

SURVEY OF LIFE IN MANILA: A REPORT ON HOUSING CONDITIONS

By

MERCEDES B. CONCEPCION *

INTRODUCTION

This report on housing conditions in the city of Manila has been based on the data collected during February and March 1955 in the course of a sample survey of households in Manila conducted by the students of the Statistical Center, U.P. Part of this report also covers the ability and willingness of informants.

The sampling was done in two stages. In the first stage, 60 sample precincts were randomly selected from all the electoral precincts of Manila City after suitable stratification. The households living in these selected precincts were then listed, and in the second stage, 290 households were selected for investigation.

The data was collected by the students enrolled in Statistics 254 (Statistical Operation III) under the direction of Mr. S. B. Sen, UN Senior Statistical Adviser. Each of the 290 sample households was visited by the investigators (numbering 16) and the schedules were filled in by interviewing the household heads or other members. The interviews lasted from 30 minutes to an hour for each household.

OBJECT

The sample survey of life in Manila was set up as a training project for the Center's first group of students. It served to furnish the students with actual experience in the field and familiarity with statistical operations. Current and reliable socio-economic data were also acquired in the course of the survey.

The sample survey of 290 households has been carried out with the object of collecting data on:

* Research Assistant, Statistical Center, Manila

SURVEY OF LIFE IN MANILA

- (1) demographic characteristics of the population of Manila;
- (2) nature of employment and unemployment;
- (3) consumption pattern of households;
- (4) nature of income distribution;
- (5) housing conditions.

SCOPE

Detailed information was collected from the households through the use of a comprehensive schedule suggested and drawn up by the students. The schedule was divided into the following:

(1) *Demographic Data* collected for each member of the household pertaining to relationship to the household head: sex; age; civil status; dialect spoken in the home; educational level, both formal and vocational; migration details; length of stay in Manila; and economic status.

(2) *Employment Data* for a month for every person who was economically active (i.e. working earner and earning dependent) during this period. The industrial status, the principal occupation and subsidiary occupation, if any, along with related industries were noted. Information regarding number of days worked in the month preceding the interview and number of hours worked in the preceding week was also collected.

(3) *Consumption Expenditures* for a month collected from all households. The schedule listed 32 items tracing the expenditure per household. For some food items like rice, meat, sugar, vegetable oil, lard, patis and salt, both quantity and value were noted. Value alone was listed for other items.

(4) *Income and Receipts* of the household for a month from such sources as occupation, both main and subsidiary; property; remittances and pensions; past savings; help; loans; and others not specified above.

DESIGN OF THE SURVEY

1. *Frame*: For the selection of sample households, it was found that no complete list of households for the city of Manila was available. However, a list of electoral precincts

into which Manila is subdivided was procured from the office of the Commission on Elections. There were 1501 such precincts in the four congressional districts of Manila. These were then divided into 15 strata of approximately equal size without disturbing the boundaries of the 4 congressional districts. A summary list of strata with the number of precincts included in them is given below.

Districts	Stratum No.	No. of Precincts
I	1	109
	2	108
	3	108
	4	108
II	5	89
	6	89
	7	89
III	8	101
	9	101
	10	101
	11	101
IV	12	100
	13	99
	14	99
	15	99

1501

In cases where precinct boundaries were not easily definable, a map of the city indicating the boundaries of each precinct by heavy or colored lines was also available from the Commission on Elections or the City Hall for reference purposes.

The sample units were selected in two stages. First, the precincts were selected after suitable stratification. The sample households were then selected at random from the lists of households of these precincts.

2. *Sample Selection:* From each stratum, a sample of four precincts was selected with replacement. There was thus a total of 60 first stage units. All the households living in these selected precincts were then listed by the students by going round these areas. For each household, the serial number; name of household head; house number and street; and type of premises were recorded. This up-to-date list served as a frame for the selection of the ultimate sampling units, the households.

SURVEY OF LIFE IN MANILA

The households were numbered serially within each sample precinct and samples were selected. The number selected from each precinct was so adjusted that the overall sampling fraction for the households was uniform for all strata. The total sample consisted of 290 households.

In the event that contact could not be established with the sample household, the missed households (20 in number) were replaced by extra households within the same precinct randomly selected at the outset.

FIELD OPERATIONS

The 16 students who worked as investigators were divided into two groups, A and B, each consisting of 8 persons. They were Misses Julia Calixto, Rosario Chew, Paz Culabutan, Celestina Gumapac, Norma Lardizabal, and Virginia Roxas, and Messrs. Domingo Alonzo, Ernesto Battad, Mateo de Dios, Cresencio Dimen, Benjamin Faylona, Lope Leonio, Modesto Libuit, Eugenio Lopez, Eugenio Nierras and Cesar Tranqued.

1. *Listing of Households*: The definition of the "household" (as distinct from a house or a structure) was as follows: A group of persons taking principal meals together and usually living together was considered a Household. Domestic servants and paying guests taking principal meals in the household were also included. The listing of households in sample precincts was done during December 1954 and January 1955.

2. *Field Work*: The actual investigation started on February 1955. Each investigator received about 18 schedules as his share. As the finished schedules were brought in, they were scrutinized and any omissions or mistakes were brought to the notice of the investigator.

Contacting of households was sometimes difficult since most of the investigators were employed during the daytime and thus had to work during their available free time. The interview took place mostly during the late afternoons or early evenings. It also was a convenient time to find the heads of households at home.

The informants were on the whole quite willing to give information regarding the household. Households which could not be contacted even by repeated calls were replaced by substitute households from the same precinct randomly selected at the beginning for such a contingency.

PROCESSING AND ANALYSIS OF DATA

In the processing of data schedules were again subjected to a close scrutiny and mistakes in coding or arithmetic were corrected. Cards were punched for the households and individuals and preliminary tables were compiled with the help of IBM machines located at the Central Bank through the Bank's courtesy. A part of the data was also tabulated in the servicing office of the IBM. The scrutiny of the machine tables and the subsequent hand tabulations are being done by a number of persons. The tables presented in this paper have been prepared by the author.

POPULATION OF MANILA

(An estimate of the present population of Manila City has been made from the survey figures. The estimating procedure and also the margin of accuracy have been indicated.

The estimating procedure used for equal probabilities and for sampling with replacement was as follows:

$$\text{Total households for each stratum} = \frac{P}{p} \sum N_i$$

where P = total no. of precincts in stratum

p = no. of sample precincts per stratum

N_i = total no. of households in sample precinct.

These estimates were totalled over all 15 strata. The estimated total no. of households in Manila was 158,614.50 with a standard deviation of ± 5769.13 . The sample survey revealed an average of 5.99 persons per household and this figure was used to estimate the total number of persons in Manila. Thus, the estimated total no. of persons in Manila was 950,100.85 \pm 43,557.09. The 95% confidence limits of the sample estimate give 882,369 — 1,017,833 persons. The 1948 Census showed Manila to have a population of 983,906 persons. No satisfactory estimates for population of Manila City for recent years are available except only the projections of

SURVEY OF LIFE IN MANILA

the 1948 Census figure. On the whole, it will be correct to say that the population in Manila remained roughly the same and that it is just under a million persons.

SURVEY RESULTS

The information on housing and informant's willingness and ability has been compiled in the set of Tables which are shown in this report. Much of the available information has been condensed in the following tables and it is proposed to deal only with the significant results of the survey. Other aspects of the survey are being dealt with by some of the students in their thesis work, results of which will be published later.

SUMMARY OF HOUSING RESULTS

1. *Type of Construction:* Information was collected regarding the nature of material used in constructing walls, floors, and roofs. The households were classified according

TABLE I:
PER CENT DISTRIBUTION OF SAMPLE HOUSEHOLDS IN MANILA
BY TYPE OF FLOORS, BY TYPE OF CONSTRUCTION OF WALLS
AND ROOFS

<i>Type of Construction</i>	<i>Type of floor</i>						<i>% of all House- holds</i>
	<i>Cement</i>	<i>Tiles</i>	<i>Wood</i>	<i>Bamboo</i>	<i>Earth</i>	<i>Others</i>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Walls:</i>							
% of all Types	9.66	2.77	80.34	3.79	0.34	3.10	100.00
1. Brick or Concrete	0.69	1.74	3.10	—	—	—	5.53
2. Wood	8.97	1.03	71.04	2.07	0.34	1.72	85.17
3. Galvanized Iron	—	—	1.03	—	—	0.69	1.72
4. Bamboo	—	—	0.34	—	—	—	0.34
5. Sawali	—	—	1.38	1.03	—	—	2.41
6. Barong-barong	—	—	2.42	0.34	—	—	2.76
7. Others	—	—	1.03	0.35	—	0.69	2.07
<i>Roofs:</i>							
% of all Types	9.31	2.77	80.69	3.79	0.34	3.10	100.00
1. Concrete	—	—	—	—	—	—	—
2. Tile	—	—	—	—	—	—	—
3. Galvanized Iron	8.97	2.77	77.93	3.10	0.34	3.10	96.21
4. Nipa	—	—	1.03	0.69	—	—	1.72
5. Barong-barong	—	—	1.04	—	—	—	1.04
6. Others	0.34	—	0.69	—	—	—	1.03

to type of material used for floors such as cement, tiles, wood, bamboo, earth and others, and also by type of wall material, whether brick or concrete, wood, galvanized iron, bamboo, sawali, scrap or other materials. At the same time the households classified by type of floors were also classified by material used for roofs as concrete, tile, galvanized iron, nipa, scrap and other materials.

The results in Table I show that 80% of houses have floors of wood, 10% have cement floors, 4% bamboo, 3% tiles, and the remaining 3% earth and other materials. Regarding the material used for walls, 85% used wood, only 5% had brick or concrete, 3% used scrap material and the rest galvanized iron, bamboo, sawali or other materials. Ninety-six per cent (96%) of roofing material used in the houses was galvanized iron, a bare 2% was nipa and the rest used scrap and other materials. It is noteworthy that of the 80% of houses with wooden floors, 71% had wooden walls. Of these same 80% of houses with wooden floors, 78% had galvanized iron roofs.

2. *Rooms*: Households in the four congressional districts were classified by the no. of rooms found in each. Rooms varied from one to eight in number.

TABLE II:
DISTRIBUTION OF SAMPLE HOUSEHOLDS BY NUMBER OF ROOMS IN FOUR CONGRESSIONAL DISTRICTS OF MANILA

<i>Number of Rooms</i>	<i>Number of Households</i>	<i>% of all Households</i>
(1)	(2)	(3)
T o t a l	290	100.00
One	100	34.48
Two	87	30.00
Three	60	20.69
Four	28	9.66
Five	10	3.45
Six	4	1.38
Seven	—	—
Eight	1	0.34

About a third (34%) of the houses have only one room; less than 1/3 (30%) have two rooms; about 1/5 (21%) have three rooms; 1/10 (10%) have four rooms and the remaining 1/20 (5%) have five or more rooms.

SURVEY OF LIFE IN MANILA

3. *Floor Space*: The percentage distribution of sample households of different income levels is shown in Table III as classified by total floor space in square meters.

TABLE III:

PER CENT DISTRIBUTION OF SAMPLE HOUSEHOLDS IN MANILA BY FLOOR SPACE GROUPS

<i>Total Floor Space</i> (Square meters)	<i>Number of</i> <i>Households</i>	<i>% of all</i> <i>Households</i>
(1)	(2)	(3)
T o t a l	290	100.00
1—10	21	7.24
11—20	74	25.52
21—40	84	28.97
41—60	49	16.90
61—100	44	15.17
Over 100	18	6.20

Seven percent (7%) of households had total floor space under 10 sq. meters; 26% between 11-20 sq. meters; 29% between 21-40 sq. meters; 17% between 41-60 sq. meters and 15% between 61-100 sq. meters. Only 6% reported floor space of more than 100 sq. meters.

4. *Facilities*: Sample households in Manila were classified by type of facilities found in each. These included toilet, water supply and light. Toilets were classified into 6 types, namely: sewer and flush, septic tank, antipolo, pail, pit and others. The distance of these toilets from the premises are also shown in Table IV. All toilets within or adjoining the house were listed as 0 distance. The same was done for water supply of the household. Lighting facilities included electricity, gas, kerosene and other types.

PHILIPPINE STATISTICIAN — DECEMBER, 1955

TABLE IV:

DISTRIBUTION OF SAMPLE HOUSEHOLDS OF MANILA BY DIFFERENT TYPES OF FACILITIES IN TOILETS, WATER SUPPLY AND LIGHTING

<i>Facilities</i>	<i>Number of Households</i>	<i>% of all Households</i>
(1)	(2)	(3)
Type of Toilet:		
All Types	290	100.00
1. Sewer and Flush	127	43.79
2. Septic Tank	76	26.21
3. Antipolo	33	11.38
4. Pail	35	12.07
5. Pit	3	1.03
6. Others	16	5.52
Distance of Toilet		
T o t a l	290	100.00
1. 0 (within the premises)	179	61.72
2. 1—25 meters	63	21.72
3. 26—75 meters	27	9.32
4. 76—150 meters	15	5.18
5. Over 150 meters	5	1.72
6. Unclassified	1	0.34
Distance of Water Source		
T o t a l	290	100.00
1. 0 (within the premises)	243	83.79
2. 1—25 meters	31	10.69
3. 26—75 meters	8	2.76
4. 76—150 meters	3	1.04
5. Over 150 meters	5	1.72
Lighting		
T o t a l	290	100.00
1. Electricity	267	92.07
2. Gas	11	3.79
3. Kerosene	10	3.45
4. Others	2	0.69

SURVEY OF LIFE IN MANILA

a. Toilets — Sixty-two per cent (62%) of households have toilets in the house or adjoining it; 22% within 25 m. distance; 9% within a distance of 26-75 m. and the rest from 76 to over 150 m. Forty-four per cent (44%) of all households use the sewer and flush type of toilet; 26% have septic tanks; 11% make use of the Antipolo system; 12% the pail, 1% use the pit, and 6% other types.

b. Water supply — Eighty-four (84%) of households have running water within the premises; 11% within a distance of 25 m. and the rest from 26 to over 150 meters.

c. Lighting — Of the total households, 92% use electricity; 4% use gas; 3% use kerosene and 1% use other types of lighting.

5. *Possession of the Land and Occupancy of Houses*: The percentage distribution of households with regard to both the possession of land and occupancy status is shown in Table V. These households were classified according to whether land was owned, leased, went with rented house, squatted or other types of possession; and at the same time whether the house was owned, rented, squatted or other types of occupancy.

TABLE V:
PER CENT DISTRIBUTION OF SAMPLE HOUSEHOLDS IN MANILA
BY TYPE OF POSSESSION OF LAND AND BY OCCUPANCY
STATUS

	<i>Type of Possession of the Land</i>					<i>% of all House- holds</i>
	<i>Owned</i>	<i>Leased</i>	<i>Land goes w/Rented House</i>	<i>Squatted</i>	<i>Others</i>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Type of Occupancy of Houses						
% of Total	8.62	22.41	43.79	21.03	4.15	100.00
1. Owned	8.28	17.59	—	15.17	1.03	42.07
2. Rented	—	4.48	43.45	4.14	1.72	53.79
3. Squatted	—	—	—	—	—	—
4. Others	0.34	0.34	0.34	1.72	1.40	4.14

Forty-four per cent (44%) of the households reported that the land went with their rented houses; 22% were leasing theirs; 21% squatted on the land; 9% were owners, and 4% reported other forms of possession.

Fifty-three per cent (53%) of the households were living in rented houses; 42% owned the house they lived in; and 4% reported other types of occupancy. It is significant that no squatters on houses were reported.

Eight per cent (8%) of the households owned both land and house; 18% owned the house but leased the land; 43% rented both house and land, while 15% of those who owned the house squatted on the land.

Certain Characteristics by Income Levels. Households belonging to different levels of income were classified by types of possession of land and house, and by such facilities as lighting and toilets. The households have been arranged into seven groups, e.g., six income levels from below P100 to over P1000 and on *Others* group where receipts to households come only from sources other than occupation.

The type of possession of land, occupancy status and facilities when classified by income levels show that 37% of households belong to the P101-P200 income level. About 20% fall below the P100 level; 14% come between P201-P300; another 14% between P301-P500, and 10% over P500.

In the lowest income, i.e., below P100, 11% of house were rented while 8% were owner-occupied. In this income level, 9% of households reported that land they occupied went with the rented house; 6% squatted on the land; and the remaining 5% leased or owned land or reported other types of possession. In the next income level of P101-P200, 20% of houses were on rental basis and 16% were owned. Of the households in this income level, 16% occupied land which went with the rented house, 11% squatted, 10% either leased land or reported owning the land or other types of possession. In the P201-P300 level of income, 7% of households were renting houses and 6% owned them. Seven percent (7%) of the households in this income level reported that land went with the rented house and 6% were lessors, owners, squatters or reported other types of possession. In the income level P301-P500, 9% of houses were rented and 6% were owned. Seven percent (7%) of the households in this level reported the land they occupied went with the house they rented; 4% were leasing theirs; and 3% were owners, squatters or reported other

TABLE VI:

PER CENT DISTRIBUTION OF SAMPLE HOUSEHOLDS BY TYPES OF POSSESSION OF LAND AND HOUSE BY TYPES OF FACILITIES AND BY MONTHLY INCOME LEVELS

	Monthly Income							% of all Households
	Up to P100	P101-P200	P201-P300	P301-P500	P501-P1000	Over P1000	Others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Possession of Land								
% of Total	20.34	37.24	13.79	14.14	8.97	1.04	4.48	100.00
1. Owned	1.03	1.03	2.41	1.72	2.42	0.35	—	8.96
2. Leased	3.10	8.28	2.76	4.14	2.76	—	1.03	22.07
3. Land goes with rented house	8.62	15.86	7.24	6.55	2.76	0.69	2.41	44.13
4. Squatted	6.21	11.38	1.03	1.38	—	—	0.69	20.69
5. Others	1.38	0.69	0.35	0.35	1.03	—	0.34	4.15
Occupancy of Houses								
% of Total	20.34	37.24	13.79	14.14	8.97	1.04	4.48	100.00
1. Owned	8.27	15.52	5.86	5.52	5.17	0.35	1.39	42.07
2. Rented	10.69	20.34	7.24	8.62	3.80	0.69	2.41	53.79
3. Squatted	—	—	—	—	—	—	—	—
4. Others	1.38	1.38	0.69	—	—	—	0.69	4.14
Type of Lighting								
% of Total	20.34	37.24	13.79	14.14	8.97	1.04	4.48	100.00
1. Electricity	16.55	33.79	13.79	14.14	8.97	1.04	3.79	92.07
2. Gas	2.76	0.69	—	—	—	—	0.34	3.79
3. Kerosene	1.03	2.07	—	—	—	—	0.35	3.45
4. Others	—	0.69	—	—	—	—	—	0.69
Type of Toilet								
% of Total	20.34	37.24	13.79	14.14	8.97	1.04	4.48	100.00
1. Sewer and Flush	4.82	12.07	7.93	10.69	5.17	1.04	2.07	43.79
2. Septic Tank	4.83	10.34	4.48	3.11	2.76	—	0.69	26.21
3. Antipolo	2.76	6.90	0.69	0.34	0.69	—	—	11.38
4. Pail	5.17	4.83	0.69	—	0.35	—	1.03	12.07
5. Pit	0.69	0.34	—	—	—	—	—	1.03
6. Others	2.07	2.76	—	—	—	—	0.69	5.52

forms of possession. For households with incomes over ₱500, 6% owned the houses they occupied and 5% rented them. Of these households, 4% reported occupying land which went together with the rented house; 3% owned their land; and 4% leased theirs or reported other types of possession. Of those households whose receipts came only from sources other than occupation, 2% rented the houses they occupied and the remaining 2% either owned the house or reported other types of occupancy. 2% of households in this group were owners or squatters on land while another 2% reported that land went with the rented house they occupied.

The majority of households, regardless of income level, used electricity for lighting, Seventeen percent (17%) of households with incomes below ₱100 and 34% of those within the ₱101-₱200 level reported using electricity. About 4% in both groups used either gas or kerosene. The households whose reported incomes ranged from ₱200 to over ₱1000 used nothing but electricity for lighting purposes.

The sewer and flush type of toilet was used by the majority of households in all income levels. In the income below ₱100, 5% of houses used the pail, 5% the sewer and flush type, another 5% the septic tank, and the remaining 5% used the pit or other types. Of households in the income level ₱101-₱200, 12% used the sewer and flush toilet, 10% the septic tank, 7% the Antipolo system, 5% the pail, and the rest used the pit and other types. For households belonging to other income levels, the sewer and flush type of toilet was preferred above other types, with the septic coming second in use. No households were reported using the pit or other types of toilet aside from the Antipolo system and the pail.

Informants' Willingness and Ability: As a point of interest, the ability and willingness of informants, based on the investigators' judgment, were listed during the survey. The different informants interviewed as shown in Table VII were heads of households, wives, grown-up sons and daughters and other relatives. The households wherein these informants resided were classified into 4 degrees of willingness, ranging from completely willing to almost unwilling; and also into 4 degrees of ability from very able to poor.

TABLE VII:

PER CENT DISTRIBUTION OF SAMPLE HOUSEHOLDS IN MANILA CLASSIFIED BY TYPE OF INFORMANT AND BY DEGREES OF WILLINGNESS AND ABILITY

	<i>Type of Informant</i>							<i>% of all Households</i>
	<i>Head</i>	<i>Wife</i>	<i>Grown-up Daughter</i>	<i>Grown-up Son</i>	<i>Other Relatives</i>	<i>Non-Relatives</i>	<i>Unclassified</i>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Degree of Willingness</i>								
<i>% of Total</i>	<u>36.90</u>	<u>49.65</u>	<u>4.83</u>	<u>1.38</u>	<u>5.86</u>	—	<u>1.38</u>	<u>100.00</u>
1. Completely willing	21.38	23.79	1.38	0.35	1.38	—	—	48.28
2. Willing	13.11	24.48	3.10	1.03	3.45	—	—	45.17
3. Somewhat hesitant	1.38	1.03	0.35	—	1.03	—	—	3.79
4. Almost unwilling	1.03	0.35	—	—	—	—	—	1.38
5. Unclassified	—	—	—	—	—	—	1.38	1.38
<i>Degree of Ability</i>								
<i>% of Total</i>	<u>36.90</u>	<u>49.65</u>	<u>4.83</u>	<u>1.38</u>	<u>5.86</u>	—	<u>1.38</u>	<u>100.00</u>
1. Very able	13.45	14.83	0.34	—	1.03	—	—	29.65
2. Able	21.03	27.59	3.11	1.03	3.79	—	—	56.55
3. Somewhat hasty	2.07	5.51	0.69	0.35	0.69	—	—	9.31
4. Poor	0.35	1.72	0.69	—	0.35	—	—	3.11
5. Unclassified	—	—	—	—	—	—	1.38	1.38

Nearly one-half (48%) of those interviewed were completely willing to furnish information; 45% were just willing; 4% were somewhat hesitant, and the rest (3%) were almost unwilling or unclassified. With regard to ability, 57% of the informants were able; 30% very able; 9% somewhat hasty, and the rest (4%) poor or unclassified.

Of those interviewed, 50% were wives of the household heads; 37% were heads of households; 5% were grown-up daughters; 1% grown-up sons, and the remaining 6% were relatives. One per cent (1%) were unclassified. It is interesting to note that no informants, aside from the household head and relatives, were interviewed.

Among the household heads interviewed, 21% were completely willing and 13% willing. Twenty-four per cent (24%) of the wives were completely willing and 27% were willing. In the degree of ability, 13% of household heads were very able and 21% were able. Among wives, 15% were very able and 28% were able.

CONCLUSION

From the information on housing collected in the survey, it is notable that most of the houses in Manila are of a standard pattern of construction, i.e., walls and floor mainly of wood with roofs of galvanized iron. The survey also revealed the existence still of squatters on land although no squatters on houses were reported. The majority of houses consisted of one to three rooms. It is gratifying to note the high percentage of households with water supply and toilets within the premises and the great number of electricity consumers as compared to other types of lighting used. A classification of occupancy status and possession of land by income levels has revealed that the majority of households in Manila rent their houses regardless of income level.

The majority of people approached were willing to be interviewed and a high number were very able in the way they furnished information. The investigators interviewed a greater number of wives than household heads in spite of the fact that interviews were carried on after office hours.

