rent-free house, rent-free lot w/o consent
NCR						
single/separated, hhsz=1	100.0	10.6	64.5	-	25.0	-
single w/ hhsz>1	100.0	37.2	50.2	5.6	7.1	-
separated, hhsz>1	100.0	31.0	35.8	9.8	23.4	-
married, hhead<30, hsz< or=3	100.0	20.8	45.3	12.7	21.3	-
married, hhead<30, 3<hsz<6	100.0	30.1	46.5	5.7	13.5	4.1
married, hhead<30, hsz 6+	100.0	24.6	40.1	7.4	23.0	4.9
married, hhead 30-39, hsz< or=3	100.0	25.7	45.1	6.1	19.0	4.1
married, hhead 30-39, 3<hsz<6	100.0	37.6	35.7	5.6	16.7	4.4
married, hhead 30-39, hsz 6+	100.0	35.0	41.9	8.1	13.4	1.6
married, hhead 40-49, hsz< or=3	100.0	22.3	58.9	7.6	7.8	3.5
married, hhead 40-49, 3<hsz<6	100.0	36.8	34.5	6.3	17.8	4.5
married, hhead 40-49, hsz 6+	100.0	42.4	26.3	14.1	14.2	2.9
married, hhead 50+, hsz< or=3	100.0	55.9	25.6	7.2	6.5	4.7
married, hhead 50+, 3<hsz<6	100.0	48.8	25.2	11.1	11.7	2.2
married, hhead 50+, hsz 6+	100.0	53.3	23.2	11.1	9.6	2.7
Metro Cebu						
single/separated, hhsz=1	100.0	-	75.0	-	25.0	- 9
single w/ hhsz>1	100.0	71.4	14.3	14.3	-	-
separated, hhsz>1	100.0	50.0	50.0	-	-	-
married, hhead<30, hsz< or=3	100.0	33.3	-	-	33.3	33.3
married, hhead<30, 3<hsz<6	100.0	11.1	33.3	-	11.1	44.4
married, hhead<30, hsz 6+	100.0	33.4	66.6	-	-	-
married, hhead 30-39, hsz< or=3	100.0	25.0	-	25.0	25.0	25.0
married, hhead 30-39, 3<hsz<6	100.0	38.9	16.7	11.1	16.7	16.7
married, hhead 30-39, hsz 6+	100.0	23.5	29.4	11.8	11.8	23.5
married, hhead 40-49, hsz< or=3	100.0	100.0	-	-	-	-
married, hhead 40-49, 3<hsz<6	100.0	66.7	-	-	-	33.3
married, hhead 40-49, hsz 6+	100.0	32.1	7.1	25.0	10.7	25.0
married, hhead 50+, hsz< or=3	100.0	40.0	20.0	-	40.0	-
married, hhead 50+, 3<hsz<6	100.0	39.3	3.6	7.1	14.3	35.7
married, hhead 50+, hsz 6+	100.0	46.7	16.7	20.0	3.3	13.3
Davao City						
single/separated, hhsz=1	100.0	29.5	20.5	-	50.0	-
single w/ hhsz>1	100.0	77.5	22.5	-	-	-
separated, hhsz>1	100.0	46.2	53.8	-	-	-
married, hhead<30, hsz< or=3	100.0	56.4	12.7	-	30.9	-
married, hhead<30, 3<hsz<6	100.0	11.9	47.4	11.9	28.9	-
married, hhead<30, hsz 6+	100.0	33.3	50.0	-	16.7	-
married, hhead 30-39, hsz< or=3	100.0	50.0	50.0	-	-	-
married, hhead 30-39, 3<hsz<6	100.0	34.3	22.1	15.7	23.4	4.5
married, hhead 30-39, hsz 6+	100.0	44.5	14.6	-	37.2	3.7
married, hhead 40-49, hsz< or=3	100.0	50.0	33.3	16.7	-	-
married, hhead 40-49, 3<hsz<6	100.0	57.6	21.2	-	21.2	-
married, hhead 40-49, hsz 6+	100.0	59.2	5.2	7.8	27.8	-
married, hhead 50+, hsz< or=3	100.0	91.5	8.5	-	-	-
married, hhead 50+, 3<hsz<6	100.0	62.8	8.0	13.7	15.5	-
married, hhead 50+, hsz 6+	100.0	59.9	5.0	20.2	14.8	-

The Dynamics of Housing Demand in the Philippines

Appendix 6 (continued)

	1991 Tenure Status					
	Total	Own or owner-like possession of house and lot	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines						
single/separated, hsize=1	1000	56.1	12.9	3.2	25.9	1.9
single w/ hsize>1	1000	65.0	14.6	4.9	14.6	0.9
separated, hsize>1	1000	57.2	13.2	6.1	20.1	3.5
married, hhead<30, hsize< or =3	1000	52.2	9.9	5.9	30.2	1.9
married, hhead<30, 3<hsize<6	1000	51.9	8.2	4.9	32.8	2.3
married, hhead<30, hsize 6+	1000	53.5	9.0	5.0	30.0	2.4
married, hhead 30-39, hsize< or =3	1000	54.3	14.9	3.6	25.1	2.1
married, hhead 30-39, 3<hsize<6	1000	55.4	11.2	6.1	24.1	3.3
married, hhead 30-39, hsize 6+	1000	57.3	5.5	6.7	27.6	2.8
married, hhead 40-49, hsize< or =3	1000	62.9	10.6	4.2	20.2	2.1
married, hhead 40-49, 3<hsize<6	1000	62.5	9.7	5.3	20.2	2.2
married, hhead 40-49, hsize 6+	1000	61.0	5.4	5.8	25.4	2.5
married, hhead 50+, hsize< or =3	1000	73.4	2.9	4.1	17.5	2.1
married, hhead 50+, 3<hsize<6	1000	70.6	3.9	5.8	17.5	2.1
married, hhead 50+, hsize 6+	1000	69.6	4.7	5.7	18.0	2.0
Urban						
single/separated, hsize=1	1000	51.6	22.0	4.8	19.9	1.7
single w/ hsize>1	1000	60.7	22.4	2.9	13.1	1.0
separated, hsize>1	1000	52.8	19.7	7.5	16.7	3.3
married, hhead<30, hsize< or =3	1000	38.1	22.4	9.4	28.1	2.1
married, hhead<30, 3<hsize<6	1000	44.0	18.0	4.6	30.0	3.4
married, hhead<30, hsize 6+	1000	46.7	19.0	7.1	24.4	2.8
married, hhead 30-39, hsize< or =3	1000	48.0	24.8	2.8	21.6	2.9
married, hhead 30-39, 3<hsize<6	1000	49.6	19.8	6.7	20.3	3.6
married, hhead 30-39, hsize 6+	1000	53.4	11.4	7.3	23.9	3.9
married, hhead 40-49, hsize< or =3	1000	54.4	19.2	6.6	15.8	3.9
married, hhead 40-49, 3<hsize<6	1000	57.9	17.2	6.7	16.0	2.2
married, hhead 40-49, hsize 6+	1000	57.4	10.4	7.1	22.1	3.0
married, hhead 50+, hsize< or =3	1000	70.3	6.2	6.0	15.0	2.6
married, hhead 50+, 3<hsize<6	1000	68.4	7.7	8.0	13.5	2.3
married, hhead 50+, hsize 6+	1000	66.4	8.5	7.0	15.7	2.5
Rural						
single/separated, hsize=1	1000	59.5	6.0	1.9	30.5	2.1
single w/ hsize>1	1000	72.7	0.6	8.6	17.4	0.7
separated, hsize>1	1000	65.1	1.3	3.6	26.1	3.8
married, hhead<30, hsize< or =3	1000	62.7	0.5	3.3	31.8	1.6
married, hhead<30, 3<hsize<6	1000	57.9	0.7	5.0	34.9	1.5
married, hhead<30, hsize 6+	1000	59.1	0.9	3.3	34.6	2.1
married, hhead 30-39, hsize< or =3	1000	61.9	3.0	4.6	29.4	1.1
married, hhead 30-39, 3<hsize<6	1000	62.0	1.2	5.4	28.4	2.9
married, hhead 30-39, hsize 6+	1000	60.6	0.6	6.2	30.7	1.9
married, hhead 40-49, hsize< or =3	1000	72.5	0.8	1.5	25.2	-
married, hhead 40-49, 3<hsize<6	1000	68.1	0.9	3.7	25.1	2.2
married, hhead 40-49, hsize 6+	1000	64.6	0.4	4.4	28.6	2.1
married, hhead 50+, hsize< or =3	1000	75.4	0.8	2.9	19.1	1.8
married, hhead 50+, 3<hsize<6	1000	72.7	0.5	3.7	21.2	1.9
married, hhead 50+, hsize 6+	1000	73.2	0.6	4.2	20.6	1.5

Appendix 6 (continued)

	Total	1991 Tenure Status				
		Own or owner-like possession of house and lot	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of	Own/ rent-free house, rent-free lot w/ consent of owner
NCR						
single/separated, hsize=1	100.0	28.1	44.9	-	14.9	12.2
single w/ hsize>1	100.0	41.1	45.7	0.5	11.2	1.4
separated, hsize>1	100.0	44.2	32.6	5.0	15.3	2.9
married, hhead<30, hsize< or=3	100.0	28.1	43.3	5.1	22.2	1.3
married, hhead<30, 3<hsize<6	100.0	26.6	43.7	4.6	21.0	4.0
married, hhead<30, hsize 6+	100.0	26.8	47.8	4.8	19.0	1.5
married, hhead 30-39, hsize< or=3	100.0	36.0	44.5	2.1	12.6	4.8
married, hhead 30-39, 3<hsize<6	100.0	37.2	39.3	3.9	15.5	4.1
married, hhead 30-39, hsize 6+	100.0	48.3	26.6	6.6	16.1	7.4
married, hhead 40-49, hsize< or=3	100.0	38.0	38.7	7.8	10.9	4.6
married, hhead 40-49, 3<hsize<6	100.0	48.8	35.9	6.3	11.6	2.3
married, hhead 40-49, hsize 6+	100.0	48.2	24.4	8.6	13.8	5.0
married, hhead 50+, hsize< or=3	100.0	59.5	21.9	8.1	6.9	3.5
married, hhead 50+, 3<hsize<6	100.0	58.3	20.9	10.7	8.0	2.0
married, hhead 50+, hsize 6+	100.0	56.4	21.1	6.6	11.6	4.3
Metro Cebu						
single/separated, hsize=1	100.0	16.7	50.0	16.7	16.7	-
single w/ hsize>1	100.0	72.7	9.1	9.1	9.1	-
separated, hsize>1	100.0	50.2	25.1	24.7	-	-
married, hhead<30, hsize< or=3	100.0	20.1	40.1	19.8	20.1	-
married, hhead<30, 3<hsize<6	100.0	44.5	11.0	11.0	27.8	5.6
married, hhead<30, hsize 6+	100.0	25.0	25.0	-	50.0	-
married, hhead 30-39, hsize< or=3	100.0	30.8	22.9	-	46.3	-
married, hhead 30-39, 3<hsize<6	100.0	25.0	23.2	17.8	32.1	1.8
married, hhead 30-39, hsize 6+	100.0	36.0	10.2	17.9	30.8	5.2
married, hhead 40-49, hsize< or=3	100.0	33.3	50.0	-	-	16.7
married, hhead 40-49, 3<hsize<6	100.0	48.5	26.1	4.4	26.1	-
married, hhead 40-49, hsize 6+	100.0	54.3	5.7	8.5	31.5	-
married, hhead 50+, hsize< or=3	100.0	57.8	-	5.3	36.9	-
married, hhead 50+, 3<hsize<6	100.0	59.0	5.1	5.1	25.7	5.1
married, hhead 50+, hsize 6+	100.0	57.7	8.9	15.5	17.8	-
Davao City						
single/separated, hsize=1	100.0	-	40.0	20.0	40.0	-
single w/ hsize>1	100.0	61.9	28.6	-	9.5	-
separated, hsize>1	100.0	33.3	66.7	-	-	-
married, hhead<30, hsize< or=3	100.0	-	28.6	-	71.4	-
married, hhead<30, 3<hsize<6	100.0	48.4	17.0	-	39.6	-
married, hhead<30, hsize 6+	100.0	58.4	-	-	16.7	25.0
married, hhead 30-39, hsize< or=3	100.0	-	35.3	-	64.7	-
married, hhead 30-39, 3<hsize<6	100.0	54.4	13.2	4.4	24.6	3.5
married, hhead 30-39, hsize 6+	100.0	53.5	9.9	6.9	24.8	5.0
married, hhead 40-49, hsize< or=3	100.0	100.0	-	-	-	-
married, hhead 40-49, 3<hsize<6	100.0	63.9	6.0	-	16.9	13.2
married, hhead 40-49, hsize 6+	100.0	60.5	12.3	7.0	20.2	-
married, hhead 50+, hsize< or=3	100.0	82.9	9.8	-	-	7.3
married, hhead 50+, 3<hsize<6	100.0	84.8	2.5	2.5	7.6	2.5
married, hhead 50+, hsize 6+	100.0	89.7	3.0	6.1	18.2	3.0

The Dynamics of Housing Demand in the Philippines

Appendix 6 (continued)

	1994 Tenure Status					
	Total	Own or owner-like possession of house and lot	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines						
single/separated, hsize=1	100.0	57.5	9.6	1.0	30.5	1.4
single w/ hsize>1	100.0	62.0	13.2	5.7	17.3	1.8
separated, hsize>1	100.0	57.0	13.6	4.2	21.3	3.8
married, hhead<30, hsize< or =3	100.0	49.6	12.8	3.5	31.8	2.3
married, hhead<30, 3<hsize<6	100.0	53.7	7.9	4.3	31.0	3.1
married, hhead<30, hsize 6+	100.0	56.3	6.2	5.3	26.9	5.3
married, hhead 30-39, 3<hsize< or =3	100.0	55.1	13.5	3.4	25.1	2.9
married, hhead 30-39, 3<hsize<6	100.0	57.9	9.6	4.7	25.2	2.7
married, hhead 30-39, hsize 6+	100.0	58.2	5.4	4.6	28.2	3.7
married, hhead 40-49, hsize< or =3	100.0	60.7	8.1	4.4	23.4	3.4
married, hhead 40-49, 3<hsize<6	100.0	64.1	8.9	5.3	18.6	3.2
married, hhead 40-49, hsize 6+	100.0	63.2	4.9	4.2	24.6	3.2
married, hhead 50+, hsize< or =3	100.0	74.5	2.9	3.0	17.4	2.2
married, hhead 50+, 3<hsize<6	100.0	72.5	3.9	4.4	17.2	1.9
married, hhead 50+, hsize 6+	100.0	72.8	3.8	4.1	17.0	2.2
Urban						
single/separated, hsize=1	100.0	54.9	15.9	0.8	27.8	0.7
single w/ hsize>1	100.0	56.2	20.3	7.3	14.0	2.2
separated, hsize>1	100.0	54.7	21.0	4.5	15.9	3.9
married, hhead<30, hsize< or =3	100.0	46.5	20.4	4.1	27.2	1.9
married, hhead<30, 3<hsize<6	100.0	51.2	14.7	4.7	25.1	4.3
married, hhead<30, hsize 6+	100.0	48.1	11.2	6.3	25.6	8.7
married, hhead 30-39, hsize< or =3	100.0	50.3	22.1	2.9	21.6	3.1
married, hhead 30-39, 3<hsize<6	100.0	52.5	16.9	5.3	22.6	2.7
married, hhead 30-39, hsize 6+	100.0	55.7	11.0	5.0	23.7	4.6
married, hhead 40-49, hsize< or =3	100.0	55.4	14.4	4.7	21.4	4.0
married, hhead 40-49, 3<hsize<6	100.0	60.1	15.0	6.8	14.4	3.6
married, hhead 40-49, hsize 6+	100.0	58.9	9.7	4.5	23.2	3.7
married, hhead 50+, hsize< or =3	100.0	70.3	6.6	4.3	15.8	3.0
married, hhead 50+, 3<hsize<6	100.0	69.6	7.2	5.9	14.6	2.8
married, hhead 50+, hsize 6+	100.0	70.8	7.0	5.8	14.2	2.1
Rural						
single/separated, hsize=1	100.0	60.5	2.5	1.3	33.5	2.2
single w/ hsize>1	100.0	71.2	1.9	3.1	22.5	1.2
separated, hsize>1	100.0	61.2	-	3.8	31.3	3.7
married, hhead<30, hsize< or =3	100.0	53.8	2.8	2.8	37.7	2.9
married, hhead<30, 3<hsize<6	100.0	55.8	2.0	4.0	36.2	2.0
married, hhead<30, hsize 6+	100.0	63.4	1.8	4.4	28.0	2.4
married, hhead 30-39, hsize< or =3	100.0	61.3	2.6	4.0	29.5	2.6
married, hhead 30-39, 3<hsize<6	100.0	64.4	0.8	3.9	28.3	2.6
married, hhead 30-39, hsize 6+	100.0	60.1	1.1	4.2	31.6	3.0
married, hhead 40-49, hsize< or =3	100.0	67.4	0.1	4.0	25.9	2.7
married, hhead 40-49, 3<hsize<6	100.0	69.3	1.0	3.3	23.9	2.5
married, hhead 40-49, hsize 6+	100.0	67.1	0.6	3.8	25.8	2.7
married, hhead 50+, hsize< or =3	100.0	77.1	0.5	2.3	18.5	1.7
married, hhead 50+, 3<hsize<6	100.0	75.5	0.6	3.0	19.8	1.1
married, hhead 50+, hsize 6+	100.0	74.9	0.4	2.4	20.0	2.4

Appendix 6 (continued)

	Total	1994 Tenure Status				
		Own or owner-like possession of house and lot	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/consent of owner	Own/ rent-free house, rent-free lot w/b consent of owner
NCR						
single/separated, hhsz=1	100.0	43.1	33.5	-	23.4	-
single w/hhsz>1	100.0	34.2	44.6	6.7	12.1	2.5
separated, hhsz>1	100.0	42.3	35.1	1.3	13.4	8.0
married, hhead<30, hsize< or =3	100.0	38.1	34.1	3.1	22.0	2.8
married, hhead<30, 3<hsize<6	100.0	38.7	29.4	2.5	25.6	3.8
married, hhead<30, hsize 6+	100.0	21.4	27.3	11.8	28.8	10.6
married, hhead 30-39, hsize< or =3	100.0	35.2	39.9	2.2	17.6	5.1
married, hhead 30-39, 3<hsize<6	100.0	40.8	35.7	3.2	15.9	4.4
married, hhead 30-39, hsize 6+	100.0	43.3	25.5	4.0	19.9	7.3
married, hhead 40-49, hsize< or =3	100.0	43.0	30.5	1.0	16.8	8.7
married, hhead 40-49, 3<hsize<6	100.0	47.7	31.3	4.8	11.0	5.2
married, hhead 40-49, hsize 6+	100.0	46.3	27.7	3.4	16.3	6.3
married, hhead 50+, hsize< or =3	100.0	59.6	25.6	3.2	8.1	3.5
married, hhead 50+, 3<hsize<6	100.0	58.4	20.9	5.8	10.9	4.0
married, hhead 50+, hsize 6+	100.0	65.7	19.0	5.2	7.6	2.5
Metro Cebu						
single/separated, hhsz=1	100.0	-	100.0	-	-	-
single w/hhsz>1	100.0	66.4	-	11.2	22.4	-
separated, hhsz>1	100.0	75.0	25.0	-	-	-
married, hhead<30, hsize< or =3	100.0	16.7	50.0	-	33.3	-
married, hhead<30, 3<hsize<6	100.0	57.3	9.4	14.2	9.4	9.6
married, hhead<30, hsize 6+	100.0	12.5	12.5	12.5	24.7	37.6
married, hhead 30-39, hsize< or =3	100.0	33.2	33.5	10.9	22.4	-
married, hhead 30-39, 3<hsize<6	100.0	34.3	23.7	15.6	23.8	2.7
married, hhead 30-39, hsize 6+	100.0	59.6	10.7	16.1	8.1	5.5
married, hhead 40-49, hsize< or =3	100.0	25.2	24.5	25.2	25.2	-
married, hhead 40-49, 3<hsize<6	100.0	59.5	9.2	12.5	12.6	6.3
married, hhead 40-49, hsize 6+	100.0	62.4	7.5	7.5	17.6	5.0
married, hhead 50+, hsize< or =3	100.0	41.7	16.7	16.7	8.3	16.7
married, hhead 50+, 3<hsize<6	100.0	66.7	2.2	8.9	13.3	8.9
married, hhead 50+, hsize 6+	100.0	60.0	6.0	17.9	8.0	8.0
Davao City						
single/separated, hhsz=1	-	-	-	-	-	-
single w/hhsz>1	100.0	38.2	9.6	23.5	28.7	-
separated, hhsz>1	100.0	-	-	20.3	79.7	-
married, hhead<30, hsize< or =3	100.0	24.7	16.9	-	58.4	-
married, hhead<30, 3<hsize<6	100.0	43.0	23.7	-	23.7	9.6
married, hhead<30, hsize 6+	100.0	54.9	-	-	45.1	-
married, hhead 30-39, hsize< or =3	100.0	63.4	18.3	-	18.3	-
married, hhead 30-39, 3<hsize<6	100.0	45.7	13.1	6.4	32.2	2.6
married, hhead 30-39, hsize 6+	100.0	47.4	6.7	6.7	33.3	5.8
married, hhead 40-49, hsize< or =3	100.0	75.9	-	-	24.1	-
married, hhead 40-49, 3<hsize<6	100.0	62.0	-	4.2	20.5	13.4
married, hhead 40-49, hsize 6+	100.0	43.3	9.7	5.8	34.4	6.7
married, hhead 50+, hsize< or =3	100.0	24.3	17.3	-	41.1	17.3
married, hhead 50+, 3<hsize<6	100.0	79.7	9.6	4.8	3.5	2.4
married, hhead 50+, hsize 6+	100.0	63.5	6.4	10.1	20.0	-

The Dynamics of Housing Demand in the Philippines

Appendix 6 (continued)

	1997 Tenure Status					
	Total	Own or owner-like possession of house and lot	Rent house/ room, incl. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
Philippines						
single/separated, hysize=1	100.0	53.0	14.5	4.0	23.9	4.5
single w/ hysize>1	100.0	64.2	15.1	2.8	15.6	2.2
separated, hysize>1	100.0	62.7	11.0	4.1	18.7	3.5
married, hhead<30, hsize< or =3	100.0	49.6	15.4	4.1	27.8	3.1
married, hhead<30, 3<hsize<6	100.0	53.5	9.7	2.2	30.4	4.3
married, hhead<30, hsize 6+	100.0	53.9	9.5	3.9	30.1	2.5
married, hhead 30-39, hsize< or =3	100.0	55.3	15.8	3.0	24.0	1.9
married, hhead 30-39, 3<hsize<6	100.0	58.8	9.0	3.7	25.2	3.3
married, hhead 30-39, hsize 6+	100.0	60.4	4.5	3.8	27.2	4.0
married, hhead 40-49, hsize< or =3	100.0	61.1	9.2	3.6	21.9	4.2
married, hhead 40-49, 3<hsize<6	100.0	64.6	7.7	4.0	20.9	2.8
married, hhead 40-49, hsize 6+	100.0	63.1	4.4	4.8	23.8	3.8
married, hhead 50+, hsize< or =3	100.0	71.3	2.9	3.7	20.1	2.1
married, hhead 50+, 3<hsize<6	100.0	71.6	3.9	4.5	17.6	2.4
married, hhead 50+, hsize 6+	100.0	71.3	3.6	5.0	16.8	3.3
Urban						
single/separated, hysize=1	100.0	42.5	23.6	4.3	24.0	5.6
single w/ hysize>1	100.0	59.2	22.3	3.0	12.6	2.9
separated, hysize>1	100.0	61.7	16.1	3.1	14.4	4.7
married, hhead<30, hsize< or =3	100.0	40.1	31.5	5.0	19.6	3.7
married, hhead<30, 3<hsize<6	100.0	43.7	20.3	2.5	28.2	5.3
married, hhead<30, hsize 6+	100.0	49.7	18.1	5.3	24.7	2.1
married, hhead 30-39, hsize< or =3	100.0	48.3	28.8	2.7	17.6	2.6
married, hhead 30-39, 3<hsize<6	100.0	52.3	16.4	4.2	22.4	4.7
married, hhead 30-39, hsize 6+	100.0	54.7	10.3	5.0	23.6	6.4
married, hhead 40-49, hsize< or =3	100.0	53.5	15.4	4.6	20.5	6.0
married, hhead 40-49, 3<hsize<6	100.0	60.8	13.5	4.7	16.9	4.1
married, hhead 40-49, hsize 6+	100.0	59.3	9.0	6.2	19.4	6.1
married, hhead 50+, hsize< or =3	100.0	71.7	6.7	5.1	13.0	3.5
married, hhead 50+, 3<hsize<6	100.0	67.7	8.0	6.4	14.7	3.3
married, hhead 50+, hsize 6+	100.0	68.7	7.0	6.0	13.7	4.6
Rural						
single/separated, hysize=1	100.0	66.8	2.6	3.8	23.8	3.1
single w/ hysize>1	100.0	73.2	2.3	2.6	21.0	1.0
separated, hysize>1	100.0	64.6	1.4	6.1	26.7	1.2
married, hhead<30, hsize< or =3	100.0	57.4	2.1	3.4	34.6	2.5
married, hhead<30, 3<hsize<6	100.0	61.2	1.3	2.0	32.1	3.4
married, hhead<30, hsize 6+	100.0	58.2	0.7	2.5	35.6	3.0
married, hhead 30-39, hsize< or =3	100.0	63.2	1.1	3.3	31.4	1.1
married, hhead 30-39, 3<hsize<6	100.0	65.3	1.6	3.2	27.9	1.9
married, hhead 30-39, hsize 6+	100.0	64.3	0.6	3.1	29.6	2.4
married, hhead 40-49, hsize< or =3	100.0	68.5	3.0	2.6	23.3	2.5
married, hhead 40-49, 3<hsize<6	100.0	68.8	1.2	3.2	25.4	1.4
married, hhead 40-49, hsize 6+	100.0	66.2	0.7	3.7	27.4	2.0
married, hhead 50+, hsize< or =3	100.0	71.1	0.5	2.8	24.5	1.1
married, hhead 50+, 3<hsize<6	100.0	75.0	0.3	2.9	20.1	1.6
married, hhead 50+, hsize 6+	100.0	73.7	0.3	4.0	19.9	2.1

Appendix 6 (continued)

	1997 Tenure Status					
	Total	Own or owner-like possession of house and lot	Rent house/ room, ind. lot	Own house, rent lot	Own/ rent-free house, rent-free lot w/ consent of owner	Own/ rent-free house, rent-free lot w/o consent of owner
NCR						
single/separated, hhsz=1	100.0	31.9	31.6	1.1	22.7	12.6
single w/hhsz>1	100.0	46.5	39.0	0.6	11.2	2.7
separated, hhsz>1	100.0	55.0	24.1	2.0	14.5	4.4
married, hhead<30, hsz< or =3	100.0	35.1	49.4	1.2	11.9	2.3
married, hhead<30, 3<hsz<6	100.0	36.1	36.2	0.6	20.2	7.0
married, hhead<30, hsz 6+	100.0	47.2	36.3	0.9	15.6	-
married, hhead 30-39, hsz< or =3	100.0	35.0	47.8	1.6	11.3	4.3
married, hhead 30-39, 3<hsz<6	100.0	42.1	30.0	2.5	20.4	5.0
married, hhead 30-39, hsz 6+	100.0	46.1	21.6	3.8	17.1	11.5
married, hhead 40-49, hsz< or =3	100.0	44.5	32.0	-	14.5	9.0
married, hhead 40-49, 3<hsz<6	100.0	53.1	25.4	3.8	12.2	5.5
married, hhead 40-49, hsz 6+	100.0	49.8	21.2	5.3	14.1	9.6
married, hhead 50+, hsz< or =3	100.0	66.0	18.0	3.4	6.9	5.7
married, hhead 50+, 3<hsz<6	100.0	56.3	22.3	6.7	9.3	5.4
married, hhead 50+, hsz 6+	100.0	60.1	17.2	5.8	8.3	8.6
Metro Cebu						
single/separated, hhsz=1	100.0	15.0	56.9	9.2	18.9	-
single w/hhsz>1	100.0	36.9	20.9	12.3	3.0	27.0
separated, hhsz>1	100.0	58.3	-	-	16.7	25.0
married, hhead<30, hsz< or =3	100.0	34.2	44.5	3.6	8.4	9.3
married, hhead<30, 3<hsz<6	100.0	23.8	15.9	5.6	38.0	16.8
married, hhead<30, hsz 6+	100.0	59.3	5.7	-	27.1	7.9
married, hhead 30-39, hsz< or =3	100.0	45.2	30.1	4.3	12.2	8.2
married, hhead 30-39, 3<hsz<6	100.0	42.3	11.0	8.1	19.2	19.4
married, hhead 30-39, hsz 6+	100.0	33.7	8.9	12.3	32.8	12.3
married, hhead 40-49, hsz< or =3	100.0	55.6	-	15.7	25.9	2.8
married, hhead 40-49, 3<hsz<6	100.0	44.5	8.0	9.1	29.6	8.7
married, hhead 40-49, hsz 6+	100.0	44.0	2.6	14.7	19.1	19.6
married, hhead 50+, hsz< or =3	100.0	46.4	-	18.7	23.7	11.2
married, hhead 50+, 3<hsz<6	100.0	56.5	1.8	16.9	10.6	14.2
married, hhead 50+, hsz 6+	100.0	44.8	9.9	13.1	18.3	13.8
Davao City						
single/separated, hhsz=1	100.0	15.4	46.2	-	38.5	-
single w/hhsz>1	100.0	53.6	17.1	-	29.3	-
separated, hhsz>1	100.0	67.0	-	27.1	5.9	-
married, hhead<30, hsz< or =3	100.0	17.0	28.3	9.4	45.3	-
married, hhead<30, 3<hsz<6	100.0	38.5	27.5	3.9	22.5	7.6
married, hhead<30, hsz 6+	100.0	100.0	-	-	-	-
married, hhead 30-39, hsz< or =3	100.0	55.9	35.3	-	8.8	-
married, hhead 30-39, 3<hsz<6	100.0	40.2	25.3	3.5	29.1	1.9
married, hhead 30-39, hsz 6+	100.0	28.0	11.2	11.8	48.9	-
married, hhead 40-49, hsz< or =3	100.0	66.0	19.4	-	14.6	-
married, hhead 40-49, 3<hsz<6	100.0	70.4	6.9	6.5	13.8	2.4
married, hhead 40-49, hsz 6+	100.0	42.8	8.4	9.6	37.8	1.5
married, hhead 50+, hsz< or =3	100.0	73.9	-	3.6	18.9	3.6
married, hhead 50+, 3<hsz<6	100.0	64.2	5.8	4.9	25.1	-
married, hhead 50+, hsz 6+	100.0	68.4	-	18.3	13.3	-

The Dynamics of Housing Demand in the Philippines

Appendix 7. Housing Improvement By Lifecycle, Wall Materials

WALL MATERIALS	1995				1997			
	Total	Strong	Light	Makeshift	Total	Strong	Light	Makeshift
Philippines								
single/separated, hsize=1	100.0	34.2	57.9	7.9	100.0	58.4	36.4	5.2
single w/ hsize>1	100.0	54.0	44.6	1.5	100.0	76.3	21.6	2.1
separated, hsize>1	100.0	46.4	47.9	5.7	100.0	65.9	31.3	2.9
married, hhead<30, hsize< or =3	100.0	21.7	71.8	6.5	100.0	53.9	43.2	2.8
married, hhead<30, 3<hsize<6	100.0	23.1	71.4	5.6	100.0	47.3	49.9	2.7
married, hhead<30, hsize 6+	100.0	24.1	67.1	8.9	100.0	49.8	48.2	2.0
married, hhead 30-39, hsize< or =3	100.0	41.2	55.9	2.9	100.0	61.6	36.4	2.0
married, hhead 30-39, 3<hsize<6	100.0	37.4	57.9	4.7	100.0	62.0	35.7	2.3
married, hhead 30-39, hsize 6+	100.0	31.3	64.6	4.0	100.0	51.4	45.5	3.1
married, hhead 40-49, hsize< or =3	100.0	33.4	62.6	4.0	100.0	66.6	30.6	2.8
married, hhead 40-49, 3<hsize<6	100.0	41.9	54.7	3.5	100.0	68.6	29.4	2.0
married, hhead 40-49, hsize 6+	100.0	37.6	59.2	3.2	100.0	58.5	39.5	2.0
married, hhead 50+, hsize< or =3	100.0	40.3	55.2	4.5	100.0	61.3	37.1	1.6
married, hhead 50+, 3<hsize<6	100.0	44.0	53.0	3.0	100.0	68.6	29.9	1.5
married, hhead 50+, hsize 6+	100.0	46.5	51.0	2.5	100.0	69.3	29.0	1.7
Urban								
single/separated, hsize=1	100.0	51.2	45.5	3.3	100.0	76.5	19.1	4.4
single w/ hsize>1	100.0	62.2	36.3	1.4	100.0	85.0	12.4	2.6
separated, hsize>1	100.0	53.2	37.2	9.6	100.0	77.3	18.4	4.4
married, hhead<30, hsize< or =3	100.0	41.2	53.4	5.4	100.0	68.1	26.8	5.1
married, hhead<30, 3<hsize<6	100.0	35.5	58.1	6.5	100.0	65.3	29.5	5.2
married, hhead<30, hsize 6+	100.0	34.3	54.6	11.1	100.0	63.2	33.4	3.4
married, hhead 30-39, hsize< or =3	100.0	52.9	43.8	3.3	100.0	78.6	19.2	2.2
married, hhead 30-39, 3<hsize<6	100.0	51.5	43.5	5.0	100.0	74.8	21.9	3.3
married, hhead 30-39, hsize 6+	100.0	41.8	53.3	4.9	100.0	65.0	29.6	5.4
married, hhead 40-49, hsize< or =3	100.0	47.5	49.0	3.6	100.0	74.8	22.3	2.9
married, hhead 40-49, 3<hsize<6	100.0	56.3	40.6	3.1	100.0	80.3	17.1	2.6
married, hhead 40-49, hsize 6+	100.0	49.3	45.9	4.9	100.0	72.1	25.0	2.9
married, hhead 50+, hsize< or =3	100.0	54.4	40.7	4.8	100.0	77.6	20.3	2.1
married, hhead 50+, 3<hsize<6	100.0	61.0	35.2	3.8	100.0	78.2	19.7	2.1
married, hhead 50+, hsize 6+	100.0	56.9	39.8	3.2	100.0	79.8	17.9	2.3
Rural								
single/separated, hsize=1	100.0	24.5	65.0	10.5	100.0	34.7	59.1	6.2
single w/ hsize>1	100.0	45.2	53.3	1.5	100.0	60.7	38.1	1.2
separated, hsize>1	100.0	36.4	63.6	-	100.0	44.3	55.7	-
married, hhead<30, hsize< or =3	100.0	13.5	79.6	7.0	100.0	42.2	56.8	1.0
married, hhead<30, 3<hsize<6	100.0	17.4	77.5	5.1	100.0	33.2	66.1	0.7
married, hhead<30, hsize 6+	100.0	17.9	74.6	7.5	100.0	36.2	63.2	0.7
married, hhead 30-39, hsize< or =3	100.0	32.9	64.5	2.6	100.0	42.3	55.9	1.8
married, hhead 30-39, 3<hsize<6	100.0	27.0	68.5	4.5	100.0	49.1	49.5	1.3
married, hhead 30-39, hsize 6+	100.0	26.5	69.9	3.6	100.0	42.3	56.2	1.5
married, hhead 40-49, hsize< or =3	100.0	25.6	70.2	4.2	100.0	58.5	38.8	2.7
married, hhead 40-49, 3<hsize<6	100.0	31.0	65.2	3.8	100.0	55.6	43.1	1.3
married, hhead 40-49, hsize 6+	100.0	30.8	66.9	2.3	100.0	47.2	51.4	1.3
married, hhead 50+, hsize< or =3	100.0	34.9	60.6	4.4	100.0	51.0	47.8	1.2
married, hhead 50+, 3<hsize<6	100.0	34.0	63.4	2.6	100.0	60.1	38.9	1.0
married, hhead 50+, hsize 6+	100.0	38.2	59.9	1.9	100.0	59.2	39.8	1.1

Appendix 7 (continued)

	1993				1997			
	Total	Strong	Light	Makeshift	Total	Strong	Light	Makeshift
NCR								
single/separated, hysize=1	100.0	54.3	45.7	-	100.0	80.2	10.0	9.8
single w/hysize>1	100.0	74.7	24.0	1.3	100.0	89.6	6.4	4.0
separated, hysize>1	100.0	62.4	28.7	8.9	100.0	84.3	8.8	6.9
married, hhead<30, hsize< or =3	100.0	44.4	48.2	7.4	100.0	79.6	8.4	11.9
married, hhead<30, 3<hsize<6	100.0	44.0	47.6	8.4	100.0	80.4	9.2	10.4
married, hhead<30, hsize 6+	100.0	42.8	49.8	7.4	100.0	76.7	21.9	1.3
married, hhead 30-39, hsize< or =3	100.0	52.9	42.9	4.2	100.0	88.9	6.5	4.7
married, hhead 30-39, 3<hsize<6	100.0	59.8	33.2	7.0	100.0	84.0	9.7	6.2
married, hhead 30-39, hsize 6+	100.0	52.3	42.4	5.3	100.0	73.6	11.8	14.6
married, hhead 40-49, hsize< or =3	100.0	62.4	37.6	-	100.0	89.6	5.7	4.7
married, hhead 40-49, 3<hsize<6	100.0	57.4	37.6	5.0	100.0	90.5	5.8	3.7
married, hhead 40-49, hsize 6+	100.0	53.8	39.1	7.0	100.0	86.9	7.6	5.5
married, hhead 50+, hsize< or =3	100.0	72.6	24.0	3.4	100.0	90.1	4.8	5.1
married, hhead 50+, 3<hsize<6	100.0	72.2	25.0	2.8	100.0	86.9	8.1	5.0
married, hhead 50+, hsize 6+	100.0	60.8	34.4	4.9	100.0	90.5	4.4	5.1
Metro Cebu								
single/separated, hysize=1	100.0	25.0	75.0	-	100.0	89.4	10.6	-
single w/hysize>1	100.0	71.4	28.6	-	100.0	80.7	11.5	7.8
separated, hysize>1	100.0	100.0	-	-	100.0	68.0	32.0	-
married, hhead<30, hsize< or =3	100.0	33.4	66.6	-	100.0	52.9	47.1	-
married, hhead<30, 3<hsize<6	100.0	33.3	66.7	-	100.0	51.4	42.0	6.5
married, hhead<30, hsize 6+	100.0	33.3	33.3	33.3	100.0	44.9	40.7	14.3
married, hhead 30-39, hsize< or =3	100.0	25.0	50.0	25.0	100.0	77.5	22.5	-
married, hhead 30-39, 3<hsize<6	100.0	55.6	44.4	-	100.0	63.9	31.0	5.1
married, hhead 30-39, hsize 6+	100.0	35.3	64.7	-	100.0	64.2	31.5	4.3
married, hhead 40-49, hsize< or =3	100.0	-	100.0	-	100.0	38.0	59.2	2.8
married, hhead 40-49, 3<hsize<6	100.0	55.5	33.3	11.1	100.0	65.8	32.2	2.0
married, hhead 40-49, hsize 6+	100.0	50.0	42.9	7.1	100.0	64.3	30.6	5.0
married, hhead 50+, hsize< or =3	100.0	-	80.0	20.0	100.0	69.6	25.0	5.4
married, hhead 50+, 3<hsize<6	100.0	50.0	32.1	17.9	100.0	76.5	20.7	2.8
married, hhead 50+, hsize 6+	100.0	70.0	30.0	-	100.0	68.8	28.3	2.9
Davao City								
single/separated, hysize=1	100.0	100.0	-	-	100.0	100.0	-	-
single w/hysize>1	100.0	32.4	67.6	-	100.0	79.5	10.3	10.3
separated, hysize>1	100.0	73.1	26.9	-	100.0	93.6	-	6.4
married, hhead<30, hsize< or =3	100.0	43.6	56.4	-	100.0	81.1	9.4	9.4
married, hhead<30, 3<hsize<6	100.0	35.6	64.4	-	100.0	76.9	19.2	3.9
married, hhead<30, hsize 6+	100.0	50.0	16.7	33.3	100.0	26.3	73.7	-
married, hhead 30-39, hsize< or =3	100.0	50.0	50.0	-	100.0	91.2	8.8	-
married, hhead 30-39, 3<hsize<6	100.0	45.5	48.2	6.3	100.0	86.7	13.3	-
married, hhead 30-39, hsize 6+	100.0	39.7	38.8	21.5	100.0	90.4	6.2	3.4
married, hhead 40-49, hsize< or =3	100.0	16.7	66.7	16.7	100.0	75.7	24.3	-
married, hhead 40-49, 3<hsize<6	100.0	42.4	57.6	-	100.0	91.3	8.7	-
married, hhead 40-49, hsize 6+	100.0	49.0	51.0	-	100.0	76.3	20.8	2.9
married, hhead 50+, hsize< or =3	100.0	79.3	20.7	-	100.0	74.7	25.3	-
married, hhead 50+, 3<hsize<6	100.0	70.8	29.2	-	100.0	88.2	11.8	-
married, hhead 50+, hsize 6+	100.0	52.4	40.1	7.6	100.0	94.7	5.3	-

Appendix 8. Housing Improvement By Lifecycle, Toilet Facility

	1995						1997					
	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc.)	None	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system, etc.)	None
TYPE OF TOILET FACILITY												
Philippines												
single/separated, hsize=1	100.0	50.9	8.7	17.0	3.2	20.2	100.0	60.2	9.6	11.8	3.7	14.7
single w/ hsize>1	100.0	60.8	14.9	11.1	2.5	10.7	100.0	75.2	9.2	5.9	3.9	5.8
separated, hsize>1	100.0	58.4	12.8	12.3	5.3	11.3	100.0	70.3	10.6	5.8	2.7	10.6
married, hhead<30, hsize< or =3	100.0	33.0	21.7	21.2	3.8	20.2	100.0	56.8	15.0	11.3	4.4	12.4
married, hhead<30, 3<hsize<6	100.0	40.5	17.0	17.0	4.4	21.1	100.0	50.8	14.3	12.5	4.6	17.8
married, hhead<30, hsize 6+	100.0	40.1	18.1	18.2	6.0	17.6	100.0	54.6	11.6	15.1	3.7	15.0
married, hhead 30-39, hsize< or =3	100.0	60.4	11.0	11.4	4.1	13.1	100.0	63.7	11.2	9.8	3.6	11.6
married, hhead 30-39, 3<hsize<6	100.0	53.2	17.6	14.1	3.8	11.3	100.0	64.7	10.7	10.0	4.2	10.4
married, hhead 30-39, hsize 6+	100.0	44.0	17.3	17.3	3.6	17.8	100.0	53.7	14.6	11.8	4.3	15.7
married, hhead 40-49, hsize< or =3	100.0	50.2	16.3	16.1	4.7	12.7	100.0	68.1	10.3	7.2	4.2	10.3
married, hhead 40-49, 3<hsize<6	100.0	56.6	16.2	11.6	3.6	12.1	100.0	70.5	11.0	8.0	3.5	7.1
married, hhead 40-49, hsize 6+	100.0	53.5	16.4	15.7	3.7	10.7	100.0	61.6	13.6	11.4	3.5	9.9
married, hhead 50+, hsize< or =3	100.0	48.6	17.9	15.8	2.6	15.1	100.0	62.8	12.0	8.9	3.1	13.2
married, hhead 50+, 3<hsize<6	100.0	58.3	15.2	12.1	3.3	11.0	100.0	71.1	11.9	7.5	2.8	6.8
married, hhead 50+, hsize 6+	100.0	60.3	16.9	12.2	3.2	7.3	100.0	71.3	10.1	8.8	3.3	6.5
Urban												
single/separated, hsize=1	100.0	83.7	9.0	0.6	1.7	5.0	100.0	76.2	6.2	5.7	3.1	8.7
single w/ hsize>1	100.0	77.4	10.9	4.8	2.7	4.2	100.0	84.5	8.0	2.1	3.3	2.1
separated, hsize>1	100.0	73.5	8.8	4.1	5.4	8.2	100.0	78.3	8.7	2.0	3.5	7.5
married, hhead<30, hsize< or =3	100.0	59.7	12.1	7.8	7.3	13.1	100.0	71.4	9.2	6.2	6.4	6.8
married, hhead<30, 3<hsize<6	100.0	59.4	14.1	7.7	5.2	13.5	100.0	67.5	11.6	4.9	5.8	10.1
married, hhead<30, hsize 6+	100.0	53.5	13.2	11.3	6.5	15.5	100.0	68.8	9.9	8.2	3.8	9.4
married, hhead 30-39, hsize< or =3	100.0	74.5	9.3	8.9	3.5	3.8	100.0	78.9	7.7	4.6	4.5	4.4
married, hhead 30-39, 3<hsize<6	100.0	71.1	12.1	6.6	4.5	5.7	100.0	76.4	7.8	4.4	4.6	6.7
married, hhead 30-39, hsize 6+	100.0	64.6	13.4	8.0	3.9	10.2	100.0	69.3	11.3	5.5	4.6	9.2
married, hhead 40-49, hsize< or =3	100.0	66.8	11.9	10.0	3.7	7.6	100.0	79.9	7.0	4.0	2.4	6.7
married, hhead 40-49, 3<hsize<6	100.0	75.7	11.4	4.1	3.7	5.1	100.0	81.3	8.0	3.7	3.3	3.7

Appendix 8 (continued)

	1993						1997					
	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system etc.)	None	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system etc.)	None
married, hhead 40-49, hsize 6+	100.0	69.6	12.3	7.3	3.7	7.1	100.0	75.7	9.4	5.6	4.0	5.4
married, hhead 50+, hsize< or =3	100.0	69.7	13.8	7.9	0.1	8.5	100.0	77.9	7.7	4.6	3.4	6.5
married, hhead 50+, 3<hsize<6	100.0	77.5	9.4	5.6	2.9	4.6	100.0	82.2	7.4	3.8	3.3	3.2
Married, hhead 50+, hsize 6+	100.0	76.2	11.0	5.2	3.7	3.8	100.0	81.0	6.9	4.9	3.2	4.0
Rural												
single/separated, hsize=1	100.0	32.3	8.6	26.3	4.1	28.8	100.0	39.2	14.0	19.7	4.5	22.6
single w/ hsize>1	100.0	43.2	19.0	17.9	2.4	17.6	100.0	58.7	11.2	12.8	5.0	12.3
separated, hsize>1	100.0	36.0	18.7	24.4	5.1	15.7	100.0	55.2	14.1	13.0	1.0	16.6
married, hhead<30, hsize< or =3	100.0	21.8	25.8	26.9	2.3	23.2	100.0	44.7	19.9	15.6	2.8	17.1
married, hhead<30, 3<hsize<6	100.0	31.7	18.4	21.3	4.1	24.5	100.0	37.6	16.5	18.5	3.6	23.8
married, hhead<30, hsize 6+	100.0	32.0	21.0	22.4	5.6	18.9	100.0	40.1	13.3	22.1	3.6	20.8
married, hhead 30-39, hsize< or =3	100.0	50.5	12.2	13.1	4.5	19.6	100.0	46.5	15.3	15.9	2.6	19.8
married, hhead 30-39, 3<hsize<6	100.0	39.9	21.7	19.6	3.3	15.5	100.0	53.1	13.5	15.6	3.8	14.0
married, hhead 30-39, hsize 6+	100.0	34.5	19.1	21.6	3.5	21.3	100.0	43.2	16.8	16.0	4.0	20.0
married, hhead 40-49, hsize< or =3	100.0	41.0	18.8	19.5	5.2	15.5	100.0	56.4	13.5	10.4	5.9	13.7
married, hhead 40-49, 3<hsize<6	100.0	42.2	19.8	17.2	3.5	17.3	100.0	58.4	14.3	12.9	3.6	10.8
married, hhead 40-49, hsize 6+	100.0	44.2	18.8	20.5	3.7	12.9	100.0	49.9	17.2	16.2	3.2	13.5
married, hhead 50+, hsize< or =3	100.0	40.6	19.4	18.8	3.5	17.6	100.0	53.2	14.8	11.7	2.9	17.5
married, hhead 50+, 3<hsize<6	100.0	47.0	18.7	16.0	3.6	14.8	100.0	61.3	15.8	10.8	2.3	9.9
married, hhead 50+, hsize 6+	100.0	47.7	21.6	17.8	2.9	10.0	100.0	61.8	13.2	12.5	3.4	9.1
NCR												
single/separated, hsize=1	100.0	91.4	8.6	-	-	-	100.0	85.6	1.7	2.8	3.5	6.4
single w/ hsize>1	100.0	83.4	10.9	1.4	4.3	-	100.0	86.4	8.1	1.1	4.4	-
separated, hsize>1	100.0	74.6	9.7	4.3	9.2	2.2	100.0	81.7	11.0	0.9	3.3	3.1
married, hhead<30, hsize< or =3	100.0	71.6	9.9	5.3	10.5	2.7	100.0	80.9	6.7	0.7	9.2	2.6
married, hhead<30, 3<hsize<6	100.0	76.5	4.4	3.0	8.8	7.4	100.0	77.5	10.8	1.1	8.2	2.4
married, hhead<30, hsize 6+	100.0	67.2	9.7	10.3	4.8	8.0	100.0	82.4	10.0	3.6	4.0	-
married, hhead 30-39, hsize< or =3	100.0	80.6	8.3	4.4	6.6	-	100.0	83.6	8.3	0.9	5.9	1.3

Appendix 8 (continued)

	1995						1997					
	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system etc.)	None	Total	Water-sealed	Closed-pit	Open-pit	Others (pail system etc.)	None
married, hhead 30-39, 3<hsize<6	100.0	75.5	9.5	5.1	7.0	2.9	100.0	83.3	6.4	1.4	6.2	2.7
married, hhead 30-39, hsize 6+	100.0	78.2	10.4	2.5	5.0	3.8	100.0	79.6	9.5	1.6	5.3	3.9
married, hhead 40-49, hsize< or =3	100.0	69.5	7.6	7.8	3.5	11.7	100.0	86.1	7.8	-	3.7	2.4
married, hhead 40-49, 3<hsize<6	100.0	82.2	7.0	2.2	6.8	1.8	100.0	84.1	8.8	1.1	4.6	1.4
married, hhead 40-49, hsize 6+	100.0	80.3	7.4	1.2	5.3	5.8	100.0	87.7	6.1	2.4	3.1	0.8
married, hhead 50+, hsize< or =3	100.0	88.8	6.7	1.4	-	3.1	100.0	88.2	6.8	-	3.5	1.5
married, hhead 50+, 3<hsize<6	100.0	85.0	8.0	0.9	3.9	2.2	100.0	89.7	4.7	1.0	4.4	0.1
married, hhead 50+, hsize 6+	100.0	82.2	7.4	3.6	5.8	1.1	100.0	87.3	4.6	2.3	4.6	1.2
Metro Cebu												
single/separated, hsize=1	100.0	100.0	-	-	-	-	100.0	76.7	11.3	-	-	12.1
single w/ hsize>1	100.0	85.7	14.3	-	-	-	100.0	56.1	22.4	3.0	-	18.5
separated, hsize>1	100.0	100.0	-	-	-	-	100.0	60.2	-	7.7	3.1	28.9
married, hhead<30, hsize< or =3	100.0	33.3	-	33.3	-	33.3	100.0	49.5	7.3	17.9	6.7	18.5
married, hhead<30, 3<hsize<6	100.0	66.7	11.1	-	-	22.2	100.0	63.5	13.3	-	5.1	18.1
married, hhead<30, hsize 6+	100.0	33.3	-	33.3	33.3	-	100.0	50.5	-	8.6	-	40.8
married, hhead 30-39, hsize< or =3	100.0	50.0	-	-	-	50.0	100.0	92.5	-	-	-	7.5
married, hhead 30-39, 3<hsize<6	100.0	72.2	-	5.6	-	22.2	100.0	72.0	8.8	4.4	9.6	5.1
married, hhead 30-39, hsize 6+	100.0	70.6	5.9	-	-	23.5	100.0	66.8	10.3	-	8.8	14.0
married, hhead 40-49, hsize< or =3	100.0	100.0	-	-	-	-	100.0	43.7	14.9	16.3	3.9	21.2
married, hhead 40-49, 3<hsize<6	100.0	66.7	-	11.1	11.1	11.1	100.0	78.5	7.5	5.8	3.3	4.9
married, hhead 40-49, hsize 6+	100.0	82.1	7.1	7.1	-	3.6	100.0	64.2	11.6	7.2	1.3	15.6
married, hhead 50+, hsize< or =3	100.0	20.0	-	40.0	-	40.0	100.0	59.5	3.5	18.1	1.5	17.5
married, hhead 50+, 3<hsize<6	100.0	71.4	7.1	14.3	-	7.1	100.0	73.3	10.8	3.1	8.6	4.2
married, hhead 50+, hsize 6+	100.0	90.0	-	3.3	-	6.7	100.0	73.9	3.4	9.2	2.4	11.2
Davao City												
single/separated, hsize=1	100.0	100.0	-	-	-	-	100.0	100.0	-	-	-	-
single w/ hsize>1	100.0	45.1	32.4	22.5	-	-	100.0	69.2	10.3	20.5	-	-
separated, hsize>1	100.0	86.5	-	-	13.5	-	100.0	83.5	-	10.6	-	5.9

Appendix 8 (continued)

	1993						1997					
	Total	Water-sealed	Closed-rif	Open-rif	Others (pail system etc.)	None	Total	Water-sealed	Closed-rif	Open-rif	Others (pail system etc.)	None
married, hhead<30, hsize< or =3	100.0	81.8	-	18.2	-	-	100.0	71.7	-	9.4	9.4	9.4
married, hhead<30, 3<hsize<6	100.0	71.1	-	17.0	11.9	-	100.0	69.9	3.9	14.7	3.9	7.6
married, hhead<30, hsize 6+	100.0	66.7	-	16.7	16.7	-	100.0	100.0	-	-	-	-
married, hhead 30-39, hsize<or=3	100.0	50.0	-	50.0	-	-	100.0	82.4	-	8.8	-	8.8
married, hhead 30-39, 3<hsize<6	100.0	70.7	7.7	18.5	3.2	-	100.0	77.0	3.5	9.8	1.8	7.9
married, hhead 30-39, hsize 6+	100.0	50.7	8.9	35.1	5.2	-	100.0	78.9	-	5.6	3.1	12.4
married, hhead 40-49, hsize<or=3	100.0	66.7	-	16.7	16.7	-	100.0	85.4	-	-	-	14.6
married, hhead 40-49, 3<hsize<6	100.0	63.6	21.2	15.2	-	-	100.0	88.4	-	8.3	-	3.3
married, hhead 40-49, hsize 6+	100.0	55.7	12.7	25.2	-	6.4	100.0	68.2	8.1	5.5	2.9	15.3
married, hhead 50+, hsize< or =3	100.0	67.0	12.2	20.7	-	-	100.0	68.2	6.4	16.4	-	8.9
married, hhead 50+, 3<hsize<6	100.0	67.3	9.7	22.9	-	-	100.0	68.0	-	25.1	-	6.9
married, hhead 50+, hsize 6+	100.0	72.9	8.7	15.9	2.5	-	100.0	91.9	3.2	-	-	4.9

The Dynamics of Housing Demand in the Philippines

Appendix 9. Housing Improvement By Lifecycle, Source of Water Supply

	1966								
	Total	Own use, faucet community water system	Shared, faucet, community water system	Own use, tubed/ piped well	Shared, tubed/ piped well	Dug- well	Spring, river stream, etc.	Rain	Peddler
Philippines									
single/separated, hsize=1	100.0	18.7	20.1	11.9	17.2	21.1	8.8	0.8	1.4
single w/ hsize>1	100.0	30.7	16.6	15.6	14.4	13.0	6.0	0.8	2.9
separated, hsize>1	100.0	31.7	14.3	17.7	18.0	9.2	6.4	-	2.6
married, hhead<30, hsize< or =3	100.0	10.0	17.1	8.8	23.1	23.1	14.6	1.3	2.0
married, hhead<30, 3<hsize<6	100.0	12.8	18.0	11.6	23.2	20.5	11.0	0.9	2.0
married, hhead<30, hsize 6+	100.0	18.0	21.0	7.9	23.6	14.4	10.4	1.0	3.8
married, hhead 30-39, hsize< or =3	100.0	21.6	15.8	14.2	18.6	16.7	8.9	2.2	2.0
married, hhead 30-39, 3<hsize<6	100.0	20.6	18.7	14.9	17.3	16.3	8.0	1.0	3.1
married, hhead 30-39, hsize 6+	100.0	13.5	17.7	16.1	18.6	20.2	11.0	0.9	2.1
married, hhead 40-49, hsize< or =3	100.0	16.7	15.5	15.0	16.5	22.4	8.4	3.1	2.5
married, hhead 40-49, 3<hsize<6	100.0	23.2	17.8	16.5	14.5	15.6	9.3	1.5	1.7
married, hhead 40-49, hsize 6+	100.0	17.8	18.5	17.4	14.7	18.4	9.6	1.2	2.4
married, hhead 50+, hsize< or =3	100.0	14.0	18.7	19.4	15.9	18.6	10.9	1.3	1.2
married, hhead 50+, 3<hsize<6	100.0	20.4	14.9	20.5	15.1	16.8	8.9	1.7	1.6
married, hhead 50+, hsize 6+	100.0	24.0	16.2	22.0	13.2	14.3	7.8	0.8	1.8
Urban									
single/separated, hsize=1	100.0	38.7	25.5	13.3	7.8	8.9	1.9	-	3.9
single w/ hsize>1	100.0	53.6	14.8	11.0	11.0	3.9	0.5	0.3	4.9
separated, hsize>1	100.0	47.5	13.7	12.2	18.6	4.7	-	-	3.3
married, hhead<30, hsize< or =3	100.0	29.1	32.3	8.9	15.1	6.1	2.8	2.2	3.5
married, hhead<30, 3<hsize<6	100.0	32.3	25.5	6.8	20.1	8.7	0.9	-	5.6
married, hhead<30, hsize 6+	100.0	34.9	30.6	3.8	16.6	4.6	1.7	-	7.9
married, hhead 30-39, hsize< or =3	100.0	37.9	15.9	20.0	12.6	6.0	4.6	-	3.1
married, hhead 30-39, 3<hsize<6	100.0	39.3	21.6	11.8	13.6	5.8	1.2	0.2	6.5
married, hhead 30-39, hsize 6+	100.0	30.6	24.8	14.4	14.3	8.1	2.5	0.3	4.9
married, hhead 40-49, hsize< or =3	100.0	39.0	19.2	15.0	12.7	4.8	2.6	1.0	5.7
married, hhead 40-49, 3<hsize<6	100.0	43.6	20.6	12.2	11.8	6.9	1.7	0.4	2.8
married, hhead 40-49, hsize 6+	100.0	35.8	23.1	13.2	12.8	7.4	1.8	0.3	5.6
married, hhead 50+, hsize< or =3	100.0	35.2	21.3	19.3	12.6	7.7	1.3	0.3	2.3
married, hhead 50+, 3<hsize<6	100.0	44.1	15.2	16.0	11.8	6.9	1.3	0.7	4.0
married, hhead 50+, hsize 6+	100.0	45.1	17.1	17.3	9.8	5.3	1.2	0.4	3.7
Rural									
single/separated, hsize=1	100.0	7.3	17.0	11.1	22.5	28.0	12.7	1.3	-
single w/ hsize>1	100.0	6.3	18.4	20.6	18.1	22.6	11.8	1.4	0.7
separated, hsize>1	100.0	8.5	15.1	25.9	17.1	15.9	15.8	-	1.7
married, hhead<30, hsize< or =3	100.0	1.9	10.8	8.8	26.5	30.2	19.6	0.9	1.4
married, hhead<30, 3<hsize<6	100.0	3.9	14.5	13.8	24.6	25.9	15.7	1.3	0.4
married, hhead<30, hsize 6+	100.0	7.9	15.2	10.4	27.8	20.2	15.5	1.5	1.4
married, hhead 30-39, hsize< or =3	100.0	10.1	15.7	10.2	22.8	24.2	12.1	3.7	1.3
married, hhead 30-39, 3<hsize<6	100.0	6.8	16.5	17.2	20.0	24.1	13.1	1.6	0.6
married, hhead 30-39, hsize 6+	100.0	5.5	14.4	16.9	20.6	25.7	15.0	1.2	0.8
married, hhead 40-49, hsize< or =3	100.0	4.2	13.4	15.1	18.6	32.2	11.6	4.2	0.7
married, hhead 40-49, 3<hsize<6	100.0	7.9	15.6	19.7	16.5	22.1	15.0	2.3	0.8
married, hhead 40-49, hsize 6+	100.0	7.4	15.8	19.8	15.8	24.8	14.0	1.7	0.6
married, hhead 50+, hsize< or =3	100.0	5.9	17.7	19.5	17.1	22.8	14.5	1.7	0.8
married, hhead 50+, 3<hsize<6	100.0	6.5	14.8	23.2	17.1	22.5	13.4	2.2	0.2
married, hhead 50+, hsize 6+	100.0	7.1	15.4	25.6	15.8	21.4	13.1	1.2	0.3

Appendix 9 (continued)

	Total	1985						
		Own use, faucet community water system	Shared, faucet, community water system	Own use, tubed/ piped well	Shared, tubed/ piped well	Dug-well	Spring, river stream, etc.	Rain	Peddler
NCR								
single/separated, hsize=1	100.0	64.6	25.7	-	-	-	-	- 9.7
single w/ hsize>1	100.0	65.3	11.6	5.4	4.4	2.8	-	- 10.5
separated, hsize>1	100.0	71.4	14.0	2.7	6.9	-	-	- 5.1
married, hhead<30, hsize< or =3	100.0	47.4	37.1	2.4	5.2	-	-	- 7.9
married, hhead<30, 3<hsize<6	100.0	48.6	29.3	-	8.7	4.0	-	- 9.4
married, hhead<30, hsize 6+	100.0	46.8	35.8	-	10.1	-	-	- 7.4
married, hhead 30-39, hsize< or =3	100.0	57.1	16.9	8.7	6.0	4.2	-	- 7.0
married, hhead 30-39, 3<hsize<6	100.0	53.4	22.9	4.0	5.4	2.1	-	- 12.2
married, hhead 30-39, hsize 6+	100.0	45.8	31.2	3.4	6.3	4.0	-	- 9.4
married, hhead 40-49, hsize< or =3	100.0	67.9	19.0	4.9	-	-	-	- 8.2
married, hhead 40-49, 3<hsize<6	100.0	60.9	23.0	1.8	6.9	2.5	-	- 5.0
married, hhead 40-49, hsize 6+	100.0	51.9	23.4	5.3	4.7	3.2	-	- 11.5
married, hhead 50+, hsize< or =3	100.0	50.9	21.6	11.9	4.7	1.8	-	- 9.1
married, hhead 50+, 3<hsize<6	100.0	62.5	12.4	6.7	6.2	4.2	-	- 8.0
married, hhead 50+, hsize 6+	100.0	61.7	19.0	6.5	3.0	1.7	-	- 8.1
Metro Cebu								
single/separated, hsize=1	100.0	25.0	-	25.0	25.0	25.0	-	- -
single w/ hsize>1	100.0	57.1	28.6	-	14.3	-	-	- -
separated, hsize>1	100.0	50.0	-	-	50.0	-	-	- -
married, hhead<30, hsize< or =3	100.0	-	100.0	-	-	-	-	- -
married, hhead<30, 3<hsize<6	100.0	22.2	33.3	-	11.1	11.1	11.1	- 11.1
married, hhead<30, hsize 6+	100.0	-	66.6	33.4	-	-	-	- -
married, hhead 30-39, hsize< or =3	100.0	-	25.0	25.0	25.0	-	25.0	- -
married, hhead 30-39, 3<hsize<6	100.0	33.3	27.8	11.1	22.2	-	-	- 5.6
married, hhead 30-39, hsize 6+	100.0	41.2	35.3	-	5.9	5.9	5.9	- 5.9
married, hhead 40-49, hsize< or =3	100.0	50.0	50.0	-	-	-	-	- -
married, hhead 40-49, 3<hsize<6	100.0	66.7	22.2	-	11.1	-	-	- -
married, hhead 40-49, hsize 6+	100.0	28.6	39.3	10.7	14.3	-	-	- 7.1
married, hhead 50+, hsize< or =3	100.0	-	80.0	-	20.0	-	-	- -
married, hhead 50+, 3<hsize<6	100.0	28.6	32.1	14.3	17.9	-	3.6	- 3.6
married, hhead 50+, hsize 6+	100.0	60.0	13.3	20.0	3.3	3.3	-	- -
Davao City								
single/separated, hsize=1	100.0	50.0	20.5	-	-	29.5	-	- -
single w/ hsize>1	100.0	22.5	-	-	-	22.5	54.9	- -
separated, hsize>1	100.0	59.7	13.4	-	13.4	-	-	- 13.4
married, hhead<30, hsize< or =3	100.0	56.4	25.4	-	-	-	18.2	- -
married, hhead<30, 3<hsize<6	100.0	35.5	23.7	-	-	28.9	-	- 11.9
married, hhead<30, hsize 6+	100.0	33.3	50.0	-	-	-	-	- 16.7
married, hhead 30-39, hsize< or =3	100.0	50.0	-	-	-	50.0	-	- -
married, hhead 30-39, 3<hsize<6	100.0	44.1	9.4	4.5	12.2	6.3	3.2	4.5 15.8
married, hhead 30-39, hsize 6+	100.0	30.8	7.3	-	10.5	3.7	19.4	19.4 8.9
married, hhead 40-49, hsize< or =3	100.0	50.0	33.3	-	-	-	-	16.7 -
married, hhead 40-49, 3<hsize<6	100.0	21.2	21.2	21.2	-	10.6	-	15.2 10.6
married, hhead 40-49, hsize 6+	100.0	40.0	14.2	7.8	17.6	6.4	7.5	3.8 2.6
married, hhead 50+, hsize< or =3	100.0	54.8	8.5	-	-	-	24.5	12.2 -
married, hhead 50+, 3<hsize<6	100.0	43.9	4.0	-	9.7	5.7	17.2	15.5 4.0
married, hhead 50+, hsize 6+	100.0	39.0	20.2	6.2	5.1	8.7	3.6	9.8 7.6

The Dynamics of Housing Demand in the Philippines

Appendix 9 (continued)

	1997								
	Total	Own use, faucet community water system	Shared, faucet, community water system	Own use, tubed/ pip ed well	Shared, tube d/ pip ed well	Dug- well	Spring, river stream, etc.	Rain	Peddler
Philippines									
single/separated, hhsz=1	100.0	27.6	17.9	10.8	21.8	12.8	4.8	0.8	3.5
single w/ hhsz>1	100.0	34.8	17.9	16.1	12.1	7.8	6.8	0.9	3.6
separated, hhsz>1	100.0	33.0	20.0	12.1	21.0	7.9	2.2	0.4	3.5
married, hhead<30, hsize< or =3	100.0	15.1	23.8	12.0	23.0	10.5	10.2	0.4	5.1
married, hhead<30, 3<hsize<6	100.0	14.1	22.8	10.0	25.9	13.2	9.7	0.2	4.1
married, hhead<30, hsize 6+	100.0	19.8	23.7	9.2	21.6	10.8	10.4	-	4.4
married, hhead 30-39, hsize< or =3	100.0	22.1	23.8	12.9	18.9	9.3	10.1	0.1	2.7
married, hhead 30-39, 3<hsize<6	100.0	21.1	22.6	13.6	21.0	10.4	7.4	0.4	3.5
married, hhead 30-39, hsize 6+	100.0	15.0	22.0	12.2	22.5	14.0	11.0	0.2	3.1
married, hhead 40-49, hsize< or =3	100.0	26.1	19.5	14.5	18.1	10.3	9.0	0.4	2.1
married, hhead 40-49, 3<hsize<6	100.0	28.0	18.6	17.2	16.8	10.0	6.4	0.3	2.7
married, hhead 40-49, hsize 6+	100.0	19.6	21.1	14.2	19.0	13.6	9.0	0.3	3.2
married, hhead 50+, hsize< or =3	100.0	18.7	19.9	16.5	17.2	14.0	10.4	0.8	2.4
married, hhead 50+, 3<hsize<6	100.0	24.0	18.8	19.8	16.2	11.1	7.4	0.4	2.3
married, hhead 50+, hsize 6+	100.0	24.3	16.7	21.0	15.8	11.2	8.3	0.2	2.4
Urban									
single/separated, hhsz=1	100.0	40.5	19.1	10.5	16.7	5.8	2.5	-	5.0
single w/ hhsz>1	100.0	48.6	17.8	14.0	9.9	3.1	1.4	-	5.1
separated, hhsz>1	100.0	45.8	19.3	10.1	14.0	4.8	0.8	0.1	5.1
married, hhead<30, hsize< or =3	100.0	28.3	29.3	8.0	17.8	4.7	1.4	0.2	10.1
married, hhead<30, 3<hsize<6	100.0	26.7	28.0	9.0	19.8	5.5	2.7	0.1	8.1
married, hhead<30, hsize 6+	100.0	32.1	28.8	8.7	15.8	5.8	2.7	-	6.0
married, hhead 30-39, hsize< or =3	100.0	36.2	28.9	9.6	13.8	4.7	2.4	0.2	4.2
married, hhead 30-39, 3<hsize<6	100.0	35.5	23.5	11.2	16.2	5.4	2.2	0.1	5.9
married, hhead 30-39, hsize 6+	100.0	29.4	25.5	9.6	18.6	7.6	2.8	0.1	6.4
married, hhead 40-49, hsize< or =3	100.0	42.5	20.3	11.4	13.5	5.2	3.4	0.3	3.4
married, hhead 40-49, 3<hsize<6	100.0	45.3	18.4	13.3	12.8	4.1	1.4	0.1	4.5
married, hhead 40-49, hsize 6+	100.0	34.8	22.0	12.4	15.6	6.9	2.5	0.1	5.8
married, hhead 50+, hsize< or =3	100.0	37.7	19.0	16.5	12.5	6.5	2.7	0.2	5.0
married, hhead 50+, 3<hsize<6	100.0	41.4	16.8	17.4	13.0	5.3	1.7	0.1	4.3
married, hhead 50+, hsize 6+	100.0	40.4	16.2	17.6	13.9	5.4	2.2	0.1	4.2
Rural									
single/separated, hhsz=1	100.0	10.7	16.4	11.2	28.5	21.9	7.8	1.8	1.6
single w/ hhsz>1	100.0	10.1	18.0	19.9	16.1	16.2	16.3	2.6	0.9
separated, hhsz>1	100.0	8.7	21.1	15.8	34.2	13.8	4.9	1.1	0.4
married, hhead<30, hsize< or =3	100.0	4.1	19.2	15.3	27.3	15.3	17.5	0.5	0.8
married, hhead<30, 3<hsize<6	100.0	4.2	18.7	10.8	30.6	19.2	15.2	0.3	0.9
married, hhead<30, hsize 6+	100.0	7.4	18.6	9.6	27.5	15.8	18.3	-	2.8
married, hhead 30-39, hsize< or =3	100.0	6.0	18.1	16.6	24.8	14.5	18.9	-	1.0
married, hhead 30-39, 3<hsize<6	100.0	6.7	21.7	16.1	25.8	15.4	12.5	0.7	1.1
married, hhead 30-39, hsize 6+	100.0	5.2	19.6	14.0	25.2	18.4	16.5	0.3	0.9
married, hhead 40-49, hsize< or =3	100.0	10.0	18.8	17.5	22.6	15.3	14.4	0.5	0.9
married, hhead 40-49, 3<hsize<6	100.0	8.6	18.8	21.5	21.2	16.6	12.0	0.6	0.7
married, hhead 40-49, hsize 6+	100.0	7.0	20.3	15.8	21.8	19.2	14.4	0.4	1.1
married, hhead 50+, hsize< or =3	100.0	6.8	20.5	16.5	20.2	18.7	15.3	1.2	0.7
married, hhead 50+, 3<hsize<6	100.0	8.6	20.6	22.0	19.1	16.1	12.5	0.6	0.6
married, hhead 50+, hsize 6+	100.0	8.5	17.2	24.3	17.7	16.9	14.3	0.4	0.7

Appendix 9 (continued)

	1997								
	Total	Own use, faucet community water system	Shared, faucet community water system	Own use, tubed/ piped well	Shared, tubed/ piped well	Dug-well	Spring, river stream, etc.	Rain	Peddler
NCR									
single/separated, hhsz=1	100.0	51.5	18.5	3.4	14.0	2.1	-	-	10.4
single w/hhsz>1	100.0	58.3	18.9	7.4	6.8	0.7	-	-	8.0
separated, hhsz>1	100.0	52.2	24.3	4.4	8.3	3.2	-	-	7.6
married, hhead<30, hsize< or =3	100.0	40.1	31.4	1.6	11.4	-	-	-	15.4
married, hhead<30, 3<hsize<6	100.0	36.0	30.9	4.3	11.7	2.1	-	-	14.9
married, hhead<30, hsize 6+	100.0	49.1	32.1	2.8	4.4	-	-	-	11.6
married, hhead 30-39, hsize< or =3	100.0	42.3	33.0	4.4	9.9	1.0	-	-	9.4
married, hhead 30-39, 3<hsize<6	100.0	44.6	27.0	5.9	9.9	1.5	-	-	11.1
married, hhead 30-39, hsize 6+	100.0	34.8	32.4	3.0	12.0	3.6	-	-	14.1
married, hhead 40-49, hsize< or =3	100.0	61.3	18.0	5.6	7.4	2.4	-	-	5.2
married, hhead 40-49, 3<hsize<6	100.0	55.9	20.4	5.4	7.6	1.8	-	-	8.8
married, hhead 40-49, hsize 6+	100.0	44.9	25.1	4.2	9.0	3.9	-	-	13.0
married, hhead 50+, hsize< or =3	100.0	54.3	22.0	6.6	5.5	3.1	-	-	8.6
married, hhead 50+, 3<hsize<6	100.0	55.7	16.9	8.9	9.0	0.5	-	-	9.0
married, hhead 50+, hsize 6+	100.0	57.4	16.6	8.6	6.9	1.5	-	-	9.0
Metro Cebu									
single/separated, hhsz=1	100.0	61.7	-	-	30.7	-	7.7	-	-
single w/hhsz>1	100.0	47.2	23.7	3.0	5.5	13.0	-	-	7.8
separated, hhsz>1	100.0	48.3	23.5	8.1	3.1	6.1	-	-	10.8
married, hhead<30, hsize< or =3	100.0	10.4	21.9	3.9	12.5	19.2	7.3	-	24.8
married, hhead<30, 3<hsize<6	100.0	28.4	21.2	6.8	17.0	8.7	-	-	17.8
married, hhead<30, hsize 6+	100.0	15.0	7.9	10.6	46.5	5.7	-	-	14.3
married, hhead 30-39, hsize< or =3	100.0	23.7	19.4	14.4	15.7	11.2	7.5	-	8.2
married, hhead 30-39, 3<hsize<6	100.0	33.5	17.3	8.6	12.1	9.5	1.6	-	17.4
married, hhead 30-39, hsize 6+	100.0	29.5	30.1	2.6	23.2	8.4	1.7	-	4.6
married, hhead 40-49, hsize< or =3	100.0	11.0	14.9	2.8	17.1	14.3	31.8	-	8.1
married, hhead 40-49, 3<hsize<6	100.0	27.1	22.5	11.7	13.6	10.1	4.3	-	10.7
married, hhead 40-49, hsize 6+	100.0	23.3	18.9	8.7	22.5	12.1	4.3	-	10.3
married, hhead 50+, hsize< or =3	100.0	16.7	12.5	23.8	8.2	12.2	16.8	-	9.7
married, hhead 50+, 3<hsize<6	100.0	30.8	19.3	12.6	14.6	13.3	3.9	-	5.5
married, hhead 50+, hsize 6+	100.0	23.7	24.7	15.4	15.5	10.5	1.6	-	8.5
Davao City									
single/separated, hhsz=1	100.0	84.6	-	15.4	-	-	-	-	-
single w/hhsz>1	100.0	46.4	11.4	-	16.0	-	10.3	10.3	5.7
separated, hhsz>1	100.0	55.9	10.6	-	16.5	6.4	-	10.6	-
married, hhead<30, hsize< or =3	100.0	-	54.7	-	17.0	-	-	-	28.3
married, hhead<30, 3<hsize<6	100.0	43.5	34.1	-	11.5	-	-	7.0	3.9
married, hhead<30, hsize 6+	100.0	100.0	-	-	-	-	-	-	-
married, hhead 30-39, hsize< or =3	100.0	55.9	44.1	-	-	-	-	-	-
married, hhead 30-39, 3<hsize<6	100.0	52.2	29.3	-	8.4	3.5	1.8	3.2	1.8
married, hhead 30-39, hsize 6+	100.0	38.8	30.1	-	28.0	-	-	-	3.1
married, hhead 40-49, hsize< or =3	100.0	48.6	19.4	-	-	17.4	-	-	14.6
married, hhead 40-49, 3<hsize<6	100.0	68.1	12.0	-	6.5	1.8	3.3	6.5	1.8
married, hhead 40-49, hsize 6+	100.0	48.9	17.0	5.2	17.6	2.9	-	2.6	5.8
married, hhead 50+, hsize< or =3	100.0	37.6	14.3	3.6	19.3	-	12.8	-	12.5
married, hhead 50+, 3<hsize<6	100.0	35.5	21.7	-	8.8	2.5	13.3	13.3	4.9
married, hhead 50+, hsize 6+	100.0	46.7	6.3	-	21.1	7.1	13.0	3.2	2.6

Appendix 10. Estimated Parameters^a of Housing Demand Functions

	Philippines		Urban		Rural		Metro Manila		Metro Cebu		Davao City ^d	
	Owners	Renters	Owners	Renters	Owners	Renters	Owners	Renters	Owners	Renters	Owners	Renters
Constant	-6.512 (0.078)	-5.732 (0.271)	-5.806 (0.087)	-5.601 (0.291)	-7.164 (0.156)	-4.373 (1.167)	-3.306 (0.201)	-4.350 (0.408)	-4.909 (0.476)	-3.402 (1.272)	-3.710 (0.628)	-1.120 (2.045)
Income	1.296 (0.008)	1.171 (0.024)	1.260 (0.008)	1.186 (0.025)	1.338 (0.014)	0.984 (0.108)	1.178 (0.017)	1.231 (0.035)	1.323 (0.043)	1.170 (0.119)	1.192 (0.058)	0.904 (0.188)
Size	-0.505 (0.011)	-0.346 (0.030)	-0.485 (0.013)	-0.342 (0.081)	-0.530 (0.019)	-0.414 (0.148)	-0.374 (0.027)	-0.436 (0.044)	-0.481 (0.070)	-0.539 (0.129)	-0.417 (0.101)	-0.258 (0.187)
Housing Price ^b	0.293 (0.011)	0.308 (0.032)	0.282 (0.011)	0.292 (0.033)	0.344 (0.025)	0.462 (0.123)						
Price Elasticity ^c	-0.267	-0.229	-0.296	-0.270	-0.141	0.154						
R ²	0.719	0.595	0.707	0.572	0.553	0.482	0.702	0.533	0.713	0.589	0.658	0.327
Adjusted R ²	0.718	0.594	0.707	0.571	0.553	0.471	0.702	0.532	0.712	0.577	0.655	0.299

^a All parameters significant at $\alpha = 0.01$.

^b Price data based on computed hedonic price by type of housing in each city.

^c Price elasticity is obtained by untangling the price of land from structure using the following relationship:

$$E_p = b/K_s - 1 \quad \text{where } b = \text{parameter for land}$$

K_s = share of structure housing: 0.60

Appendix 11. Percentage Distribution of Household Expenditure

Income Class	FOOD	ALBEV & TBCCO	FUEL	TRCOM	HOPER & PRCRE	CLOTH	EDUC	MEDIC	HOUSE	OTHERS
Philippines										
under 10,000	65.6	2.0	7.7	1.7	4.9	1.7	0.2	1.3	8.0	7.0
10,000-19,999	65.3	2.9	6.3	2.2	4.6	2.2	0.5	1.4	7.5	6.9
20,000-29,999	64.3	3.3	6.1	2.4	4.8	2.6	1.0	1.4	7.0	7.2
30,000-39,999	62.4	3.6	5.8	2.5	5.1	3.0	1.2	1.6	7.1	7.6
40,000-49,999	61.2	3.6	5.6	2.8	5.1	3.3	1.4	1.6	7.5	8.0
50,000-59,999	58.8	3.3	5.4	3.0	5.2	3.3	2.0	1.8	8.4	8.6
60,000-79,999	56.1	3.4	5.7	3.4	5.3	3.4	2.4	1.7	9.8	8.8
80,000-99,999	53.3	3.0	5.7	3.9	5.4	3.5	2.7	1.8	10.9	9.7
100,000-149,999	48.9	2.5	5.7	4.5	5.4	3.6	3.5	2.0	12.3	11.6
150,000-249,999	43.3	1.9	5.4	5.3	5.6	3.5	4.4	2.4	14.0	14.1
250,000-499,999	36.0	1.4	4.9	7.0	6.0	3.5	5.3	2.4	15.7	17.6
500,000 & over	21.9	0.7	4.4	10.0	6.2	2.6	4.8	2.7	25.3	21.4
Urban										
under 10,000	68.5	2.0	7.4	1.1	4.8	1.0	0.2	0.5	9.5	5.0
10,000-19,999	63.2	2.3	6.8	2.4	4.9	2.4	0.7	2.0	9.2	6.2
20,000-29,999	62.5	3.0	6.7	2.4	5.2	2.5	1.1	1.6	8.7	6.2
30,000-39,999	61.5	3.5	6.3	2.6	5.2	2.8	1.3	1.7	9.2	6.1
40,000-49,999	60.5	3.4	6.0	3.0	5.3	3.1	1.4	1.6	9.2	6.5
50,000-59,999	58.5	3.1	5.7	3.1	5.4	3.1	1.8	1.8	10.2	7.4
60,000-79,999	55.9	3.2	5.9	3.5	5.4	3.2	2.3	1.6	11.0	7.9
80,000-99,999	53.3	3.0	5.9	3.9	5.5	3.3	2.7	1.9	11.2	9.3
100,000-149,999	48.8	2.4	5.9	4.5	5.5	3.4	3.7	2.0	12.6	11.1
150,000-249,999	42.3	1.9	5.4	5.3	5.9	3.5	4.8	2.4	13.4	15.1
250,000-499,999	35.2	1.4	4.8	7.3	6.5	3.6	5.9	3.2	13.8	18.3
500,000 & over	25.9	0.9	4.1	9.6	6.8	3.2	6.4	3.9	15.7	23.4
Rural										
under 10,000	65.3	2.0	7.7	1.7	4.9	1.8	0.2	1.4	7.8	7.2
10,000-19,999	65.7	3.0	6.2	2.2	4.6	2.2	0.4	1.3	7.1	6.9
20,000-29,999	64.7	3.3	5.9	2.4	4.7	2.7	1.0	1.3	6.6	7.4
30,000-39,999	62.8	3.7	5.6	2.5	5.0	3.1	1.3	1.5	6.5	8.2
40,000-49,999	61.5	3.7	5.4	2.7	5.0	3.4	1.5	1.5	6.7	8.5
50,000-59,999	59.2	3.5	5.2	3.0	5.2	3.5	2.1	1.8	7.3	9.4
60,000-79,999	56.4	3.6	5.2	3.2	5.2	3.8	2.7	1.8	8.2	9.9
80,000-99,999	53.4	3.1	5.0	3.8	5.3	3.9	3.3	2.0	8.8	11.4
100,000-149,999	48.1	2.7	4.7	4.2	5.3	4.1	4.1	2.5	9.2	15.0
150,000-249,999	42.8	2.2	4.4	4.7	5.6	4.0	5.0	3.1	9.9	18.4
250,000-499,999	35.0	1.8	4.0	6.0	5.6	4.0	5.9	2.4	11.8	23.5
500,000 & over	26.5	1.7	3.1	9.1	5.6	3.6	6.6	3.6	12.0	28.2
NCR										
under 10,000	...	...	...	...	...	...	...	...	...	...
10,000-19,999	58.7	6.1	8.3	0.0	4.0	2.2	0.0	0.4	20.2	0.0
20,000-29,999	59.3	1.6	7.4	2.4	4.9	2.2	0.3	1.4	18.3	2.2
30,000-39,999	51.3	2.4	8.8	2.1	5.8	2.2	0.3	2.5	20.9	3.6
40,000-49,999	57.4	2.7	6.8	2.9	5.2	2.7	0.6	2.7	16.8	2.0
50,000-59,999	54.6	2.4	7.6	4.0	5.0	3.2	1.1	1.7	16.5	4.0
60,000-79,999	55.8	3.0	7.5	3.9	5.2	2.6	1.1	1.3	14.8	4.9
80,000-99,999	53.3	2.6	7.0	4.0	5.3	3.1	1.3	1.3	15.6	6.8
100,000-149,999	50.1	2.3	6.7	4.9	4.9	3.2	2.2	1.3	15.9	8.4

The Dynamics of Housing Demand in the Philippines

Appendix 11 (continued)

Income Class	FOOD	ALBEV & TBCCO	FUEL	TRCOM	HOPER & PRCRE	CLOTH	EDUC	MEDIC	HOUSE	OTHERS
150,000-249,999	45.1	1.7	6.0	5.9	5.1	3.1	3.2	2.0	17.9	9.9
250,000-499,999	37.2	1.3	5.4	7.2	5.6	3.3	4.6	1.7	19.2	14.8
500,000 & over	20.2	0.6	4.6	10.2	6.0	2.3	4.1	2.1	29.7	20.0
Metro Cebu										
under 10,000	...	...	...	...	...	...	...	...	...	...
10,000-19,999	65.8	1.6	3.6	4.5	4.3	1.2	0.4	2.9	11.9	3.8
20,000-29,999	62.5	2.2	5.5	4.5	5.1	2.2	2.3	3.0	11.5	1.2
30,000-39,999	61.8	2.0	5.1	2.8	3.9	1.3	2.1	1.4	16.7	2.8
40,000-49,999	63.5	3.0	5.8	3.6	4.7	2.2	0.8	0.7	12.4	3.4
50,000-59,999	61.2	3.1	5.0	2.9	6.1	2.3	1.9	0.9	13.7	2.9
60,000-79,999	58.9	2.7	6.1	3.6	5.3	2.7	1.8	0.8	12.4	5.9
80,000-99,999	57.7	2.8	5.7	4.0	6.0	2.3	1.0	0.7	12.2	7.5
100,000-149,999	52.5	2.1	5.6	4.5	5.0	2.6	2.1	2.2	15.3	8.1
150,000-249,999	48.3	2.1	5.7	4.7	5.4	2.6	2.4	1.3	13.9	13.5
250,000-499,999	38.9	1.1	4.8	6.3	7.4	3.1	4.1	2.0	18.3	13.9
500,000 & over	25.3	0.5	4.1	14.3	6.2	2.1	3.1	6.2	23.9	14.0
Metro Davao										
under 10,000	...	...	...	...	...	...	...	...	...	...
10,000-19,999	58.9	0.2	4.1	1.0	5.6	4.0	0.0	3.0	15.4	7.9
20,000-29,999	55.8	1.2	4.9	1.5	5.1	3.8	0.2	4.0	17.3	6.2
30,000-39,999	60.5	6.2	4.6	3.9	4.9	3.1	2.9	2.3	9.0	2.7
40,000-49,999	61.0	4.6	4.2	3.7	4.6	3.2	0.9	2.5	10.9	4.4
50,000-59,999	55.2	3.3	4.8	3.5	5.2	3.1	2.3	1.6	8.4	12.4
60,000-79,999	55.3	4.3	4.2	4.1	5.4	4.1	1.5	2.8	9.2	9.1
80,000-99,999	53.5	3.3	4.4	4.7	5.6	3.8	2.5	2.4	8.7	11.0
100,000-149,999	50.8	2.9	4.4	5.2	5.5	4.5	3.3	2.0	11.2	10.2
150,000-249,999	41.9	1.8	4.4	7.7	5.9	4.1	3.9	2.7	12.9	14.8
250,000-499,999	33.8	1.4	4.4	10.3	6.8	4.1	4.3	2.1	11.8	21.0
500,000 & over	25.4	0.9	3.3	12.8	5.4	3.0	3.8	4.4	11.9	29.1

ALBEV alcoholic beverages
 TBCCO tobacco
 FUEL fuel, light & water
 TRCOM transportation & communication services
 HOPER household operation
 PRCRE personal care & effects
 CLOTH clothing, footwear, etc.
 EDUC education
 MEDIC medical care
 HOUSE rental of occupied dwelling unit and repair

Source: Family Income and Expenditure Survey, National Statistics Office 1997.

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