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~~POVERTY MEASUREMENT AND NUTRITION~~

by

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POVERTY MEASUREMENT AND NUTRITION

Poverty is a phenomena that pervades all economies irrespective of level of development. The poor segments of these societies often have consumption levels constrained below subsistence. In spite of the pervasiveness of this problem there is still no established and accepted method of measuring poverty.

A poverty measurement is a quantifiable characteristic that will identify the poor families. Rosenthal defines it as "a level of income that divides the poor from the nonpoor".¹ Due to difficulties in quantifying other variables, income is considered the main factor that constrains the family's consumption even though labor resources and other forms of wealth also exercise a constraint on the family's consumption in the long-run. This study is concerned with the development of a methodology that will consider income as the only constraint and the actual estimation of incidence of poverty using the method proposed.

Earlier poverty studies estimated a level of income that was then used as a poverty line for the whole population. This level is estimated using a reference family with specific demographic characteristics most common to the families in a given population.

¹Rosenthal, Gerard. "Identifying the Poor: Economic Measures of Poverty." On Understanding Poverty, Moynihan, David (Ed.) Basic Books, Inc., Publishers, New York, c. 1969, p. 330.

Recent studies in equity in income distribution show that equity cannot be taken to mean absolute income equality since a portion of income inequality can be considered socially acceptable. These can be due to difference in family sizes, number of families in an income group, sex of household heads, age structure of the working population, differences in rank, educational attainment of head.²

Similarly in the case of poverty estimation we can conclude that a blanket approach using a single poverty line does not consider variations in demographic characteristics that can bring about socially acceptable variations in poverty lines. Poverty measurements which consider these factors can also facilitate the formulation of policies designed to eliminate poverty.

Poverty measurements based on consumption requirements can be divided into two components: required food and non-food expenditures. Food expenditures are objectively more necessary and precede the latter in the preference ordering of households. APC for food has been estimated to be 0.6. Taking this as the households consumption behavior, total subsistence budget will be estimated from the calculated food budget.

² Mangahas, Mahar. "Towards a Working Definition of Income Equity," Discussion Paper 75-18, IEDR, School of Economics, University of the Philippines.

The tie up between poverty measurement and nutrition is in the estimation of the food budget which considers nutrition requirements. Several poverty studies have based the food budget on food requirements set up by FNRI (Formerly FNRC). Tan and Tecson used linear programming to determine the minimum cost of the required food intake of a reference family of 6 with specific age and sex distribution.³ Estimated food budget was used to calculate the poverty line. Incidence of poverty among different population groups was estimated using this poverty line.⁴

FNRI (Food and Nutrition Research Institute) has also come up with a food budget using the same reference family by estimating the "least cost" menu using as their criteria not only nutrition requirements but also variety in food. The results of these studies will be compared with the estimates of this study.

(C) Daily Family Caloric Requirement

Nutritional status is a condition applied to an individual and consequently nutritional requirements are also expressed in terms of individual needs. Since poverty is a family phenomena

³Tan, E. and Tecson, G., "Levels and Determinants of Nutrition," Discussion Paper 74-6. IEDR, School of Economics, University of the Philippines.

⁴Tan, E. "Income Distribution in the Philippines," Philippine Economic Problem in Perspective, José Encarnación, Jr. and others, IEDR, School of Economics, University of the Philippines, c. 1976.

we have to estimate caloric requirements of the family per day and make use of this to estimate the daily food budget.

Families differ not only in terms of demographic characteristics of its members and their physical activities but also in family size. This will therefore allow the estimation of a requirements distribution using population groupings - according to family size and according to occupation.

Given the family size, a reference family can be defined by looking at the average sex, age distribution, etc. of families within the population. The caloric requirements of this family is the average caloric requirement of families of the same size. Applying the conceptual approach discussed in the Appendix to this problem we can say that we can similarly set up a frequency distribution of families among the different groupings of daily family caloric requirements. Then with an estimated standard deviation of daily family caloric requirements it is possible to define the probability of a given family to be undernourished, if the actual daily caloric intake is known. Or given the number of families who consume a certain level of daily caloric intake we can estimate how many of these families are probably undernourished.

Estimation of Family Food Budget

The main difficulty in evaluating daily caloric requirements comes from the fact that calories consumed come from different

of kinds of foods. Making use of weighted averages, the peso price per 100 calories of food intake was estimated. First the weighted average price of different food groups was obtained and then the weighted caloric value per gram intake of each food group were computed to estimate the price of 100 calories of food intake for each food group. As there are 11 food groups, an average for all food groups was estimated by using as weights the distribution of total caloric consumption among the different food groups, which was obtained from the latest FNRI survey of Metro Manila.

Implicit in this method is the assumption that food is consumed solely for their caloric value. All nutrients: protein, carbohydrates, fats, etc. are used up to provide energy. This assumption tends to overprice calories per gram consumption of food since the body can also obtain minerals and vitamins from food intake. However, the underconsumption of calories will prevent the body from utilizing the nutrients (e.g. proteins cannot be used for tissue replacement when the body does not satisfy caloric requirements). We can say then that at low levels of consumption, food intake is solely used to satisfy caloric requirements. Therefore expenditures on food at these levels are undertaken solely for the acquisition of calories required by the family.

After the food budget has been estimated the total budget is estimated assuming that APC for food expenditures is .6. This is

an assumption used in many consumption studies. A study of families earning minimum wages in Metro Manila shows that APC for food of these families can be as high as ₱67.00. For purposes of comparison with other studies this assumption will be used though it under-estimates the total budget for food.

Families can also be grouped by occupation of head so as to examine the variations of caloric requirements due to physical activity.

Empirical Testing

To measure poverty using the proposed methodology, data on basic family characteristics will have to be collected. To estimate the food budget for various family sizes it will be necessary to estimate the caloric requirements per family. Data on age, sex distribution and on physical activity of family members of a sample of families was collected.

FNRI Food Survey

FNRI has been the only institution that has collected food intake data on the national level. Their main interest has naturally been the nutritional status of the average Filipino, and this has affected their data collection. Their data consists of caloric intakes per capita for every family and nutrients

sufficiency is measured in terms of dietary nutrient intake relative to required allowance. Estimates of caloric requirements per family per day cannot be obtained from the FNRI food survey data. However, data on caloric intakes for various family sizes will shed some light on the nutritional status of families of given sizes.

Rizal Survey

In order to arrive at a poverty measurement and make use of it to measure the extent of poverty a survey was conducted for a sample of families. Five towns from the Province of Rizal were chosen: Teresa, Tanay, Morong, Binangonan, and Cardona. A sample of 365 families were chosen through a stratified random sampling.

Data collected consisted of the following: income, expenditure, wealth, food consumption and demographic characteristic of family size, sex and age distribution. In addition a 24 hour recall of time spent on all physical activities of all the members of the family was collected.

Caloric requirements for adults was estimated using the method established earlier. In the case of children FNRI caloric allowances which includes growth requirements were used. But since most children were underweight this caloric allowance was converted into calories/kilogram of body weight. These requirements do not assume

to correct the existing undernourishment among children but it does prevent further deterioration of their nutritional status.

Comparison of Average Requirements with FNRI Allowances

This data is presented in Table 1. In the case of adults

the data shows that the sample has relatively lower average weights than the FNRI reference individuals. However, the estimated calories/kilogram of body weight for adults in the sample is higher than the FNRI allowances because the sample consists of families whose heads are farmers, fishermen, laborers and industrial workers. Since a majority of the sample women were housewives, which is similarly the assumed activity of the FNRI reference women, only a slight variation

in the caloric requirements per day of women adults can be observed.

Individual children of the sample survey required less calories

because they are underweight.

Estimated Daily Family Caloric Requirements

Four family sizes were chosen - 4, 5, 6, and 7. Sample families were classified according to family size and total family requirements were estimated by adding the caloric requirements of the individual members of the family. The appendix shows the method for computing individual caloric requirements. A frequency distribution of families according to caloric requirements was made for each family size.

This is shown in Table 2. The distribution of families according to caloric requirements can be definitely improved by increasing the sample families.

Table 3 shows the estimated parameters for each family size. The data shows that increases in mean daily family caloric requirements is lower as we go from size 5 to 6 than from 4 to 5. This gives us an idea of the effect of family size on food requirements. Analysis of data shows that this effect is affected by the interaction of age distribution and family size. In Table 4 is a

comparison of per capita caloric intake for each family size and shows the distribution of members between two age groups. Per capita caloric requirements for each family size decreases from size 4 to 6 but increases suddenly from size 6 to 7. When age distribution is examined it shows that the number of adults increases more gradually than the members below 16. Families who have more

adolescents have larger caloric requirements than those whose children belong to the infant groups.

Food Budget Estimates

Table 5 shows the weights that were used to obtain the peso price per 100 calories of food consumed daily. This data was based on a price survey of the Province of Rizal at 1976 prices. Using the estimated price, the food budget was estimated and this data

is presented in Table 6. For purposes of comparison, the estimates made by Tan-Tecson for family size 6 and the FNRI estimates for the same family size are also presented. The estimates made in this study look quite reasonable. Taking into consideration the inflation, this poverty line is even lower compared with the Tan-Tecson estimates which are linear programming results. The food budget is therefore the estimated amount of money that will assure the possibility that all families of a given family size will be able to buy its caloric requirements at the same time that it maximizes their utility. This method differs from the linear programming in that the latter calculates the food budget on the basis of lowest cost of caloric requirements regardless of existing taste. The former takes as given the existing food habits of the population. The latter can give such impractical solutions as a menu that consists entirely of sugar and oil.

Caloric Requirements by Occupation

Table 7 presents the different occupations and the respective caloric requirements of the heads of the family and per capita requirements of the family. Larger caloric requirements are needed for more manual occupations. On the average most manual occupations require about 3,000 calories - about 500 calories more than the requirements of the reference males of FNRI. Certain occupations also raise the per capita caloric requirements for the rest of the

family. In many cases the members of the family also participated in the activities of the household head. This is the case for farm and fishing households.

Families were grouped into three, according to occupation of household head, while controlling family size at 4-7 to keep lower the dispersion of the distribution of families among classes of caloric requirements. Table 8 shows the frequency distribution of daily family caloric requirements of three groups of families classified by occupation of head. These distributions are much better behaved than the family size groupings. Families of carpenters and laborers have smaller sizes and consequently they have lower daily caloric requirements.

Table 9 shows the estimated parameters for caloric requirements for these family groups. Table 10 also shows the calculation of the food budget and the limits of the poverty lines for these occupational groupings. Taking the maximum food budget as the amount that will allow all families the possibility of obtaining their food requirements, some conclusions can be seen. Given the existing minimum wage structure it can be seen that their income does not sufficiently cover the required food expenses. This estimate can be considered underestimates since family size is controlled at size 4-7. If larger family sizes will be included these parameters will definitely be higher.

Incidence of Poverty

A calculation of probabilities of poverty was made by making use of the mean total Budget and the standard deviation for every family size. This is presented in Table 11. These probabilities can be of use in determining how many families of a given income class and family size are poor. Given a family of a certain size and family income this table shows its probability of being poor. These probabilities were then applied to the cross tabulation of families by family size and income classes of the 1971 BCS survey. The absolute number of poor families are presented in Table 12. This estimate has limitations since the poverty measurements are valued at 1976 prices. It can be corrected by using 1971 food prices to estimate price per calorie. These poverty measurements can also be used for the results of 1975 NCSO Household Survey to get a more accurate estimate of poverty.

Policy implications

In spite of the lack of thoroughness in empirical testing it has been shown that this model presents a practical method of computing poverty measurements. Caloric requirements can be calculated with more accurateness through the FNRI Food Surveys and the method of calculating price per calorie of food taken can also be improved and used to update poverty measurements.

~~Isolation~~ Poverty measurements can be useful for two groups of policy makers. If policy makers seriously want to pursue the target of providing the members of society with its minimum needs, these measurements can ease the identification of the poor families. This identification is important in working out the policy that will be pursued. The more clearly identified are the specific groups the less the chances of coming up with policies that have a more expensive blanket approach. A policy of providing cheap rice through government price control program does not give the assurance that it will be enjoyed only by the families who use it most.

Assessment of the nutrition problem by way of investigating the causes is very necessary for the formulation and choice of nutrition programs. Most approaches to nutrition planning have often been limited to agricultural planning to assure sufficiency of food production. This approach attacks the problem from the supply side only neglecting the fact that poor income distribution can also bring about problems from the demand side. Awareness of the demand problem have made nutritionists formulate different kinds of interventions. The lack of proper assessment of the causal relationships involved in the nutrition problem has brought about an ineffective nutrition planning. Cost benefit analysis cannot be used in choosing nutrition programs unless these factors are identified and in some cases quantified. The use of poverty

measurements that are based on nutrition requirements is an initial point in quantifying causal relationships in the nutrition system.

1. The first step in the process of identifying a problem is to define the problem. This involves identifying the symptoms of the problem and determining the scope of the problem. Once the problem has been defined, the next step is to identify the causes of the problem. This involves identifying the factors that are contributing to the problem and determining the underlying causes. Once the causes have been identified, the next step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and determining the resources that will be needed to implement the plan. Finally, the last step in the process is to implement the plan and monitor the results. This involves putting the plan into action and tracking the progress of the solution. Once the problem has been solved, the final step is to evaluate the results and determine if the solution was effective. This involves comparing the results of the solution to the original problem and determining if the problem has been resolved.

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1. The first of these is the fact that the Commission has not yet received any information from the Government of the United Kingdom as to whether or not it has any plans to introduce legislation to prohibit the export of arms and ammunition to the Republic of Ireland.

APPENDIX

Nutrition Requirements

Nutritional status can be measured in many ways. Nutrition

surveys undertaken by FNRI generally consist of three phases

dietary, biochemical and clinical. In this paper the only measure-

ment of nutritional status that will be considered is the dietary survey, that is, the collection of data on food intake. Dietary surveys usually consist of the evaluation of intakes of the most

important nutrients for the body, namely, carbohydrates, proteins,

fats, minerals and vitamins, relative to body requirements. Although

each nutrient fulfills a specific function in the maintenance of the

body's health and of this we still don't have exact knowledge, the

intake of food can be more simply understood to achieve the goal of

providing the needed energy measured in terms of calories. Energy

intake has to be equal to energy expenditures in order for the

individual to maintain his nutritional status. In the case of such

nutritional disorders as undernutrition (kwashiorkor), this is

usually clinically evidenced among children by being underweight.

Elimination of such frank signs of nutritional disorders can be attained by the intake of calories that is greater than caloric expenditure. The intake of proportionate quantities of all nutrients

that will give a balanced diet is not a sufficient condition for the attainment of ideal nutritional status. For the proper nutrition of any individual it is necessary to first satisfy the caloric require-

ments, consequently the expression of an individual's nutrition requirements in terms of caloric requirements is quite reasonable.

Furthermore, the conversion of food intake into caloric intakes will facilitate a homogeneous treatment of this variable.

There are many factors that determine the individual's caloric requirements: (1) body size and composition (2) physical activity (3) age (4) climate and other ecological factors. Therefore, we can state the following:

$$C_k = f(w_k, h_k, s_k, a_k, pa_k)$$

where for any individual k :

C_k = caloric requirement

w = weight

h = height

s = sex

a = age

pa = physical activity

Height is correlated with weight. Heavier individuals require more calories. Men require more calories than women for many physical activities. Infants and adolescents age groups require various levels of energy to provide for maintenance and growth. Individuals of similar sex, body size and age may have differences in energy requirements due to physical activity. In the case of adults, caloric requirements can be broken down into two components:

caloric needs for basal metabolism during sleep and caloric needs for all physical activities during the waking hours. BMR is estimated for both men and women to be 1 calorie/hour/kilogram of body weight. Caloric needs for physical activity can be estimated by calculating time duration of different activities for all waking hours. Basic research in the Philippines and in other countries have estimated calories/kilogram body weight/minute expenditure of different kinds of activities for male and for female. We can, therefore, restate caloric requirements for adults as follows:

$$C_k = BMR + C_{pa}$$

Where for any individual k:

$$BMR = w \cdot H_s$$

$$C_{pa} = \sum (w \cdot m_i \cdot A_i)$$

C = daily caloric requirement for an adult individual

BMR = Basal Metabolism Rate for sleeping hours per day

w = weight in kilograms

H_s = sleeping hours per day

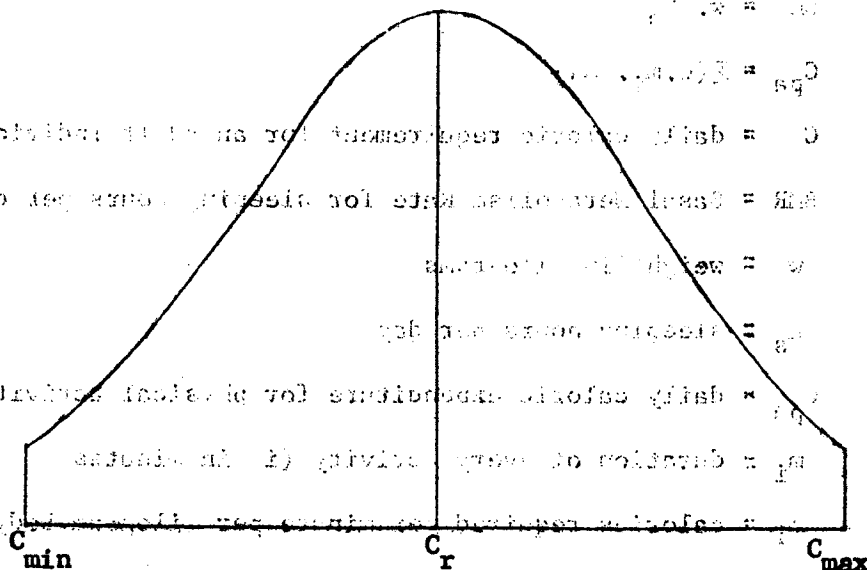
C_{pa} = daily caloric expenditure for physical activities

m_i = duration of every activity (i) in minutes

A_i = calories required per minute per kilogram body weight for every activity (i). A_i can take different values for male and female.

Caloric requirements cannot be defined as one requirement for all individuals in a given population. FNRI defines it for reference

individuals for different groups by age and body weights. Reference individuals have specific age, sex and weight characteristics. We can, therefore, say that there will be a frequency distribution of individuals among different classes of caloric requirements since the physical characteristics of individuals differ. In a given population, if we can define the reference individual as one who has the average physical characteristics of the population then the caloric requirements of this individual will also be the average caloric requirement of individuals in that population. This will allow us to define caloric requirements for a population as a frequency distribution such as this:



where :

C_T = is the caloric requirement of the individual with average physical characteristics and activity.

Glottic stop consonants occur in all languages, but are not found in all languages. The glottal stop is found in all languages, but is not found in all languages. The glottal stop is found in all languages, but is not found in all languages.

$C_{\min}$ = minimum individual caloric requirement

$C_{\max}$ = maximum individual caloric requirement

$C_{\max}$ and $C_{\min}$ can be estimated by computing the standard

deviation of required caloric intakes of individuals in a given population. Where,

$$C_{\min} = C_r - 2 \quad (6)$$

$$C_{\max} = C_r + 2 \quad (7)$$

Given any individual with a specific level of actual caloric intake we can estimate the probability that this intake will meet the requirement of the individual using the following criteria:

$$P_k(U) = 0, \text{ when } C_{ak} < C_{\min}$$

$$P_k(U) = 0.5, \text{ for all } C_{ak} = C_r$$

$$P_k(U) = 1, \text{ for all } C_{ak} \geq C_{\max}$$

where

$P_k(U)$ = is the probability for individual k to be under-nourished.

The expression of nutritional requirements in terms of a frequency distribution of a population group among various levels

of caloric requirements has been a big improvement. With this

it is sufficient to know average caloric requirements and their standard deviation of caloric requirements of individuals in a group to be able to say what are the chances of undernutrition for a given level of actual caloric intake.

Table 1

COMPARISON OF ENERGY REQUIREMENTS WITH FNRI REQUIREMENTS

Sex and Age	Reference Individuals-FNRC			Averages - Rizal Survey		
	Body Weight	Energy Cal.	Cal/kg.	Body Weight	Energy Cal.	Cal./
Male 25 years	56	2,500	44.6	52.8	2,376	45.0
30-49	56	2,400	42.8	55.7	2,766	49.7
50-69	56	2,200	39.2	53.4	2,269.5	42.5
Female 25 years	49	1,900	38.7	45.6	1,646.1	36.1
30-49	49	1,800	36.7	48.2	1,826.8	37.9
50-69	49	1,600	32.6	46.2	1,644.7	35.6
Infants 6-12 mos.	9	950	105.5	7.6	801.8	105.5
Children 1-3 years	12	1,300	108.3	10.5	1,137.2	108.3
4-6	17	1,600	94.1	14.3	1,345.8	94.1
7-9	25	1,900	76.0	18.7	1,421.2	76.0
10-12	33	2,300	70	28.2	1,974.0	70
Boys 13-15	44	2,800	64.0	40.0	2,560.0	64.0
16-19	55	2,800	50.0	48.0	2,400.0	50.0
Girls 13-15	44	2,300	53	32	1,696.0	53
16-19	48	2,100	43.7	42	1,835.4	43.7

Source: FNRI Publication No. 76, Revised 1970, based on Raw data, Rizal Survey

Table 2

Distribution of Families by Family Size

and by Total Caloric Requirements

Caloric Classes	Family Sizes					
	All sizes	4	5	6	7	8
4,000 -	2	1	1			
5,000 -	4	4	0			
6,000 -	9	7	1	1		
7,000 -	11	5	5	1		
8,000 -	13	5	6	2		
9,000 -	8	1	4	2	1	
10,000 -	20	2	8	8	2	
11,000 -	6	1	1	1	3	
12,000 -	3		1	1	1	
13,000 -	3		1		2	
14,000 -	4				4	
15,000 -						
16,000 -	1				1	
17,000 -	1				1	
18,000 -	1				1	
Total Families	91	26	28	21	16	

Source: Raw data

Table 3

ESTIMATED DAILY CALORIC REQUIREMENTS BY FAMILY SIZE

Caloric Requirements All Family Sizes	By Family Size				
	4	5	6	7	
Mean Daily Requirements	9,045.15	7,554.6	9,132.4	10,085.8	13,361.06
Standard Deviation	2,672.22	1,786.1	1,826.1	1,352.8	2,474.56
Maximum Cal. Req.	14,989.6	11,127.3	12,784.6	12,791.42	18,310.2
Minimum Cal. Req.	4,300	3,981.9	5,480.3	7,380.16	8,411.93

Source: Raw data

Table 4

PER CAPITA CAL. REQ. AND AGE DISTRIBUTION
BY FAMILY SIZE

Family Size	Per Capita Caloric Requirements	Members Below 16	Members 16 and above
4	1,886.06	1.54	2.46
5	1,813.74	2.11	2.86
6	1,716.21	3.19	2.81
7	1,908.72	4.06	2.94

Source: Raw data

Table 5

Computation of Price per 100 Calories
at 1976 Price

Food Groups	P Price Per Gram	Calories Per Gram	P Price Per 100 Cal.	Share in Total Cal.	Share in P Price/Cal
Cereal	.0872	275.29	.0317	.48	.0152
Starchy roots	.06	107.08	.0561	.04	.0022
Sugars	.0068	384.5	.0018	.04	.0001
Vegetables	.0192	33.10	.058	.10	.0058
Other fruits and Vegetables	.2018	208.13	.097	.12	.0116
Meat, fish and Poultry	.3365	127.674	.2636	.12	.0316
Eggs	.0238	90.0	.0264	.02	.00052
Milk	.0067	86.0	.0078	.06	.00046
Fats and oils	.0035	441.5	.0008	.02	.00016
Total				1.00	.0676

Source of Data: Price survey, Rizal Province, Food Composition Table,
FNRI.

Table 6

Estimated Food Budgets & Poverty Line, By
Family Size, in (P), 1976 Prices

	Family Size					
	4	5	6	7	All	
Average Food Budget	5.11	6.17	6.82	9.03	6.52	
Maximum Food Budget	7.52	8.64	8.65	12.38	10.13	
Minimum Food Budget	2.69	3.70	4.99	5.69	2.91	
Average Poverty Line	8.52	10.28	11.18	15.05	10.87	
Maximum Poverty Line	12.52	14.40	14.42	20.62	16.88	
Minimum Poverty Line	4.48	6.17	8.32	9.48	4.85	
Tan-Tecson Average Food Budget for Metro- Manila, 1973 Prices			6.85			
FNRI Estimate (Food Budget)			14.00			

Source: Bureau of Agricultural Statistics, National Food Administration, Manila, 1976.

Table 7

Calorie Requirements of Heads of Family and

Per Capita Requirements per Family by Occupation of Family Head

Occupation of Family Head	Caloric Requirements of Family Head	Per Capita Caloric Requirements
Farmers	2,635.78	2,000.34
Fishermen	2,736.26	1,809.72
Drivers	2,215.13	1,899.75
Carpenters	2,408.48	1,624.10
Laborers	3,702.80	1,944.92
Mechanic	2,765.00	1,805.82
Kaingero	3,479.33	2,108.37
Security Guard	2,661.00	1,830.31
Foreman	3,089.75	1,699.95
Shoemaker	1,730.4	1,573.48
Crane Operator	2,55.9	1,909.13
Electrician	2,215.13	1,911.99
Machinist	2,828.75	1,657.64
Merchant	1,595.3	1,423.5
Operator	1,869.9	1,740.26
Designar	1,431.0	1,049.62
Truck Helper	2,806.4	1,875.6
Spray-man	4,024.4	2,209.5
Vendor	1,901.84	1,606.46
Postman	2,129.05	1,742.74
Policeman	2,938.0	2,014.83
Clerk	2,045.03	2,047.26
Retired	1,228.12	1,433.22
Unemployed	1,361.97	
Source: Raw data		

Table 8

Daily Family Caloric Requirement by Occupation of

Family Head

Calorie Classes	Farmers and Fishermen	Drivers and Industrial Workers	Carpenters & Laborers
4,000-	1		
5,000-		1	1
6,000-		4	4
7,000-	3	5	3
8,000-	4	2	5
9,000-	4	5	2
10,000-	12	6	1
12,000-		4	1
13,000-	1	1	
14,000-	2	1	
15,000-			
16,000-		1	
17,000-		1	
18,000-	1		
Total	29	31	18

Source: Raw data

Table 9

Caloric Requirements of Families by Occupation of Family Head

	Farmers and Fishermen	Drivers and Industrial Workers	Carpenters & Laborers
Mean Daily Requirement	10,295.45	9,774.52	8,432.96
Standard Deviation	2,562.49	3,023.61	1,880.77
Maximum Requirement	15,420.43	15,821.76	12,193.92
Minimum Requirement	5,170.47	3,727.28	4,670.80
SEIR.	118.	181.	918-0000
SESA.	200.	300.	800-0000
SD.	0	0	000-0000

Table 10

Poverty Measurements of Families by Occupation of Family Head

	Farmers and Fishermen	Drivers and Industrial Workers	Carpenters & Laborers
Mean Food Budget	6.96	6.61	5.70
Maximum Food Budget	10.42	10.70	8.24
Minimum Food Budget	3.49	2.52	3.16
Average Total Budget	11.60	11.02	9.50
Maximum Total Budget	17.37	17.83	13.73
Minimum Total Budget	5.82	4.20	5.27

Table 11

Probability of Poverty by Income Class and by Family Size

(In Pesos)	Family Size			
	4	5	6	7
Income Classes				
Under 500	1	1	1	1
500-999	.1181	.1181	.1181	.1181
1000-1499	.19943	.19943	.19943	.19943
1500-1999	.19177	.18686	.19868	.19868
2000-2499	.1922	.195	.19611	.19564
2500-2999	.0228	.135	.217	.8133
3000-3999	0	.002	.003	.6293
4000-4999	0	0	0	.02

Table 12

Poor Families by Region and by Family Size
(In Thousands)

Region	Family Size			
	4	5	6	7
Philippines	428	438	418	445
Rural	368	330	348	363
Urban	59	54	71	94
Other Urban	53	46	62	66