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HEALTH FINANCE DEVELOPMENT PROJECT

HFDP Monograph No. 8

September 1994



Department of Health
Republic of the Philippines

United States Agency for
International Development
(USAID)

Management Sciences for Health

● CARRA, Inc.

Profile of Medicare Program II Target Beneficiaries

Dinah N. Patao
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List of Abbreviations

CAR	Cordillera Autonomous Region
CPH	Census of Population and Housing
DILG	Department of Interior and Local Government
EO	Executive Order
FIES	Family Income and Expenditures Survey
FLEMMS	Functional Literacy, Education, and Mass Media Survey
GAB	Games and Amusement Board
GNP	Gross National Product
GSIS	Government Service Insurance System
ISHB	Integrated Survey of Households Bulletin
NCR	National Capital Region
NSO	National Statistics Office
P1	Medicare Program 1
P2	Medicare Program 2
PD	Presidential Decree
PMCC	Philippine Medical Care Commission
PRC	Professional Regulations Commission
RA	Republic Act
SSS	Social Security System

EXECUTIVE SUMMARY

Background - The full implementation of Program 2 (P2) of Medicare would have covered the entire population under this social health insurance program. However, some policy, financial, organizational and operational issues which are currently outstanding need to be resolved prior to its implementation. To address these issues, information on the number, socio-economic characteristics and health-seeking behavior of the potential P2 beneficiaries is required. At present, comprehensive and organized macro-indications of these P2 characteristics are lacking; data are practically limited to P2 pilot initiatives confined to small geographic areas.

Purposes of this Study

This study attempts to construct a profile of the target beneficiaries of P2. Specifically, it aims to:

1. estimate the number of beneficiaries of P2 by geographical location and employment status/sectoral affiliation,
2. determine the socio-economic attributes of categories of beneficiaries and identify the factors affecting their utilization of health care services,
3. identify the possible policy, financial and operational implications on P2 design of the characteristics of the beneficiaries, and
4. specify areas for additional research.

Organization of this Report

The paper is organized as follows:

Chapter 1 presents the rationale for and the objectives of this study, the methodology adopted for the estimation of P2 coverage, specification of the sources of data, and limitations of the study.

Chapter 2 discusses the current P1 membership and coverage, and the delineation of coverage between P1 and P2.

Chapter 3 proceeds with the estimation of the number of potential beneficiaries of P2, and the determination of their sectoral affiliation and geographical distribution as feasible.

Chapter 4 presents the socio-demographic profile of P2 target beneficiaries in the agriculture, fishery and forestry sector.

Chapter 5 summarizes the policy, financial and operational implications on P2 of the major findings of the study.

Highlights of the Findings

A. Medicare Programs 1 and 2 Coverage

1. The most important results of this study concern derivation of estimates of potential P2 and P1 coverage. These are obtained by employing a new estimation approach, i.e., the *employment-based approach*.

2. This approach involves initially dividing the entire Philippine population into two mutually exclusive groups, i.e., paying vs. non-paying members. The potentially paying members are all gainfully employed members of the population over 14 years; the remainder of the population are categorized as dependents, or non-paying members.

3. In this study, the P2 paying members are the gainfully employed workers who are:

(a) explicitly excluded from P1 coverage, such as seasonal agricultural workers; and

(b) in employment categories mandatorily covered by P1 but who do not meet the income eligibility requirement, such as domestic workers earning below 1000 per month and self-employed agricultural workers earning below 1500 per month.

4. P2 non-paying members are estimated by multiplying the P2 paying members with the national dependency rate. The national dependency rate is estimated in this study at 2.2, which is computed as the ratio between the dependent population and the total gainfully employed persons.

5. The employment-based approach allows the residual estimation of potential P1 membership. Potential P1 paying membership is simply the difference between the total gainfully employed persons and potential P2 paying members. The P1 non-paying members are estimated by multiplying the P1 paying members with the national dependency rate.

6. Using 1990 data, the employment-based approach shows that there are about 5.795 million persons who are potentially P2 paying members. This constitutes about 31 percent of the total gainfully employed persons. The remaining 69 percent of the gainfully employed, or 13.129

million, therefore, constitutes the potential paying membership of P1. The latter indicates that majority of the gainfully employed are already mandatorily covered by P1.

7. Following the methodology described in (A.4) and (A.5) above, P2 non-paying members are estimated to be about 12.749 million, while P1 non-paying members are about 28.884 million. These imply that P2 coverage (paying plus non-paying members) is about 18.544 million, or 30.62 percent of the population. Potential P1 coverage at full compliance is therefore 42.013 million, or about 69.38 percent of the population. A schematic diagram of the estimation methodology and results are presented in Figure 1 below.

B. Compliance with Program 1

1. The employment-based approach also allows measurement of compliance of mandatorily covered workers with P1. Given a potential P1 paying membership of 13.129 million, the "actual" P1 paying membership of 5.06 million in 1990 implies a compliance rate of only 39 percent. Compliance rate in the public sector is estimated at 67 percent, and 34 percent in the private sector. Enforcement of compliance is most potent in expanding coverage of Medicare P1, independent of P2 implementation. Full compliance, or a 100 percent compliance rate with P1 would have resulted in the coverage of 69 percent of the Philippine population.

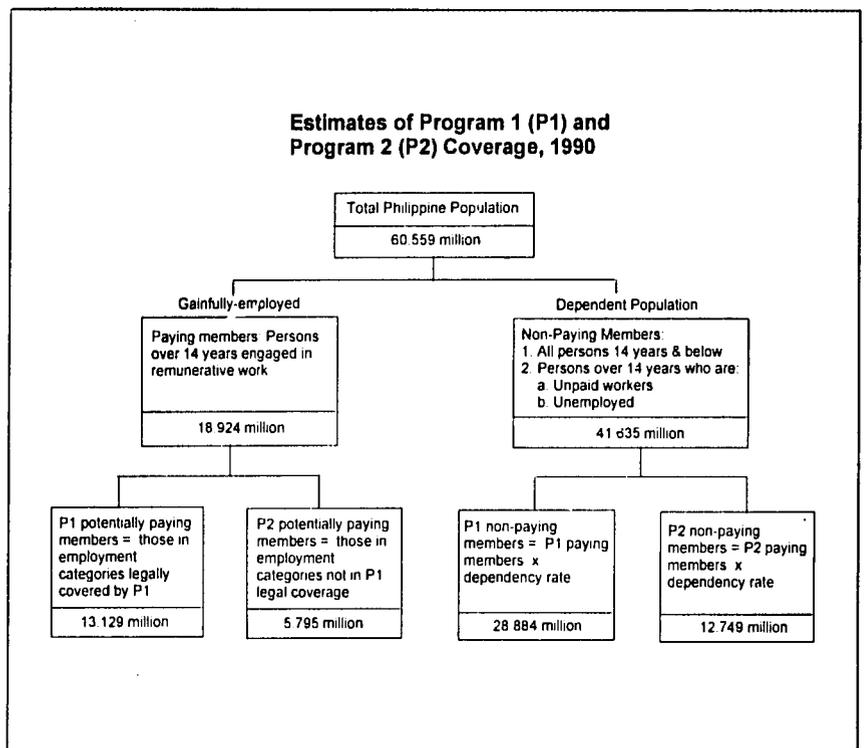


Figure 1

C. Program 2 Beneficiaries in the Agriculture Sector

1. About 45 percent of workers in the labor force, or 10.037 million, are in the agriculture sector. Of the total, only 7.037 million are gainfully employed as the remaining 3.0 million are unpaid workers. Comparing across sectors, agriculture is the largest employer of unpaid workers, accounting for about 83 percent of total unpaid workers. This may, however, only reflect a unique characteristic of Philippine agricultural production where every able-bodied member of the household provide labor to the activity without receiving any formal compensation in return.

2. By class of worker, potential P2 paying members are distributed as follows: wage/salary workers, 49 percent; self-employed workers, 44 percent; and barangay officials, 7 percent. By sector, the agriculture sector accounts for 77 percent of the potential P2 paying population.

3. Current P1 membership policies exclude from coverage seasonal agricultural workers and the self-employed earning below 18,000 annually. Estimates show that these exclusions result in non-eligibility in membership of about 1.915 million seasonal agricultural workers, and 2.554 million self-employed agricultural farmers. This means that a total of 4.469 million agricultural workers are potentially P2 paying members.

At the national level, a family spends, on average, about 1.7 percent of income for health services. For a median agricultural family earning 20,000 per annum, medical expenditures is about 340 annually.

4. The characteristic of agricultural production as a household activity and the collective reckoning of income at the family/household unit may warrant a shift from P1 paying membership unit of individual to family/household in P2. An attempt is made in this study to estimate the two categories of agricultural workers excluded from P1 coverage as described in C.3 above with the family/household as the income-earning/paying membership unit. Using the 1988 FIES data, potential P2 agricultural family-members are estimated at 2.494 million. About 0.995 million of these agricultural families are wage-based, while the remaining 1.449 million are self-employed with annual family income below 18,000.

5. Family income is generally used as a measure of the ability to pay for entitlement in a social insurance such as Medicare. Using 1988 FIES data, it is estimated that roughly one-half of all agricultural families, whether own-account or wage/salary earner, have annual income below 20,000. These low levels of income translate to high incidence of poverty in the sector, which is estimated to be about 90 percent for all classes of agricultural workers. This

is significantly above the 50 percent poverty incidence for the nation in 1988.

6. The "willingness to pay" is also investigated in this study as an alternative to the "ability to pay" criterion in setting the level of premium for agricultural families which will be covered by P2. The amount currently spent for health services as reported in the FIES is used as a proxy for "willingness to pay." At the national level, a family spends, on average, about 1.7 percent of income for health services. For a median agricultural family earning 20,000 per annum, medical expenditures is about 340 annually.

7. The peso level of actual medical expenditures for each income class is compared to what would have been paid as (individual) premium if these agricultural families were P1 beneficiaries. For an agricultural family earning the national median income of 20,000, the required annual contribution for Medicare P1 benefit entitlement is 450 (18,000 salary credit x 2.5 % P1 premium rate) assuming the member fully pays the contribution. This is higher than the current medical expenditures of 340 of the median agricultural families.

8. The difference between actual medical expenditures and expected P1 premium contribution provides an indication of the amount of subsidy that would be required if agricultural workers are placed under mandatory P1 coverage. For a median agricultural family, a per family subsidy of 110 (450 expected

P1 premium contribution less 340 actual medical expenditures) would have been required. This translates to a total premium subsidy requirement of about 274 million if the 2.494 million agricultural families for P2 coverage will each receive a subsidy of 110.

9. Other socio-demographic characteristics which are likely to affect utilization of health services are gender and education. There is a general perception that females utilize more health services presumably due to pregnancy-related medical needs. In some societies where females have low economic values, health service utilization is expected to be low. Among gainfully employed agricultural workers in the Philippines, a 1:4 ratio between female and male is observed. If this societal bias is true in the case of the Philippines, the predominance of gainfully employed males in the agriculture sector may therefore result in higher demand for health services by males than by females.

10. Education (usually measured in terms of the number of years of formal education) and preventive/promotive health service utilization are posited to be positively correlated. Presumably, higher education levels lead to better appreciation of good health and early detection of illness. Considering health as a continuum, this would mean lower demand for curative health services. Data show that agricultural workers have generally low educational attainment. About 6.63 percent had no formal education, 63.17 percent reached/finished the elementary level, 25.21 percent reached/finished high school, while only 4.99 percent

had collegiate or higher education. Given this educational profile, agricultural families may therefore tend to demand more curative than preventive/promotive health care.

Some Policy and Operational Implications on Program 2, With Emphasis on the Agriculture Sector

A. Policy Issue

Results of this study indicate that majority of the non-covered population is in the agriculture sector, estimated to be within the range of 13 to 15 million individuals. This concentration of the non-covered in one sector, where about 90 percent of its members are below the poverty threshold, raises an important social concern. The priority coverage of this sector under P2 becomes imperative in the interest of equity. This will also have reduced considerably the members of the population without legal coverage.

B. Operational Issues

1. Family/Household as Paying Membership and Premium Assessment Unit

The peculiarity of Philippine agriculture as a collec-

Executive Summary

tive undertaking may require a shift from individual paying membership as currently prevailing in P1 to family or household membership.

2. Enlistment and Collection Mechanism

Seasonality of production and physical (in)accessibility of agricultural farms likewise demand innovative methods of enlistment and premium collection. Locally-based organizations, such as agricultural cooperatives, may be tapped, or roving collection agents maybe employed, to enlist new members or collect premiums from agricultural households to address the issue of geographical dispersion. The timing of collection may also have to consider the agricultural production schedule, such that collection becomes due during harvest season.

3. Portability of Benefits

The portability of benefits is a special concern in the case of itinerant or ambulant agricultural workers with a decentralized Medicare P2. This requires formulation of special provisions that will allow for the utilization of a minimum benefit entitlement in his temporary place of work, and corresponding billing mechanisms for service providers.

4. Benefit Package

Research results indicate that health service utilization among agricultural families could possibly be biased towards curative health care. While these are not conclusive, these serve to indicate the need to review the applicability of P1 data for possi-

ble adjustments, or obtain sector-specific parameters, in order to come up with more accurate actuarial estimation and forecasting of financial requirements of implementing P2.

C. Financial Implications

1. Resource Use Optimization

Data show that agricultural families are currently spending about 1.7 percent of their income for medical purposes. Individual spending on insurable health risks would be less than optimal. Risk sharing and fund mobilization on a large scale such as the sectoral level allow ag-

gregate optimization of the utilization of limited resources.

2. Subsidy/ Counterfunding Requirements

Based on the analysis of 1988 FIES data, a median agricultural household receiving roughly 20,000 annually spent about 1.7 percent of income, or 340 per annum, for health services. Under P1 regulations, a 2.5 percent of income contribution or 450 would have been required for P1 benefit entitlement for a median agricultural family. This suggests that a subsidy of only about 110 per agricultural household would have been sufficient to enable each of the estimated 2.494 million agricultural families to have become eligible for P1 benefits

in that year. Assuming that the picture has not changed appreciably from that time, and holding other factors equal, it would appear that in principle, P1 benefit entitlement could be extended to an estimated 2.494 million agricultural families or to 13 to 15 million persons for a total cost of roughly 274 million (2.494 million x 110 per family). This amount is well within the 1.0 billion per annum recently announced by the legislature as earmarked from cigarette taxes for the expansion of Medicare coverage to the rest of the population. This is in addition to financial resources that may be made available in the form of counterpart premium contribution from employers of agricultural wage earners.

Chapter 1

INTRODUCTION

Background - Ensuring equitable access to health services, both physically and financially, is a priority concern in any national health policy. Physical accessibility relates to the geographical distribution of health facilities, personnel, and other ancillary medical services and products. Financial accessibility relates to the affordability of health services given the market prices of these services, the individual's capacity to pay and the sharing of the burden of these costs through various financing mechanisms.

The rising costs of health services, the relatively low levels of income for the majority of Filipino families, and the positive benefits that accrue from a healthy populace have spurred positive action on the part of the Philippine government to ease the financial burden of the utilization of health services by its constituents. The Philippine Medical Care Act of 1969 (RA 6111) provides the legal basis for the operationalization of this policy concern in this country. One of its primary objectives is "to provide the Filipino people with a viable means of helping themselves pay for adequate medical care" (Section 3, RA 6111). The basic financing scheme espoused in the program is social health insurance, as opposed to direct provision of health services by the government usually at subsidized rates, if not altogether free.

This social health insurance, popularly known as Medicare, is envisioned eventually to have a universal coverage. In view of resource constraints, universal coverage is intended to be achieved through a process of sequential inclusion of segments of the population into the program. This gave rise to the delineation between Programs 1 and 2 of Medicare. Program 1 (P1) was launched in 1972, and its implementation was linked to the existing social insurance schemes carried out by the GSIS on behalf of government employees, and the SSS on behalf of private sector employees. The linkage was established by requiring Medicare membership on all mandatory members of both agencies. Initial coverage as determined by existing coverage policies of the two agencies at the time P1 was launched is on the wage and salaried earners in the formal sector, including their dependents. In 1980, P1 started to cover a segment of the self-employed, such as registered professionals. Since then, numerous executive actions and SSS/GSIS/Medicare board resolutions were passed expanding the P1 coverage.

Cumulatively, however, these have not resulted in universal coverage as envisioned in RA 6111. Wage and salary workers in the informal/agriculture sector, other categories of the self-employed, the unemployed and their dependents, are still in the category of P2 for which coverage is presently offered on a pilot project basis. Those currently covered members of the population under P2 pilot programs number only a few thousands.

Objectives of the Study

The Philippine Medical Care Commission (PMCC), the government agency primarily re-

sponsible for the implementation of the Medicare Law, has yet to translate P2 from a statement of policy to an operational scheme of health care financing. Unlike P1, RA 6111 is not explicit as to how P2 should be implemented. The burden of operationalizing the scheme rests

with the PMCC. Towards this end, the PMCC has undertaken pilot projects in selected areas with the aim of evolving the basic features and mechanisms for P2.

These micro-level initiatives of the PMCC, has to be comple-

Introduction

mented by macro-indications of the magnitude, socio-demographic and economic characteristics of the P2 target population if a comprehensive "blueprint" of a workable program design is to be evolved at the central level. This, in turn, requires organized and comprehensive data which this study proposes to generate.

This study attempts to construct a profile of the target beneficiaries of P2, with special emphasis on the agriculture sector. There are two compelling reasons for this sectoral emphasis. First, the sector comprises the single largest occupation grouping which currently does not have legal P1 coverage. Second, agricultural families constitute the "poorest of the poor" segment of Philippine society. This pervasive poverty among agricultural families could deny altogether their access to health services if the government will not actively intervene.

The specific objectives of this study are to:

1. *estimate the number of beneficiaries of P2 by geographical location and employment status/sectoral affiliation,*
2. *determine the socio-economic attributes of categories of beneficiaries and identify the factors affecting their utilization of health care services,*
3. *identify the possible policy, financial and operational implications on P2 of the characteristics of the beneficiaries, and*

4. *specify areas for additional research.*

Methodology

Estimation of P2 Coverage.

Past discussions on P2 coverage (members and dependents) had to rely on "ballpark" figures or estimates based on the best educated guess of professionals in the field. The most common approach adopted in the estimation of the number of the potential P2 population is the *residual technique*. That is, P2 coverage is simply taken as the difference between the total Philippine population and "actual" P1 coverage:

$$\begin{aligned} \text{Potential P2 Coverage} &= \text{Total Pop} - \text{Actual P1 Coverage} \\ &\text{where} \\ \text{Actual P1 Coverage} &= \text{Active P1 Members} (1 + \text{Dependency Ratio}) \end{aligned}$$

The PMCC counts as active members those who have paid at least one monthly contribution in a given year (Virata *et al*, 1993). The dependency ratio commonly used in past computations is four (Beringuela 1992), which is inclusive of the SSS/GSIS member retirees and the legal dependents of both the active members and the retirees. Strictly speaking, dependents as used by Beringuela refer to non-paying P1 members and not confined to legal dependents as defined and enumerated in the Medicare Law.

Mathematically, nobody can argue against the logic of the *residual technique*. However, the residual estimation technique may not be very useful for policy purposes. First, since actual P1 coverage is currently being used,

the derived residual estimate is inclusive of that segment of the population who are supposedly covered compulsorily under P1 but are not, due to non-compliance. This study makes a distinction between individuals who are not in compliance with P1 and who are potential P2 beneficiaries. This is an important distinction because the eventual Medicare coverage of potential P2 beneficiaries requires a different set of policy and enforcement actions from those required to bring into compliance with P1 all employees and employers already legally required to be enrolled in Medicare.

Second, even if a reasonable estimate of the number of those who are not currently in compliance may be derived from other sources, the *residual estimation approach* yields a single number as an aggregate estimate. This does not easily lend itself to systematic disaggregation into the desired geographical, sectoral and occupational groupings as bases for characterization of the potential beneficiaries. The eventual P2 design is likely to require that these factors be taken into account.

Given the limitations of the residual estimate, an alternative methodology is considered in the course of this study. The estimation procedure adopted in this study is denoted as an *employment-based approach*. It involves the following steps:

1. Initially, the entire Philippine population is divided into two groups, i.e., the gainfully employed and the dependent population. The **gainfully employed** consists of all persons above a specified age (start-

ing 1976, this is set at 14 years) who are engaged in remunerative work either for an employer or self-employment (1992 Philippine Statistical Yearbook). Persons over 14 years old working in family or other enterprises but who do not receive any formal compensation are, by definition, not counted officially as gainfully employed. The **dependents** consist of all individuals 14 years and below, and the remainder of the population over 14 years who do not have any gainful employment, including unpaid family workers and retiree-pensioners. For the purposes of this report, the gainfully employed are denoted generically as *potentially paying Medicare (either P1 or P2) members (PPM)*, while the dependents, as *non-paying members (NPM)*. This new system of Medicare beneficiary classification adopted in the study is prompted by the following considerations:

a. Once P2 is fully implemented, universal Medicare coverage will have been accomplished. Technically, the entire population will become members, and the primary distinction among them is whether they are paying or non-paying members; and

b. The paying vs. non-paying member categories allow greater attention to be focused on the Medicare beneficiary's capacity to pay. Persons not mandatorily covered by either the SSS or the GSIS through P1 but are gainfully employed should have the capacity to pay, albeit in varying degrees. This study makes the assumption that P2, or an expanded Medicare, will maximize its revenue generation by collecting compulsory contributions from all members who

have the capacity to pay, without making any preemptive statement on the likely structure of premiums at this point or how contributions will be collected.

Thus, with full implementation of P2 resulting in a universal coverage Medicare, the total Philippine population may be divided into two broad groups as follows:

PPM = Gainfully Employed Persons
 NPM = Ttl Population - PPM
 where
 PPM, Potentially Paying Members
 NPM, Non-paying Members

This classification veers slightly from the conventional delineation of Medicare beneficiaries. In P1, beneficiaries are distinguished into members and legal dependents. *P1 members* are actively employed GSIS and SSS members who are required to pay the Medicare premium, and retirees who are exempted from paying the premium. *Legal dependents* are the members' next-of-kin specified by law as entitled to Medicare benefits and are not required to pay any contributions. Employing the new nomenclature of paying and non-paying members on current P1 benefi-

ciaries would result in the changes on their labels as summarized in Table 1 below.

2. The gainfully employed, or potentially paying members, are subsequently divided into two groups, i.e., the potentially paying P2 and P1 members. The *potentially P2 paying members* are the gainfully employed falling under the "negative employment list" of P1. The negative employment list, as used in this report, consists of (a) workers in employment categories explicitly excluded from P1 legal coverage; and (b) those in employment categories mandatorily covered by P1 but who do not meet the minimum income eligibility requirement. For the purposes of this study, employees of foreign government instrumentalities and overseas contract workers who qualify as voluntary members of P1 are deemed covered by P1, and therefore not included in the negative list. For each category of workers in the negative employment list, the best approximations of the number of persons given available data are used:

P2PPM = Ttl Gainfully Employed Persons in the Negative Employment List
 Where
 P2PPM, Potential P2 Paying Members

Table 1 Medicare Program 1 Beneficiaries Under New Classification System		
Category	P1 Nomenclature	New Nomenclature
Gainfully Employed SSS/GSIS P1 members Retirees	Members Members	(P1) Paying members Non-paying members
Legal Dependents Over 14 years old: (a) Gainfully employed (b) Not gainfully employed 14 years and below	Legal dependents Legal dependents Legal dependents	(P2) Paying members Non-paying members Non-paying members

Gainfully employed workers in the P1 negative employment list who currently qualify as P1 legal dependents or non-paying members will now be counted as P2 paying members. An example of this is a seasonal farmworker legally married to a public schoolteacher. Under the current P1, the seasonal farmworker is not included under mandatory P1 membership but is qualified as a dependent of the public schoolteacher. With the new classification system, the seasonal farmworker is counted as a P2 paying member.

Potential paying members of P1 (P1PPM), i.e., the gainfully employed workers legally required to enlist with Medicare P1, may be determined residually as follows:

$$P1PPM = \text{Total Gainfully Employed} - P2PPM$$

where
P1PPM, Potential P1 Paying Members

Comparison of "actual or active" and potential P1 membership as derived above yields a rough indication of the extent of non-compliance with P1. The PMCC defines "active" P1 members as those who have made at least one-month premium contribution in one year. The compliance rate may be determined as:

$$\text{Compliance Rate} = \frac{\text{Active P1 Members}}{P1PPM} * 100$$

$$\text{Non-Compliance Rate} = 100 - \text{Compliance Rate}$$

3. The estimation of the potential P2 non-paying population¹ is simplified by using a national dependency rate. The latter is computed as the ratio of non-paying members, conventionally

referred to as the dependent population including retiree-pensioners, to total paying members or gainfully-employed persons:

$$\text{National Dependency Rate} = \frac{\text{Total Pop} - \text{Gainfully Employed}}{\text{Gainfully Employed}}$$

$$\text{or} = \frac{\text{Total Non-Paying Members}}{\text{Totl P1 \& P2 Paying Members}}$$

This national dependency rate is then multiplied with the potential P2 paying member to derive estimate of the P2 non-paying members (P2NPM) as follows:

$$P2 NPM = P2PPM * \text{National Dependency Rate}$$

where
P2NPM, P2 Non-Paying Members

It follows that potential P2 coverage or beneficiary population

is
Pot'tial P2 Coverage= P2PPM +P2NPM

The same method may be applied for estimating potential P1 non-paying membership and coverage as follows:

$$\text{Pot'tial P1 Coverage} = P1PPM + P1 NPM$$

In summary, the employment-based approach may be represented diagrammatically in Figure 2 below.

Sources of Data

Primary household data may be used in the estimation of P2 (and P1) coverage using the *employment-based approach*. Information generated from a household

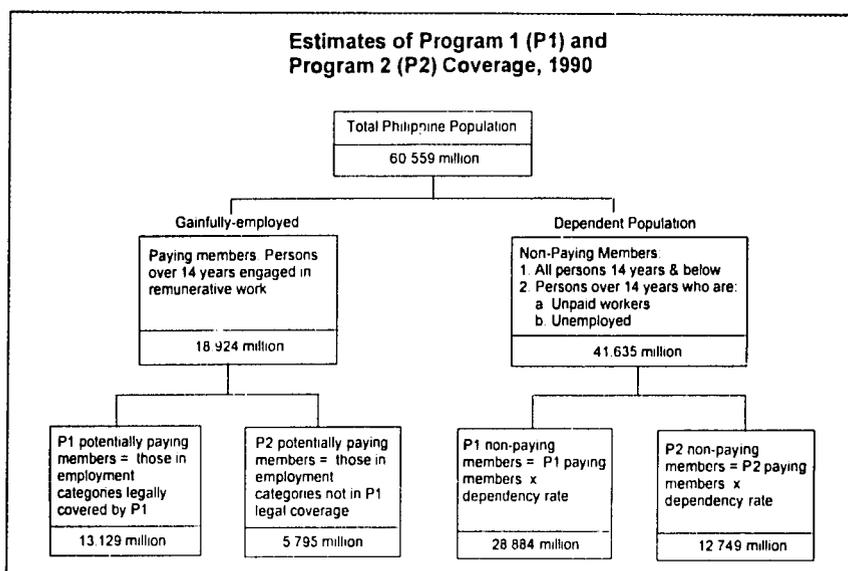


Figure 2

¹ Non-paying P2 members, conventionally referred to as dependents, ideally should include the rest of the population who do not have gainful employment, such as full-time students, unpaid family workers, etc., who do not qualify as P1 dependents and retirees who do not qualify as P1 non-paying members. But the actual identification and estimation of the P2 non-paying population could become tricky, especially if it is done at the family or household unit as is the case with P1. In the absence of P2 regulation to the contrary, there could be a significant shift of non-paying members from P1 to P2. For instance, a legal dependent child of his father who is a P1 paying member could be declared as a legal dependent of his mother who is now a P2 paying member.

context allows the determination of P2 coverage of a particular individual either as a P2 member, because his/her employment falls under the negative employment list, or as a P2 non-paying member. The household-based technique yields the precision in estimation that a researcher aspires to attain, but it obviously imposes enormous demand on data and resources which proved beyond those available to this study.

Limitations of resources constrained this study to the use of published secondary data generated in the first instance by statistical organizations and project-based researches. This study continues to rely on secondary data, especially on official population and labor/employment statistics. At the outset, it is recognized that a major shortcoming of using secondary data is that these do not lend themselves easily to manipulation, i.e., breakdowns and cross-tabulations, beyond those provided by primary data collection institutions.

This study uses official statistical data in various publications, and other secondary data generated by project-based researches of both government and private institutions. For consistency and completeness of data, 1990 figures are used in the estimation process. Major sources of data for the study are the 1990 Census of Population and Housing, the 1992 Philippine Statistical Yearbook, and the Integrated Survey of Households Bulletin No. 63 (October 1990). Family/household-based data, however, come from the 1988 Family Income and Expenditures Survey (FIES).

This study uses official statistical data in various publications, and other secondary data generated by project-based researches of both government and private institutions. For consistency and completeness of data, 1990 figures are used in the estimation process.

Limitations of Methodology

In contrast to the residual technique, the *employment-based estimation methodology* allows the categorization of potential P2 beneficiaries into paying and non-paying members, and further into sectoral affiliation and worker classification. The employment classification is important since it sheds light on how to organize collection mechanisms, apply "means" test, and other organizational, operational and implementation issues currently outstanding concerning how best to expand entitlement to Medicare benefits to the entire population. However, the *employment based methodology* using primarily secondary data, has the following shortcomings:

Definitional Problem

Official labor/employment statistics exclude those persons 14 years and below who are actually working from the total count of gainfully employed. Unofficial data indicate that there are about 9 million workers belonging to this category, and are employed primarily in the textile, pulp and paper, and service industries and the agriculture sector. The failure of the official data to capture this reality could result in an underestimation of

the potential paying members of both P1 and P2, unless there is an explicit Medicare or labor policy which excludes the gainfully employed below 15 years from the payment of social security and Medicare premiums. While this issue of child labor and their terms of coverage in the social security program inclusive of Medicare demands immediate attention, such is not attempted in this study. This is considered too broad an issue to be addressed here.

Static Assumption

Another limitation of, but not unique to, the *employment based methodology* is the treatment of dynamics in estimation. The composition of the Philippine labor force is constantly changing over short periods of time while the estimation in this study assumes a static state, i.e., using employment data at a point in time. The movements in and out of the labor force and sectoral shifts in employment are significant even in the short term as a result of economic adjustments which are occurring in the country due to internal and external pressures. These employment changes could mean shifts in program coverage, i.e., from P1 to P2 or from paying to non-paying, such that the time element of the resulting estimates must always be borne in mind.

Chapter 2

POPULATION COVERAGE: MEDICARE PROGRAM 1

Chapter Summary

Generally, all gainfully employed persons, whether wage/salary earner or self-employed, are mandatorily covered as paying members of P1. All government employees, regardless of the status of appointment, receiving regular compensation from government are mandated by law to enrol as P1 paying members. Only barangay officials who do not receive any formal compensation do not qualify for P1 coverage. In the private sector, only specific exclusions disallow certain categories of workers from membership. These include seasonal agricultural workers, certain categories of family, casual and temporary workers, and other employees belonging to employment categories mandatorily covered but do not meet the income eligibility requirements.

Given an "active" membership of 5.17 million in 1991 and adopting a dependency ratio of 4, "actual" P1 coverage is estimated at 42 percent of the Philippine population.

The low "actual" P1 coverage is attributed primarily to non-compliance. Using total non-agriculture employment as an indication of the potential paying membership of P1, a 20-year average of compliance rate of 47 percent is derived. This indicates enormous possibilities for expanding coverage through administrative and operational reforms to address the compliance issue. An alternative estimate of compliance is presented in the following chapter.

Introduction

Questions that continue to surface in Medicare, or more broadly, in national health insurance policy discussions are: *How many persons are not currently covered by Medicare (question of magnitude)? Where are they located (question of geographical dispersion)? What do they do (question of occupational affiliation, and relatedly, level of income)?* And other questions pertaining to the health status and health seeking behavior of the non-covered population.

The answer to the first question gives a sense of the enormity

of the challenge and of the tasks that lie ahead if national coverage as originally articulated in the Medicare Law is to come to pass. At the same time, it helps define strategic actions within a hierarchy of defined priorities given resource constraints that must confront any comprehensive social program such as this. The answer to the second question, on the other hand, points to areas where local autonomy and action within the broader context of empowerment and devolution may play a role or may be further strengthened. The answer to the third question provides an indication of the ability, and possibly willingness, to pay of potential beneficiaries and the counterfunding that may be required of the government or other entities should these individuals be

folded into the Medicare program.

This chapter sets the stage for the estimation of the number of the non-covered population. This chapter basically summarizes previous and current studies on P1 which are relevant to the current undertaking. In particular, the following review relied heavily on the study done by Virata *et al* (1993) on "Expanded Number of People Covered by Program 1 of Medicare" commissioned by the Health Finance Development Project (HFDP). The Virata study made an exhaustive list of the categories of workers covered by P1 based on the provisions of the pertinent laws and other executive and administrative issuances. Specific court decisions

clarifying contentious coverage policies were also cited in the study. Where appropriate, these clarificatory statements are reproduced here.

P1 Paying Members

In RA 6111 creating Medicare, P1 membership is linked to GSIS and SSS membership. The linkage was established by requiring the mandatory members of either agency to enrol with P1. Thus, P1 membership is essentially determined by the coverage policies of either the GSIS or the SSS, except in cases where RA 6111 or

any special law provides otherwise. Coverage policies of the GSIS for the public sector and SSS for the private sector applicable to P1 membership are embodied in CA 186 (later in the new GSIS law, PD 1146) and RA 1161 respectively. Membership policies are summarized in Table 2.

The coverage base of P1 may be broadly divided into two categories following the discussion in the preceding chapter. The first group consists of the **paying members**. As the category label would imply, this is composed of Medicare members who are required to pay a monthly contribution which is based on a

schedule of rates established and periodically updated by the PMCC. This monthly contribution is shared equally between the employer and the wage/salary workers, and shouldered entirely by self-employed workers.

P1 paying members are of two types, depending on whether their membership is compulsory or voluntary. Compulsory membership in the public sector as mandated by the New GSIS Law (PD 1146) is required of actively-employed permanent government employees and on all elective officials who receive regular compensation from the government. *Barangay* officials, such as the *punong barangay, barangay*

Table 2 Eligible Members of Medicare Program 1

Eligible Members	Effectivity of Coverage
<p>I.A. Public Sector: Mandatory Coverage</p> <p>A. 1 All permanent government employees below 60 years of age, except AFP personnel (CA 186, RA 6111)</p> <p>A. 2 All elective officials, except those who do not receive regular compensation, i.e., all barangay officials (PD 1146)</p> <p>A. 3 AFP personnel (Medicare Circular No. 229)</p> <p>A. 4 All casual, substitute and temporary employees if appointed for a period of not less than two months (GSIS Policy and Procedural Guidelines No. 112-87)</p> <p>A. 5 Government retirees under RA 660, RA 1616, and PD 1184. A retiree under RA 1616, PD 1146 and PD 1184 must be 60 years or above to be entitled to benefits (PD 408)</p>	<p>Those permanently employed prior to 1972, upon the effectivity of the Medicare Law; after 1972, upon appointment to permanent status</p> <p>For the duration of their tenure</p> <p>01 January 1985</p> <p>Various dates</p> <p>PD 408 signed on 6 March 1974</p>
<p>I. B. Public Sector: Voluntary Coverage</p> <p>B. 1 A retired or separated government employee who opted to continue membership within six months from the date of separation by paying his contribution plus the counterpart of the employer (RA 6111)</p> <p>II. A. Private Sector: Mandatory Coverage</p> <p>A. 1 All employees not over 60 years of age and their employers, except those in the following employment (RA 1161, as amended): a/</p> <p>1. Agricultural labor when performed by a share or leasehold tenant or worker who is not paid any regular daily wage or base pay and who does not work for an uninterrupted period of at least six months;</p>	<p>Upon continuation of membership</p> <p>Those employed prior to 1972, upon the effectivity of the Medicare Law; after 1972, on the day of employment</p>

Table 2 Eligible Members of Medicare Program 1, Con't

Eligible Members	Effectivity of Coverage
<p>II. A. Private Sector: Mandatory Coverage, cont'd</p> <ol style="list-style-type: none"> 2. Employment purely casual and not for the purpose of occupation or business; 3. Service performed by an individual in the employ of his son, daughter or spouse, and service performed by a child under the age of 21 in the employ of his parents; 4. Such other services performed by temporary employees which may be excluded by the regulation of SSS, and 5. Domestic service in private homes, except those receiving at least P1000 per month (RA 7655, SSS Circular No. 21-V). <p>A.2 All self-employed persons <i>not over 60 years old earning P1,800 or more per annum</i>. The coverage of those in the following employment categories shall take effect on the first day of January following the calendar year they started the practice of their profession or business but in no case shall coverage be earlier than 01 January 1980 (RA 1161, as amended, and SSS Circular No. 105-T):</p> <ol style="list-style-type: none"> 1. <i>Members of the Philippine Bar and professionals licensed by the Professional Regulations Commission (PRC);</i> 2. <i>Business partners, single proprietors and board directors duly registered with appropriate government agencies;</i> 3. <i>Actors and actresses, directors, scriptwriters, recording artists, dancers, singers, musicians, freelance movie cameramen, production men, propmen, make-up artists, graphic artists, sound effects men, film editors and bit players;</i> 4. <i>Freelance writers, journalists, newscasters and news correspondents;</i> 5. <i>Professional athletes, coaches, referees and trainers licensed by the Games and Amusement Board, as well as jockeys and trainers licensed by the Philippine Racing Commission.</i> 6. <i>Real estate brokers, salesmen, sales brokers, real estate agents, appraisers or consultants registered with the Bureau of Trade Regulations and Consumer Protection or any other appropriate agency;</i> 7. <i>Actuaries, insurance agents and brokers registered with the Insurance Commission;</i> 8. <i>Self-employed farmers and fishermen earning at least P1,500 a month or P18,000 per annum; and</i> 9. <i>Other groups of self-employed persons as may be determined by the Social Security Commission from time to time.</i> <p>A.3 SSS old age pensioners (EO 402); death and total disability pensioners (EO 441); unemployed permanent partial disability pensioners (EO 500)</p>	<p>1 September 1993</p> <p>On the first day of January following the calendar year they satisfy the conditions of coverage, but in no case earlier than 01 January 1980</p> <p>01 January 1992</p> <p>01 May 1990; 01 January 1991; 01 January 1992</p>

a/ In RA 1161, service performed on or in connection with an alien vessel by an employee if he is employed when such vessel is outside of the Philippines is not coverable by SSS, and hence Medicare. This was amended by SSS Circular No. 6-C issued on 29 August 1988 which provided for the mandatory coverage of seafarers effective 1 September 1988.

Table 2 Eligible Members of Medicare Program 1, Con't

Eligible Members	Effectivity of Coverage
II. B. Private Sector: Voluntary Coverage	
B.1 Those in the employ of a foreign government instrumentality, when the employers of such employees enter into an agreement with the GOP for their coverage b/ (RA 1161, as amended)	As determined by the terms of agreement after the effectivity of the Medicare Law
B.2 Filipinos recruited in the Philippines by foreign-based employers for employment abroad (RA 1161, as amended)	Upon membership after the effectivity of the Medicare Law
B.3 A separated employee who opted to continue membership within six months from the date of separation by paying his contribution plus the counterpart of the employer (RA 6111)	Upon approval of membership

b/ In 1992 for instance, voluntary agreements were signed for the coverage of Filipino workers serving at 15 embassies and eight international organizations (SSS 1992 Annual Report)

Note: This list of SSS eligible members has been verified with Ms. Amalia Camacho, Assistant Manager, Membership/Registration Office, SSS.

secretary, *barangay* treasurer, members of the *sangguniang barangay* including the *sangguniang kabataan* chairman, *barangay tanods* and members of the *lupong tagapamayapa*, however, are not covered mandatorily. These elective official do not receive any regular compensation but are entitled only to receive honoraria, allowances and other emoluments (Local Government Code of 1991). Despite the non-coverage in the GSIS, and thus in Medicare, these *barangay* officials are not without health insurance coverage. The Local Government Code (LGC) of 1991 provides the following medical and other benefits to *barangay* officials during their incumbency:

1. Free medical care, including subsistence, medicines, surgery or surgical expenses, X-rays and other laboratory fees, medical attendance and other hospital expenses, in any government hospital or institution. In cases of extreme urgency where there is no available government hospital or institution, a *barangay* official may submit himself to a private hospital and

expenses incurred not exceeding 5000 is chargeable against the funds of the *barangay* concerned (LGC Book III, Title 1, Chapter IV, Section 393(3)); and

2. Insurance coverage which includes, but not limited to temporary and permanent disability, double indemnity, accident insurance, death and burial benefits, in accordance with RA 6942 (LGC Book III, Title 1, Chapter IV, Section 393(2)).

Further, the *sangguniang bayan* may enact for the provision of additional group insurance or additional insurance coverage for *barangay* officials with public or private insurance companies, when the finances of the municipal government allow said coverage (LGC, Book III, Title 2, Chapter 3, Article 3, Section 447(1.xiii)). But while the foregoing medical and other entitlements may substitute for Medicare benefits among *barangay* officials, these benefits are not extended to their dependents as is currently the case for other government employees and elec-

tive officials who are members of P1.

In PD 1146, the compulsory coverage of non-permanent public employees is yet to be put into effect through either an executive action for those in local and national government agencies or board recommendation to the GSIS for those employed in government owned or controlled corporations. Thus, prior to 1987, what prevailed is selective coverage based on specific issuances expanding compulsory coverage to certain groups of non-permanent public employees. These include provisional teachers who are compulsorily covered by virtue of RA 4968, and temporary members of the PC-INP as specified in PD 765 and 1184. This selective coverage has created inequity in the provision of social security among public employees, which the members of the GSIS Board of Trustees endeavored to rectify. In 1987, Policy and Procedural Guidelines No. 112-87 was issued which effectively placed under compulsory coverage all

actively-employed public employees regardless of the status of their appointment.

RA 6111, at the time of its effectivity in 1972, takes an exception on AFP personnel. This is one instance where the Medicare Law deviates from the compulsory coverage of the GSIS. But this was later amended to include the personnel of the AFP effective January 1, 1985 through Medicare Circular No. 229.

Wage and salary workers in the private sector are, in general, covered compulsorily by the Social Security Law (RA 1161). Categorical exceptions are on domestic workers, and certain categories of agricultural workers, family, temporary and casual employees. In September 1993, domestic workers such as family drivers, maids, etc., earning at least 1,000 per month are placed under mandatory coverage.

The most contentious coverage issue is regarding the self-employed private workers. RA 1161 provides for the compulsory coverage of all self-employed earning at least 1,800 per annum. Because of the very low income requirement for compulsory coverage, the policy intent of RA 1161 is interpreted to mean the mandatory coverage of all self-employed. However, a phased approach in covering the self-employed is implied in RA 1161 by stating that "...the effectivity of coverage of certain groups of self-employed shall be determined by the Commission under such rules and regulations it may prescribe" (Section 9-A). Coverage of self-employed professionals registered with the Pro-

In September 1993, domestic workers such as family drivers, maids, etc., earning at least 1,000 per month are placed under mandatory coverage.

fessional Regulations Commission (PRC), Games and Amusement Board (GAB) and the Philippine Racing Commission (PhilRaCom), those in the creative, artistic, entertainment fields and broadcast and print media, and partners and single proprietors of businesses took effect in January 1980. It should be emphasized that single proprietors such as owner-operators of public transport such as jeepneys and tricycles, neighborhood stores locally known as *sari-sari* stores, and those in economic pursuits which require a permit, franchise or license from either a national government agency or a local government unit to operate, are mandatorily covered by the SSS. Later, self-employed brokers and agents in real estate and insurance registered with the Bureau of Trade Regulations and Consumer Protection of the Department of Trade and Industry (DTI) and the Insurance Commission, respectively, are also covered mandatorily. In effect, all self-employment which for its exercise or pursuit require a license, permit or franchise from a government office are mandatorily covered by the SSS.

In 1991, the Social Security Commission approved Resolution No. 466 - Series of 1991 which not only specified the date of the effectivity of coverage of self-employed farmers and fishermen but also defined the terms of their coverage. Specifically, a minimum income requirement of

1,500 per month or 18,000 per annum is set. In view of the generally low incomes of agricultural workers (discussed more fully in the next chapter), the presumption of complete coverage cannot be sustained in the case of these workers.

The other type of paying members are the **voluntary members**, comprised of SSS/GSIS employees who are separated from employment and GSIS retirees under RA 1616, PD 1146 and PD 1184 who are below 60 years of age but elected to remain as Medicare members, overseas contract workers (OCWs), and those in the employ of foreign government instrumentalities. These voluntary members are required to pay the whole amount of the monthly contribution, inclusive of the counterpart of the employer.

The levels and trend of P1 paying membership during the past 20-year period are presented in *Figure 3*. Supposedly, the paying membership count should include only the "active" members, i.e., those who have made at least one monthly contribution in one year (PMCC definition). On average, about three-fourths of membership comes from the private sector. The remaining one-fourth is accounted for by public sector employees.

With a membership of 1.78 million during its initial year of implementation in 1972, P1 paying membership has gradually increased over the succeeding years, reaching a peak of 6.11 million in 1986. In the following year (1987), there was a notable drop in membership to 4.52

million. The reduction in membership by 1.59 million between 1986 and 1987 is primarily attributed to the purging of inactive members from the SSS files². This resulted in the reduction of SSS membership by about 1.48 million, which accounts for 93 percent of the total decline. The remaining 7 percent is explained by the reduction in GSIS membership by about 0.22 million between 1985 and 1987. This may be attributed to the government reorganization and streamlining which were undertaken during the initial years of the Aquino administration. As in earlier years, the growth of membership reverted to an upward trend starting in 1988. As of 1991, "active" paying membership was 5.17 million.

P1 Non-Paying Members

The second category of P1 beneficiaries is the **non-paying members** consisting of the GSIS/SSS retiree-pensioners and the legal dependents of both the paying members and the retiree-pensioners. Those belonging to this category do not pay monthly contributions, but are entitled to the same medical benefits as the paying members.

Retiree-pensioners of GSIS were included under compulsory coverage as non-paying members through PD 408 starting in March 1974 (Table 2), SSS old-age pensioners through EO 402 in May 1990, SSS death and total disability pensioners through EO 441 in January 1991, and unemployed permanent partial disability pensioners through EO 500 in January 1992 (Table 2).

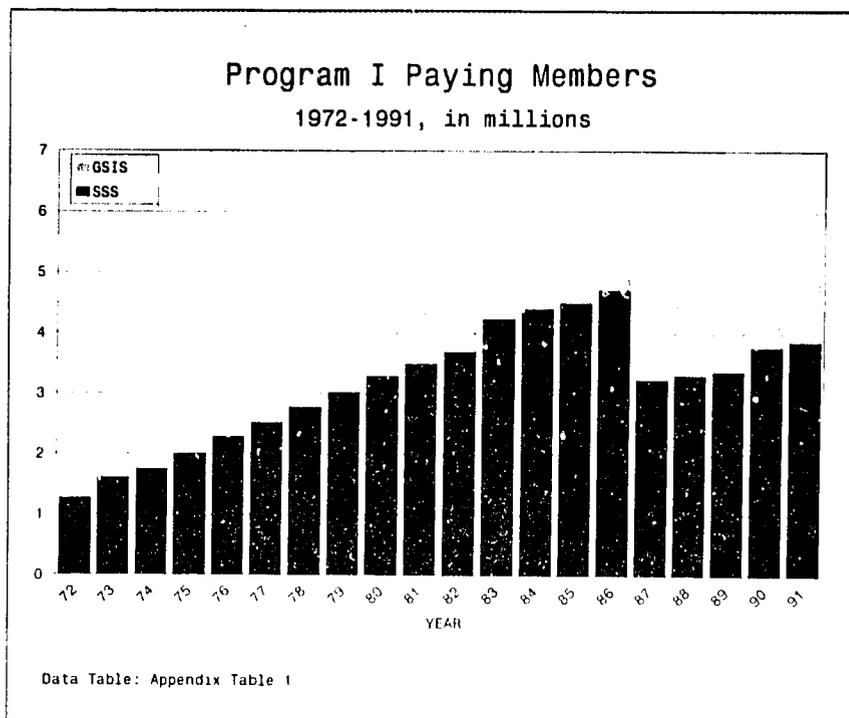


Figure 3

The legal dependents include the spouse, children or parents of the Medicare member shown (Table 3) on the following page. The legal dependents of gainfully-employed SSS and GSIS members were covered under the program starting in January 1973 by virtue of PMCC Board Resolution No. 73-222. Dependents of SSS retirees were folded into the program in May 1990 through EO 402, and dependents of SSS death/total disability pensioners and GSIS retiree-pensioners in January 1991 through EO 441.

Beringuela (1992) reports estimates of the non-paying members using a 1:4 ratio of paying to non-paying members. It is emphasized that this ratio is different from the traditional definition of dependency ratio, which includes only the legal dependents. With a paying membership of 5.17 million in 1990, this implies a non-paying membership of 20.68 million in the

same year. The levels and trend of P1 non-paying members are presented in Figure 4.

The paying to non-paying ratio used by Beringuela warrants a closer review inasmuch as the estimate of the non-paying population, and hence Medicare coverage, was noted to be highly sensitive to the ratio used. For instance, adopting a ratio of 3 implies that the total non-paying population in 1991 would have been only 15.51 million, or only two-thirds of the current estimate. A high ratio adopted may artificially overburden the system in the short run as a result of inaccurate forecasts of benefit payments. This translates to inefficient use of available financial resources as reserve funds accumulate beyond the optimal level. Since the excess

² It would therefore seem that the membership count prior (or even after) to 1987 is cumulative, and not based on active paying membership.

Table 3 Eligible Dependents of Medicare Program 1	
Eligible Dependents	Effectivity of Coverage
<ol style="list-style-type: none"> 1. The legal spouse who is not a Medicare member 2. The unmarried children, including legitimate, acknowledged, legally adopted and step children who are below 21 years of age and not gainfully employed 3. Children 21 years old and above with physical and mental disability and incapable of self-support 4. Legitimate parents over 60 years wholly dependent upon the covered employee for regular support 	<p>For dependents of actively employed workers mandatorily covered in 1972, not earlier than 01 January 1973. For dependents of retiree-pensioners, not earlier than 01 May 1990. All others, contingent on the effectivity of coverage of the Medicare member.</p>

reserves could be used now to finance improvements in the benefit package, high reserve levels means withholding, if not entirely foregoing, realizable benefits to current Medicare members. Moreover, the implementation of P2 is likely to expand the paying membership base of Medicare, which translates to a proportionate reduction in non-paying membership of the entire Medicare program. This requires a recomputation of the ratio to take the full implementation of P2 into account.

This is done in the next chapter.

Coverage of and Compliance with P1

Low Coverage

Based on the foregoing estimates of the paying and non-paying population, P1 coverage (both paying and non-paying) is placed at about 42 percent of the total Philippine

population during 1990 and 1991 (Appendix Table 1). This leaves about 58 percent of the total population which does not have Medicare coverage. If the paying to non-paying ratio currently used to estimate the dependent population is in fact an overestimate, the non-covered population could easily exceed 60 percent of the Philippine population. The non-coverage of this large proportion of the population explains the growing public clamor for action, especially if it is recognized that majority of the non-covered have the least capability to pay for their health expenditures.

Reasons for Low Coverage

It is generally perceived that existing membership policies of both systems, particularly the SSS, have effectively imposed a constraint on potential Medicare membership. P1 primarily is thought to cater to the formal/nonagricultural employed sector. The results of the *Compliance Study* by Virata *et al*, however, and the foregoing review of P1 coverage negate these perceptions. Generally, all gainfully-employed workers, whether wage/salary or

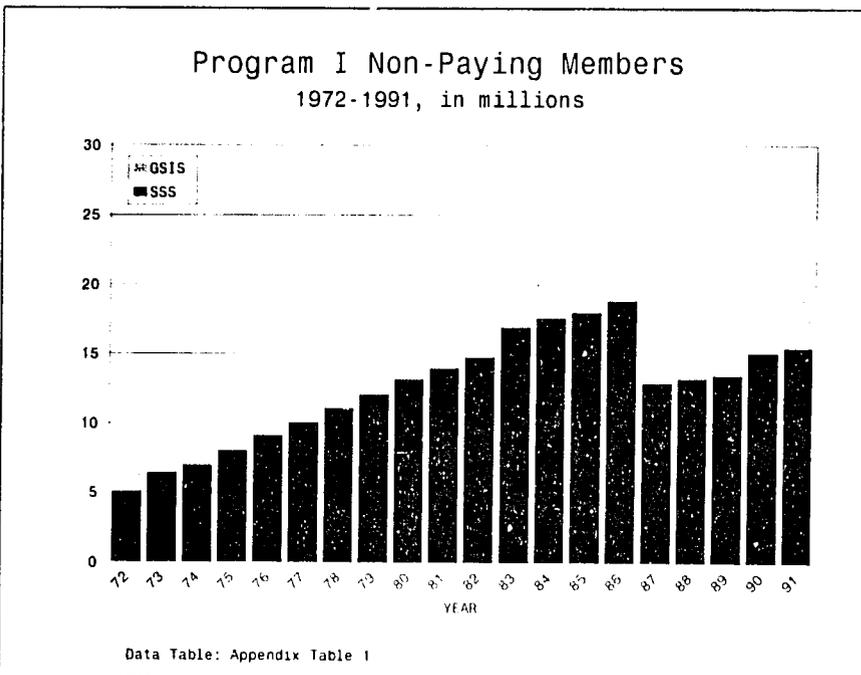


Figure 4

self-employed workers, are mandatorily covered. Only specific exclusions put certain categories of workers not under mandatory coverage.

Putting the legal eligibility requirements aside, the low coverage of P1 is attributable to the following factors:

1. Non-compliance to mandatory coverage, especially among self-employed workers:

Given a wide membership base, the SSS encounters difficulty in enforcing compliance with mandatory coverage particularly with respect to casual, contractual and temporary employees and the self-employed. It is generally opined that employers lack the incentives to provide social security coverage, inclusive of Medicare, to those employees with limited tenure. The self-employed, on the other hand, perceive that enrolment is voluntary given the current membership registration and premium payment system which are oriented primarily towards the formal/wage salary sector. The self-employed are expected to register with and pay premiums personally at SSS offices or SSS-accredited collection agencies which are considered too burdensome and costly, especially for those in the rural areas.

Preliminary indications of the compliance rate³ for P1, using total non-agriculture employment as an indication of the potential (paying) membership of P1, averages 47 percent during a 20-year period (Appendix Table 2). This signals the enormous possibilities of expanding coverage through administrative and operational reform to address the compliance issue. This warranted

the conduct of a study under the HFDP, i.e., "Expanded Number of People Covered by Program 1 of Medicare" recently completed by Virata *et al*, previously cited in several instances above and elsewhere in this study. This study aims to estimate the actual number of legally mandated P1 members currently not covered and to determine the reasons for non-compliance, from which appropriate policy and enforcement actions are formulated and recommended for implementation.

2. The slow structural transformation of the Philippine economy from a predominantly agricultural to an industrial economy: Another reason cited for low Medicare coverage is the slow transformation of the Philippine economy to a predominantly industrial economy. In 1972, agricultural employment accounted for 54.53 percent of total employment; in 1991, it still continued to account for 45.26 percent of the total (Figure 5). This represents only a 9 percentage-point decline over a 20-year period. This slow structural shift has hampered the expansion in coverage given current membership policies of the SSS in the agriculture sector which covers only the regular wage/salary work-

ers, and the self-employed with an annual income of at least 18,000.

Although employment remains agriculture-dominated, the growth of employment in the non-agriculture sector reveal a promising scenario. On the average, service sector employment grew at 5.17 percent and the industry

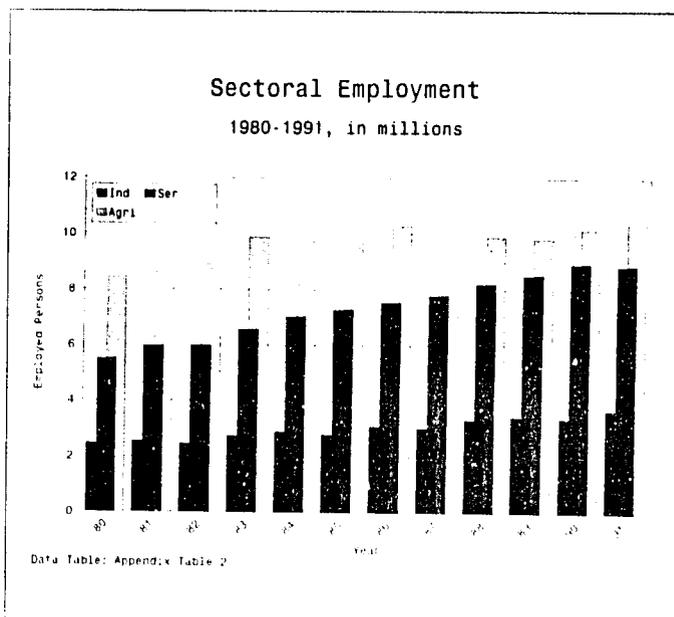


Figure 5

sector at 3.46 percent which are comparable to, if not significantly higher than, the growth in total employment of 3.30 percent. Agricultural employment, on the other hand, grew only at an average rate of 2.57 percent. This means that incremental growth in employment is towards the non-agriculture sector and thus the additional employed persons are more likely to be covered under P1, given the current P1 eligibility requirements. The issue of compliance, however, remains outstanding.

³ In the next chapter, potential P1 coverage derived in this study is used to provide an alternative indication of compliance with P1.

Chapter 3

POPULATION COVERAGE: MEDICARE PROGRAM II

Chapter Summary

The employment-based approach adopted in this study involves estimating the number of potentially P2 paying and non-paying members. The P2 paying members are the workers who are (a) explicitly excluded from P1 coverage, such as seasonal agricultural workers; and (b) in employment categories mandatorily covered by P1 but who do not meet the income eligibility requirement, such as domestic workers earning below 1000 per month and self-employed agricultural workers earning below 1500 per month. Non-paying members are estimated by multiplying the P2 paying members with the national dependency rate.

The employment-based approach shows that there are about 5.795 million persons who are potentially P2 paying members. This constitutes about 31 percent of the total gainfully employed persons. The remaining 69 percent of the gainfully employed, or 13.129 million, constitutes the potential paying membership of P1. The latter indicates that majority of the gainfully employed are already mandatorily covered by P1.

Given a potential P1 membership of 13.129 million, the "actual" P1 membership of 5.06 million in 1990 implies a compliance rate of 39 percent. Compliance rate in the public sector is estimated at 67 percent, while in the private sector, 34 percent. Enforcement of compliance is therefore most potent in expanding coverage of Medicare P1, independent of P2 implementation.

By class of worker, potential P2 paying members are distributed as follows: wage/salary workers, 49 percent, self-employed workers, 44 percent, and barangay officials, 7 percent. By sector, the agriculture sector accounts for 77 percent of the potential P2 paying population. The non-coverage of this large a proportion of agricultural workers/families has equity implications, considering that these are among the "poorest of the poor" members of Philippine society.

The P2 non-paying members are initially estimated using the national dependency rate, i.e., the ratio between the non-gainfully and gainfully employed persons. With a national dependency rate of 2.2, the P2 non-paying population is therefore 12.749 million, about 9.929 million of whom are in the agriculture sector.

P2 coverage, or the sum of the total paying and non-paying members, reaches 18.544 million. About 78 percent, or 14.442 million, are in the agriculture sector. This concentration of potential P2 membership in the agriculture sector has important equity implications. It is generally known that agricultural families are at the bottom of the income spectrum. The next chapter is devoted to the presentation and analysis of data that could possibly provide broad indications of sectoral parameters useful in crafting a P2 program which is responsive to peculiar characteristics and needs of the agricultural population.

Estimation Methodology: A Recapitulation

The estimation procedure adopted for purposes of this study is denoted as an *employment based estimation approach*. This involves basing estimates of potential P2 beneficiaries on *secondary labor/employment official statistics coupled with the "negative employment list"* of P1. The workers in the *negative employment list*, as used in this study, consist of (1) those in employment categories explicitly excluded from P1 coverage; and (2) those in employment categories mandatorily covered by P1, but do not meet the qualification requirements for coverage. For purposes of this study, voluntary members of P1 who are in either employment category (1) or (2) above are deemed included in this negative list.

Potential P2 beneficiaries are distinguished according to "potentially paying" and "non-paying" members. The paying vs. non-paying member category highlights the Medicare beneficiary's capacity to pay. This study makes the assumption that Medicare will maximize its revenue generation by collecting compulsory contributions from all members who have the capacity to pay, without making any preemptive statement on the likely structure of premiums at this point. The distinction between paying and non-paying members becomes paramount, because once P2 is fully implemented, universal coverage will have been accomplished. Tech-

Potential P2 beneficiaries are distinguished according to "potentially paying" and "non-paying" members. The paying vs. non-paying member category highlights the Medicare beneficiary's capacity to pay.

nically, all will become "members" and the primary distinction among them will be whether they are paying or non-paying members. The possibility that some potential P2 paying members are eligible dependents of P1 members at present no longer matters as their membership status eventually will be determined by their capacity to pay.

The potentially P2 paying members are the gainfully employed (this excludes unpaid workers) persons falling under the negative employment list of P1. The number of those in the negative employment list are estimated using the best approximations available from official labor/employment data. Non-paying P2 members, conventionally referred to as dependents, are estimated by a constant multiple of potential P2 paying members. This constant multiple is equal to the national dependency ratio, which is the ratio between the total dependent population/non-paying members and total gainfully employed/paying members. This specification of dependency departs from the traditional PMCC definition of the term in the legal sense, usually on the basis of consanguinity or blood relationship. Rather, in this study, dependents are determined to be those who do not have the capacity to pay, or those exempted from law in making Medicare contributions, such as GSIS and SSS retirees.

The potential coverage of P2 is thus estimated as follows:

$$\begin{aligned} & \text{Potential P2 Paying Members (P2PPM)} \\ &= \text{Tot Gainfully Employed Persons} \\ & \quad \text{in the Negative Employment List} \\ & \text{Potential P2 Non-paying Members (P2NPM)} \\ &= \text{P2PPM} * \text{National Dependency Rate} \end{aligned}$$

It follows that,

$$\begin{aligned} & \text{Potential P2 Coverage} \\ &= \text{P2PPM} + \text{P2NPM} \end{aligned}$$

For consistency of estimation and completeness of data, the 1990 labor/employment figures are used in the estimation of the potential P2 beneficiaries.

To put the estimation process in proper perspective, a description of the aggregate employment scenario is presented immediately below. Basically, employed persons are categorized according to their sectoral affiliation, i.e., agriculture vs. non-agriculture, and worker class, i.e., wage and salary worker vs. own-account, following the general classifications in the negative employment list and labor statistics.

Aggregate Employment Scenario

Labor Force

The potential labor force consists of the Philippine population 15 years old and over. Those belonging to this age category are either *in* the labor force or *not in* the labor force. Those

in the labor force include the employed and the unemployed, i.e., those who are not at work and without jobs but are available and looking for work. Those not in the labor force are those who are not at work and without jobs and not wanting work, or wanting work but not looking for it because a person is either disabled, retired, schooling or housekeeping.

As of 1990, the potential labor force is about 38.0 million, roughly 63 percent of the total Philippine population. Only 24.525 million (or 65 percent) are in the labor force, of which 22.532 million are actually employed, or only 59 percent of the population 15 years old and over (*Figure 6*). As a basis for the determination of potential paying members of P2, the number of employed persons is adjusted for the unpaid workers. The latter technically do not have the capacity to pay, hence are classified and counted as non-paying members in this study. In 1990, there are 3.608 million unpaid workers, 3.0 million of whom are in the agriculture sector. Thus, only 18.924 million gainfully employed persons (22.532 million employed - 3.608 million unpaid workers) constitute the base population for the estimation process.

Sectoral Affiliation and Class of Worker

This study adopts the conventional sectoral groupings: agriculture, service and industry. On average, the agriculture sector accounts for one-half of total employment. About 35 percent are in the service sector, and the remaining 15 percent in the industry sector.

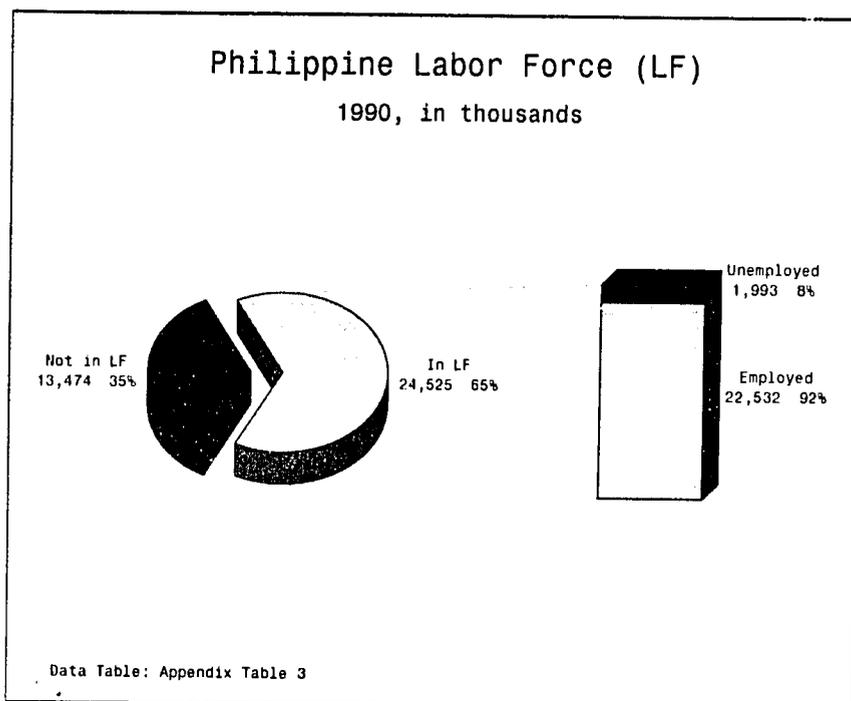


Figure 6

In addition to the sectoral groupings, there are two general classes of workers identified in labor/employment statistical publications. The first general category is the own-account worker, commonly known as an entrepreneur, under which there are two subcategories. The first subcategory is the employer, which includes natural persons engaged in any trade, business, industry, undertaking or activity of any kind and *who has one or more paid regular workers*. The second subcategory is the self-employed, which includes persons working for profit or fee in own business, farm, profession or trade *without any paid regular employee* (Glossary of Labor and Employment Statistical Terms, DOLE). A person employing purely unpaid labor as is commonly the case in the agricultural sector is therefor considered as a self-employed.

There are about 8.625 million own-account workers in 1990,

about 92 percent of which are self-employed (*Figure 7*). All employers and specific categories of the self-employed are mandatorily covered by P1.

Wage and salary workers include persons working in a private household or establishment, or in government or government corporation, for pay in cash or in kind. Wage and salary workers are about 10.299 million in 1990. About 19 percent of these are government employees⁴, who are supposed to be covered mandatorily by P1 regardless of sectoral affiliation and status of appointment.

⁴ Include Filipinos working in embassies, legation, chancelleries or consulates of foreign governments in the Philippines and international organizations of Sovereign States of Governments like the United Nations and others. This group of workers qualifies as voluntary members of P1. As stated in the methodology, these are not counted under P2.

By subsector, the proportion of classes of workers differed substantially. There are relatively more self-employed in the agriculture sector than in the non-agriculture sector. About 66 percent of gainfully employed in agriculture are self-employed workers, compared to only about 28 percent in the non-agriculture sector.

Potential Paying Members of P2

An estimate of the gainfully employed (this excludes unpaid family workers) who are not covered by P1, or alternatively, potential paying members of P2, is about 5.795 million (Table 4). This constitutes about 31 percent of total gainfully employed persons, indicating that majority of gainfully employed workers are already legally covered by P1⁵

1/ The estimate used is the total private wage and salary agricultural workers reported in the Integrated Survey of Households Bulletin (ISHB) No. 63. Ideally, the estimate should include only the share and leasehold tenants and agricultural workers who are not paid any regular or base pay and who does not work for an uninterrupted period of at least six months. Hence, there is an overestimation since the available estimate includes regular workers in agricultural farms/plantations, but is considered not significant enough to seriously affect the correctness of the estimate.

2/ Estimate comes from the 1990 Census of Population and Housing, and includes all domestic workers. Ideally, those earning 1,000 or more should be excluded from the estimate since these are already covered starting September 1993 by virtue of RA 7655. Unfortunately, these cannot be identified separately from the available data. (Source of data: Integrated Survey of Households Bulletin Series (ISHB) No 63, October 1990.)

3/ Self-employed farmers and fishermen with annual income of 18,000 or more are mandatorily covered by SSS/Medicare starting 1 January 1992. Those

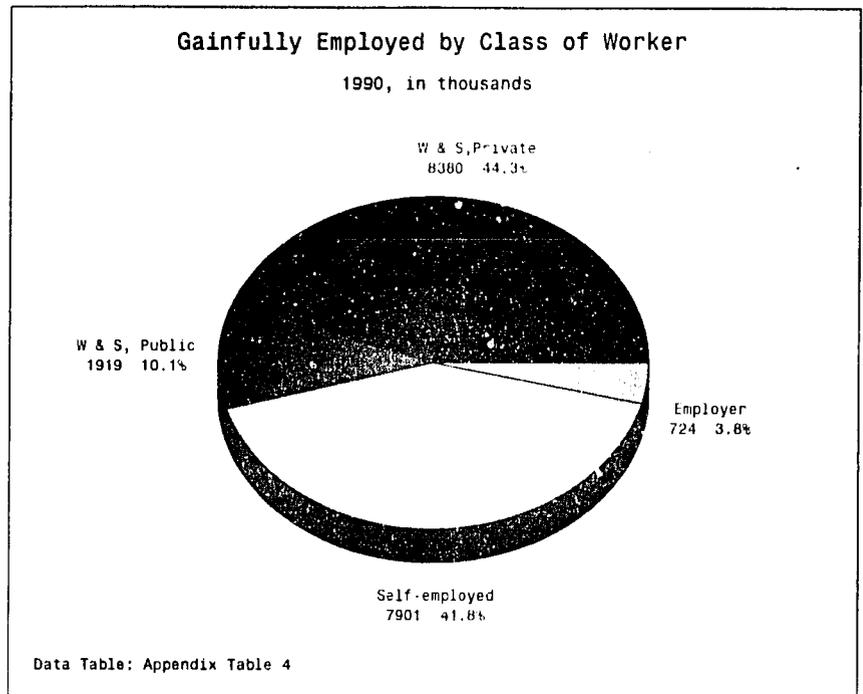


Figure 7

Class of Workers	Estimate, in thousands	
Wage and Salary Workers Private Agriculture, Forestry & Fishery Laborers 1/ Domestic Workers in Private Homes 2/ Sub-Total	1,915	
	907	2,882
Self-Employed Workers Self-Employed Farmers & Fishermen 3/ Sub-Total	2,554	2,554
Barangay Officials 4/ Sub-Total	419	419
TOTAL		5,795

self-employed in the agriculture sector earning below this threshold income are thus not covered. These are estimated to be about one-half of the total self-employed agricultural workers, given 1988 FIES which indicate that about 54.74 percent of entrepreneurial (either as employers or self-employed) families whose main source of income is from agricultural activities.

4/ Data from the National Barangay

Office of the Department of Interior and Local Government (DILG) show that there are 41,921 barangays all over the Philippines. Each barangay has 10 officials, composed of the punong barangay, barangay secretary, barangay treasurer, 6 sangguniang barangay members, and a sangguniang kabataan chairman. There are currently no available estimates on the actual number of barangay tanod members, hence are not included in the estimate.

About one-half of the total, or 2.822 million, are wage and salary workers. This constitutes about 27 percent of total wage and salary workers. For the currently non-covered wage and salary workers, about 68 percent are from the agriculture, forestry and fishery sector. The remaining 32 percent include those rendering domestic service in private homes, such as domestic helpers and family drivers.

The wage and salary worker estimate does not include the subcategories of paid family workers, temporary and casual employees excluded from P1 coverage as follows: (a) casual employees who are doing work not directly related to the main business; (b) temporary workers explicitly excluded from coverage by the SSS; and (c) a paid family worker who is a parent, spouse, or a child under 21 years, of the employer. The reason for exclusion from the estimate for (a) and (b) is that non-coverage of these subcategories in P1 is an exception rather than a rule, while for (c), segregation of the subcategory from the available estimate is nearly impossible without the application of time and resources beyond those which are available to this study.

One important qualification for mandatory coverage emerging from the guidelines is that the self-employed must hurdle a minimum level of income. For the self-employed professionals and other licensed entrepreneurs covered by RA 1161, the cut-off income is 1,800 per annum.

The self-employed workers, on the other hand, is about 44 percent of the P2 potential paying members. This constitutes about 32 percent of total self-employed workers. The estimate includes only the self-employed agricultural workers who do not meet the qualification requirements for membership. It is reiterated here that the general intention of RA 1161 is complete coverage of the self-employed, subject to the terms and timing of coverage being determined by the SSS. One important qualification for mandatory coverage emerging from the guidelines is that the self-employed must hurdle a minimum level of income. For the self-employed professionals and other licensed entrepreneurs covered by RA 1161, the cut-off income is 1,800 per annum. For the recently covered self-employed agricultural workers, the cut-off income is 18,000 per annum. Thus, the

income level requirement could disqualify a segment of the self-employed from coverage in spite of the policy declaration of complete coverage.

Barangay officials which currently are not covered mandatorily by P1 comprise the remaining 7 percent. Although these officials have medical and other insurance benefits *a la* Medicare, these entitlements are not available to their dependents. In addition, medical benefits can only be availed of at government hospitals which put a limit to their choice of a service provider as opposed to freedom of service provider choice enunciated in the Medicare law.

Overall, the estimates indicate that it is in the agriculture sector where the majority of the potential P2 members can be found. The combined seasonal agricultural workers and self-employed earning below 18,000 per annum comprise about 77 percent of the potential P2 paying members. This concentration of the non-covered in one sector has serious equity implications, since agricultural families are considered at the lowest end of the income spectrum.

⁵ In an earlier part of the paper, non-agricultural employment was used as a rough indicator of P1 paying membership. Now, residual estimation can be applied in reverse given the estimated membership of P1. With a total gainfully employed persons of 18.924 million in 1990, this implies that potential membership of P1 is 13.129 million which is inclusive of those not in compliance. The actual P1 membership of 5.06 million in 1990 therefore represents only about 39 percent of potential coverage. This gives a comparable estimate of compliance using non-agricultural employment as an indicator. The latter

indicates that about 41 percent of potential P1 members are actually covered in 1990. The slight discrepancy in estimates could be attributed to the self-employed agricultural workers who are not included in the non-agricultural employment estimate. Thus, both indicators suggest that a significant portion of the population does not have Medicare coverage. This raises a valid concern on the ability of the implementing agencies to enforce mandatory coverage on their respective sectoral responsibilities. In the government sector, "active" membership is only

1.28 million, but official statistics show that there are about 1.919 million wage and salary public employees (presumably excluding barangay officials who do not receive regular compensation). These translate into a compliance rate of about 67 percent. The remaining 11.21 million (13.129 million potential P1 paying members - 1.919 million public employees) therefore constitute the potential P1 paying members in the private sector. With 3.78 million SSS Medicare active membership, these translate to a compliance rate of only 34 percent.

Non-Paying Members

A theoretical estimate of the number of the non-paying population for both P1 and P2 may be derived by taking the difference between the total population and gainfully employed persons. Total Philippine population for 1990 is estimated at 60.559 million, 18.924 million of which are gainfully employed. This gives a difference of about 41.635 million comprising the potential non-paying population of a universal coverage Medicare.

Categories of Non-Paying Population

The non-paying population may be broken down into two broad categories. The first category comprised of the population which is 14 years old and below, but may include gainfully employed albeit underpaid children. The second category are those 15 years old and over who are (a) not in the labor force, i.e., not working and not looking for work, and/or unpaid family workers, inclusive of housewives, students, pensioners and disabled persons; and (b) the unemployed. Note that under the current P1 system of beneficiary classification, GSIS and SSS retiree and disability pensioners are classified as "members" and not as Program "dependents." In addition, a segment of the unemployed which is otherwise not eligible as "dependent" under P1, such as unemployed children over 21 years of age, are now considered as such by classifying them as non-paying members. The resulting composition

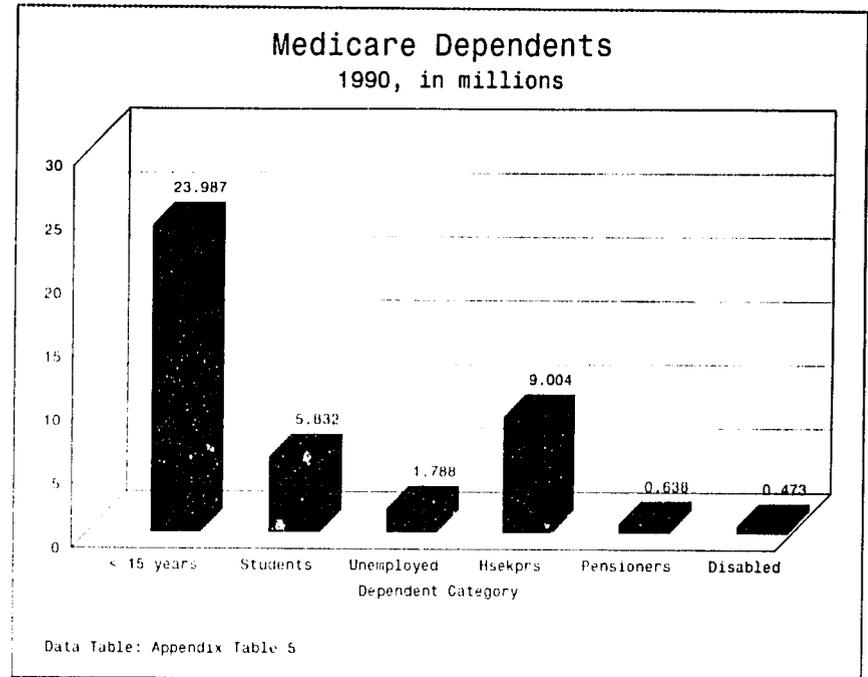


Figure 8

of the non-paying population as derived in this study is consistent with the Constitutional health priority groups such as the underprivileged sick, the elderly, disabled persons, women and children.

Independent estimates of these two categories and subcategories are estimated to total 41.722 million (*Figure 8*), which is very close to the theoretical estimate. About 60 percent is accounted for by those below 15 years of age, while those 65 years and over comprises only a negligible 2 percent of total non-paying population. This result is consistent with the Philippine demographic characteristic of having a relatively young population. Specifically, those 14 years and below comprises about 40 percent of total Philippine population, while those 65 years and over comprises only about 3 percent of the total. Housekeepers also con-

stitute a significant 22 percent of the non-paying population. Since these are reported as non-gainfully employed, possibly a majority of them, particularly the rural housekeepers, are unpaid family workers. This may also holds true for rural children.

Regional Distribution

The regional distribution of the different categories of the non-paying population is presented in Table 5. As expected, the regional distribution of the different categories of the non-paying population followed closely the overall population distribution. That is, a large proportion of the non-paying population can also be found in areas with high population levels. The top six regions, in terms of the proportion of the total population in those regions and similarly the non-paying population, in descending order are as follows: Region 4 (Southern

Table 5 Regional Distribution of Categories of Non-Paying Members of P1 and P2, 1990

Region	Persons <15 years (mil)	Persons ≥ 15 Years (mil)					Total Non-paying (mil) (a)	Total Gainfully Employed (b)	National Dependency Ratio (a + b)
		Students	House-Keepers	Pensioners	Disabled	Unemployed			
Philippines	23.987	5.832	9.004	0.638	0.473	1.788	41.722	18.924	2.20
NCR	2.650	1.026	0.932	0.057	0.050	0.225	4.941	2.665	1.85
CAR	0.456	0.101	0.119	0.009	0.013	0.024	0.723	0.328	2.21
Region 1	1.350	0.302	0.608	0.066	0.039	0.130	2.494	1.021	2.44
Region 2	0.943	0.187	0.364	0.026	0.020	0.078	1.617	0.751	2.15
Region 3	2.353	0.562	1.054	0.080	0.038	0.187	4.274	1.957	2.18
Region 4	3.266	0.717	1.333	0.097	0.052	0.211	5.677	2.596	2.19
Region 5	1.711	0.387	0.594	0.044	0.038	0.079	2.854	1.300	2.20
Region 6	2.147	0.555	0.849	0.076	0.056	0.207	3.890	1.728	2.25
Region 7	1.797	0.367	0.637	0.055	0.042	0.133	3.031	1.438	2.11
Region 8	1.290	0.269	0.457	0.037	0.032	0.104	2.190	1.007	2.17
Region 9	1.316	0.292	0.447	0.018	0.020	0.100	2.192	0.889	2.47
Region 10	1.473	0.355	0.479	0.027	0.030	0.098	2.461	1.098	2.24
Region 11	1.861	0.427	0.653	0.031	0.026	0.146	3.144	1.347	2.33
Region 12	1.374	0.285	0.478	0.015	0.017	0.066	2.234	2.234	2.80

Sources of Data: Basic data are from the 1990 Census of Population and Housing. In the absence of regional breakdown for students, pensioners and housekeepers, the following were used to disaggregate the national data into regional estimates:

(a) For students, the regional percentage distribution of students in 1989 FLEMMS.

(b) For pensioners, the regional percentage distribution of persons 65 years old and over based on the 1990 CPH.

(c) For housekeepers, the regional percentage distribution of the female population not in the labor force based on the 1990 CPH.

Tagalog), NCR, Region 3 (Central Luzon), Region 6 (Western Visayas), Region 11 (Southern Mindanao), and Region 7 (Central Visayas).

The highest proportion of those below 15 years, housekeepers and the pensioners are in Region 4, the unemployed and students in NCR, and the disabled in Region 6. The second largest proportion of students, disabled and the unemployed can also be found in Region 4, and those below 15 years in the NCR.

National Dependency Ratio

The national dependency ratio is defined in this study as the ratio between the total non-paying population as estimated above, and

the total number of gainfully employed or potentially paying persons. Based on 1990 actual gainfully employed figure of 18.924 million, the national dependency rate is about 2.20. The regional data, however, reveal significant variations in dependency rates (Table 5). The NCR has the lowest dependency rate at 1.85. Thus, it may be said that although the NCR accounts for a significant proportion of the non-paying population, the burden of dependency is mitigated by an equally large gainfully employed persons or paying members. Region 12 has the highest dependency rate at 2.80.

The national dependency ratio of 2.2 obtained in this study is substantially lower than the 4 used by Beringuela (1992). This does not imply, however, that the ratio

used by Beringuela is an overestimate or seriously flawed. Rather, it only indicates a lower dependency on the Medicare program, if national coverage is attained through P2 implementation. This assumes collection of contribution from all members who have the capacity to pay, identified here as the gainfully employed.

Given a national dependency rate of 2.2 and an estimated P2 paying membership of about 5.795 million, the total P2 non-paying members would thus be about 12.749 million. About 9.929 million (4.513 million agricultural workers x 2.2) are in the agriculture sector. This estimate of the P2 non-paying population in the agriculture sector using the national dependency rate is within a reasonable range as computation in the next chapter will show.

Chapter IV

AGRICULTURE, FISHERY AND FORESTRY SECTOR

Chapter Summary

About 45 percent of workers in the labor force, or 10.037 million, are in the agriculture sector. Of the total, only 7.037 million are gainfully employed as the remaining 3.0 million are unpaid workers. Comparing across sectors, agriculture is the largest employer of unpaid workers, accounting for about 83 percent of total unpaid workers. This may, however, only reflect a unique characteristic of Philippine agricultural production as a household activity rather than as an individual pursuit.

By class of worker, there are 5.078 million own-account (employers and self-employed) and 1.959 million agricultural wage/salary workers. Current P1 membership policies exclude seasonal agricultural workers and self-employed earning below 18,000 from coverage. Estimates in the earlier chapter show that these exclusions result in non-eligibility in membership of about 4.469 million agricultural workers.

The characteristic of agricultural production as a household activity and the reckoning of income at the family/household unit necessitate a shift from an individual to family/household as the membership unit. Using the 1988 FIES data, potential P2 family-members are estimated at 2.494 million. Potential P2 coverage in the agriculture sector is between 13.118 million to 14.442 million individuals.

Family income is generally used as a measure of the ability to pay for entitlement in a social insurance such as Medicare. Using 1988 FIES data, it is estimated that roughly one-half of all agricultural families, whether own-account or wage/salary earner, have annual income below 20,000. This low income translates to high incidence of poverty in the sector, which is estimated to be about 90 percent for all classes of agricultural workers. This is significantly above the 50 percent poverty incidence for the nation in 1988.

The "willingness to pay" is also investigated in this study as an alternative to the "ability to pay" criterion in setting the level of premium. The amount currently spent for health services as reported in the FIES is used as a proxy for "willingness to pay." At the national level, a family spends about 1.7 percent of income for health services. For a median agricultural family earning 20,000, actual medical expenditures is about 340 ($20,000 \times 1.7$ percent).

The peso level of actual medical expenditures for each income class is compared to what would have been paid as (individual) premium if these agricultural families were P1 beneficiaries. For an agricultural family earning the national median income of 20,000, the required annual contribution for Medicare P1 benefit entitlement is 450 (18,000 annual salary credit \times 2.5 % P1 premium rate) assuming the member fully pays the contribution. This is higher than the current medical expenditures of 340 of the median agricultural families.

The "willingness to pay" provides an indication of the amount of subsidy that would be required if agricultural workers are placed under mandatory coverage. Among agricultural

workers earning lower than the Medicare salary credit ceiling of 3000 per month (or 36,000 per annum), it appears that counterpart contributions from employers or subsidy from government, either national or local, are critical to the provision of a benefit package which is comparable to that of P1. The level of subsidy, i.e., the difference between actual expenditures and expected contribution, varies among income classes. The amount of subsidy per member-family ranges from 32 for the lowest income class, to 220 for the 30,000 - 39,000 income class. For a median agricultural family, a subsidy of 110 would have been required over current expenditures. Agricultural families earning at least 40,000 per annum do not require any subsidy if actual medical expenditures can be collected fully for Medicare benefit entitlement.

8. Other socio-demographic characteristics which are likely to affect utilization of health services are gender and education. There is a general perception that females utilize more health services presumably due to pregnancy-related medical needs. In some societies where females have low economic values, health service utilization is expected to be low. Among gainfully employed agricultural workers in the Philippines, a 1:4 ratio between female and male is observed. If this societal bias is true in the case of the Philippines, males in the agriculture sector may have higher demand for health services than females.

9. Education (usually measured in terms of the number of years of formal education) and preventive/promotive health service utilization are also posited to be positively correlated. Presumably, higher education levels lead to better appreciation of good health and early detection of illness. Workers in the agricultural sector have generally low levels of education, which are likely to create a bias for curative health care.

Contribution of the Agriculture, Fishery and Forestry Sector to the Economy

Currently at the threshold of the twenty-first century, the Philippine economy remains predominantly agricultural. A large proportion of the Philippine population is in the agriculture-dominated rural areas, and agricultural employment continues to account for a significant proportion of the total workforce.

Historically, the agriculture sector accounts for more than one-half of total employment. The sector, however, is practically burdened with providing employment to the fast-growing population up to the present time due

to the slow expansion of the non-agriculture sector. During the 1990-91 period, agricultural employment still accounts for about 45 percent of total employment (Figure 9).

In spite of the high agricultural employment, sectoral contribution to total economic output measured in terms of GNP is low. Agricultural output, both in current and real terms, is only about one-fourth

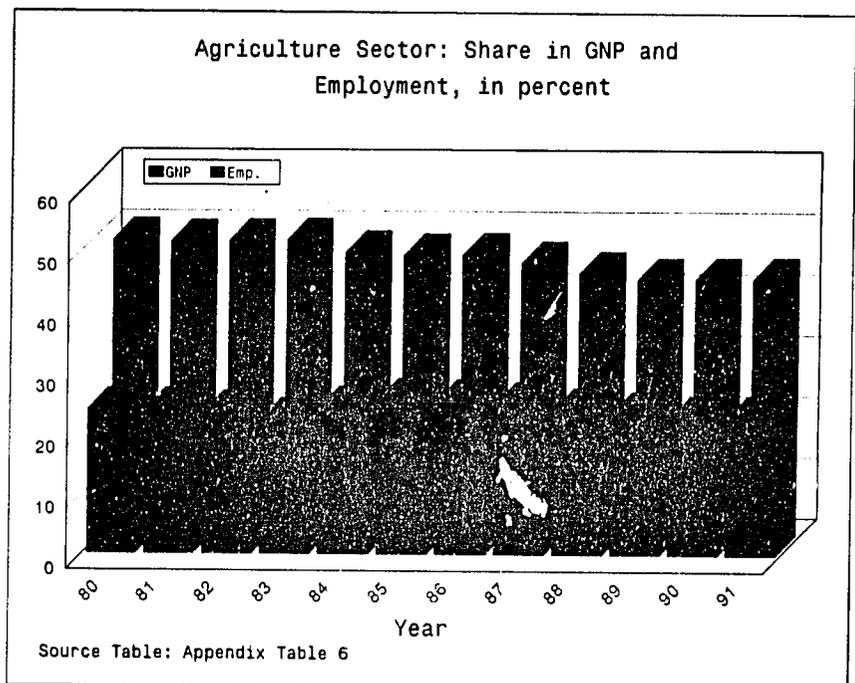


Figure 9

of the total and is even declining. This combination of low agricultural output and high agricultural employment implies low sectoral labor productivity, which may be indicative of excess employment in the sector. The average product of agricultural labor, which is the ratio between agricultural GNP in constant prices and agricultural employment, is observed to be on a decline during the last twelve years, except in the intervening years from 1987 to 1989. From 16,958 in 1980, the average product of labor has declined to 15,563 in 1991 (*Appendix Table 6*). The lowest average product of labor was recorded in 1986, at only 14,162. At the aggregate level, this means declining real income and thus purchasing power for those dependent on the sector for their source of income. At the household level, spending on highly income elastic consumer goods and services are likewise expected to exhibit significant fluctuations in response to changing income levels. The extent of the individual and joint effects of reduced purchasing power and income elasticity on the consumption of medical goods and health services are relevant concerns which are explored in subsequent sections.

Furthermore, the sector's capacity to generate foreign exchange through the export of agricultural products is declining in recent years. From an average of 60 percent share of agricultural exports to total exports in the 1970s, it declined to only 13-16 percent during 1989 to 1991. This is attributed to a combination of factors, among which are the unfavorable world market conditions resulting from

The extent of the individual and joint effects of reduced purchasing power and income elasticity on the consumption of medical goods and health services are relevant concerns which are explored in subsequent sections.

the recession being experienced by major importing countries, the declining prices of agricultural and primary products in the world market, and the trade protection policies and agricultural subsidies actively pursued by other countries.

Another important factor which threatens the capacity of the agriculture sector to contribute to economic growth and generate income for those employed in the sector is the deterioration/depletion of the natural resources on which the sector is highly dependent. Soil degradation resulting from unsustainable agricultural practices, conversion of traditionally agricultural lands into compet-

ing uses, and the over-exploitation of natural forests and fishery stocks in the past undoubtedly constrains the future productivity of the sector.

Employment Structure in the Agriculture, Fishery and Forestry Sector

In 1990, there are about 10.037 million persons employed in the agriculture sector (*Figure 10*). Of the total, only about 70 percent, or 7.037 million, may be considered as gainfully employed as the remaining 30 percent, or 3.0 million, are unpaid workers. Comparing across sectors, the agriculture sector is the single-largest employer of unpaid workers. It accounts for 83 percent of the total 3.608 million unpaid workers

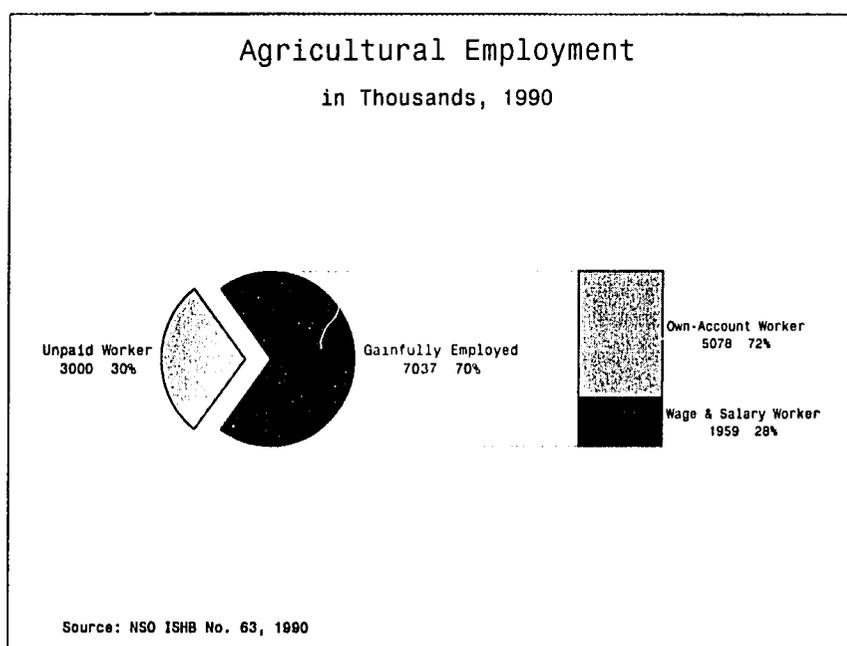


Figure 10

in 1990. This, however, may only reflect an important characteristic of Philippine agriculture as being undertaken as a household activity rather than as an individual occupation.

Following the classification adopted in Chapter 3, the gainfully-employed agricultural workers are categorized into wage and salary workers and own-account workers⁶. Agricultural wage and salary workers total 1.959 million. The majority of these are employed in the private sector, with only about 2 percent employed by the public sector. In contrast, public employees are about 23 percent of the total non-agricultural wage and salary workers. Although it may seem insignificant at first glance, this highly skewed public-private distribution of agricultural workers may be cited as exacerbating the Medicare coverage bias against the sector. By law, all government employees regardless of tenure status are mandatorily covered by P1. Seasonality of agricultural production, and hence employment, would therefore not impose a constraint on the Medicare coverage of government agricultural employees. This is not the case for seasonally employed private agricultural employees who

are explicitly excluded from coverage.

Agricultural own-account workers number 5.078 million. Ninety-one (91) percent of these are self-employed, who in most cases may be said to work with other members of the household who are not given any formal compensation for services rendered. All these estimates indicate that there is at least one unpaid family worker for every 1.5 self-employed agricultural worker. This ratio could be higher if child labor, which the sector is known to employ in large numbers, is taken into account.

Agricultural Income

In a social insurance program such as Medicare, premium payment for a basically uniform benefit entitlement is based on the member's ability to pay. This is in contrast to private insurance where "one pays for what one gets", i.e., the premium varies with the benefit package selected. The level of income is generally used as a measure of the ability to pay in a social insurance, and Medicare contribution or premium is usually assessed as a percentage of a person's income. Operationally, this would necessitate a comparable and measurable level of income among covered individuals.

One of the constraints cited in the coverage of the informal/agriculture sector is the determination of an income base for the setting of premium (Normand and Weber 1993). Currently, P1 uses as income base the gross cash individual income of wage and salary workers in the formal sector earned at short periodic intervals. Unfortu-

nately, this income measure is not generally available for agricultural workers.

For the agriculture sector, the most commonly available measure of income is the family/household income which includes both income from cash and non-cash sources over a cropping season or a calendar year. This income measure is most commonly used in the sector inasmuch as agricultural activities are usually regarded as family/household undertaking, where family members contribute to production without receiving any formal compensation. Moreover, part of agricultural production is normally used for home consumption, and therefore is included as non-cash income. Income assessment over a longer period, such as a cropping period or a calendar year, is also dictated by the characteristic of agricultural production where cost is spread over a long period while income is realized in a few weeks such as during harvest time.

The 1988 Family Income and Expenditure Survey (FIES) provides a measure of family income which is used in this study in assessing the capacity of agricultural workers to pay for Medicare benefit entitlement. The FIES reports nine income groups based on annual income, including cash and non-cash, of families whose main source of income is from agricultural activities. Prior to the analysis of the level and pattern of agricultural income as reported in the FIES, various limitations of the published data for the purposes of this study are flagged as follows: (1) although the main source of income has been identified to be from agricultural activities, the level of reported family

⁶ The delineation between these two mutually-exclusive categories, however, becomes blurred when one analyzes sector-specific data. For instance, own-account workers are commonly referred to in the sector as agricultural operators. Wage and salary earners, on the other hand, are generally referred to as agricultural laborers but largely connotes seasonal workers. Elaboration on the nuances of the terms as used in the sector and as used in labor and employment statistics, and a presentation of the corresponding estimates, are presented as Technical Annex A in this monograph. So as not to create confusion at this point and to maintain consistency across sectors, the terminologies used in labor statistical publications as adopted in Chapter 3 are maintained throughout this report.

income may be inclusive of other non-agricultural secondary sources of income; and (2) the respondent families include regular farmworkers and employers and not just the targets of P2, i.e., the seasonal farmworkers and the self-employed. Moreover, the use of FIES data in the succeeding analysis compels a shift from individual to family/household as the paying membership unit. In any case, this shift is considered appropriate to the sector in view of the characteristics of the agricultural workforce and agricultural income as described above. That is, virtually all able-bodied members of an agricultural household contribute to the income of the family without a reckoning of individual earnings.

Major Source of Income. At the national level, more agricultural families derive their income from entrepreneurial (either as employer or self-employed) activities than from wages and salaries (*Appendix Table 7*). There are about 73 percent pursuing entrepreneurial activities, while only 27 percent are wage/salary based. This pattern of distribution is also observable at the regional level, except for the NCR where the ratio is 70 : 30 between entrepreneurs/own-account and wage/salary earners, and Region VI where there are almost equal number of families for each income source.

Median Income. Roughly one-half of all agricultural families, either as own-account or wage/salary earner, have annual income below 20,000. With a cut-off income of 18,000 for the self-employed workers, this means roughly about one-half of those in this category do not have access to P1.

There are significant variations when regional median income is compared to the national median income and to those of the other regions. The proportion of agricultural wage/salary earning families in the NCR, CAR, Regions X and XI earning below 20,000 is less than the national average (*Figure 11*). For the NCR and CAR, there are less than 20 percent of families

in these regions earning less than 20,000, while for Regions X and XI, less than 40 percent. On the other hand, about 60 to 75 percent of agricultural wage/salary families in Regions I, II, V, VI, VII, VIII and IX are earning less than 20,000.

For agricultural families whose main source of income is from entrepreneurial activities,

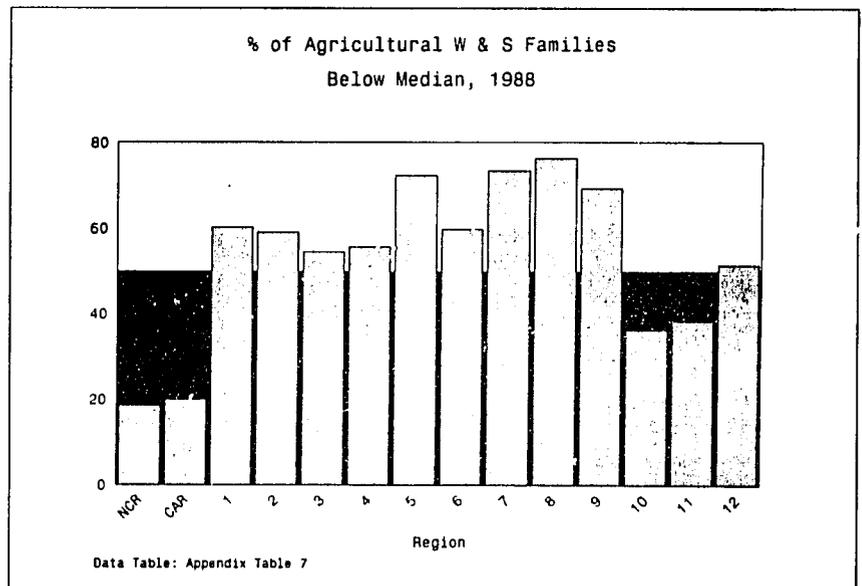


Figure 11

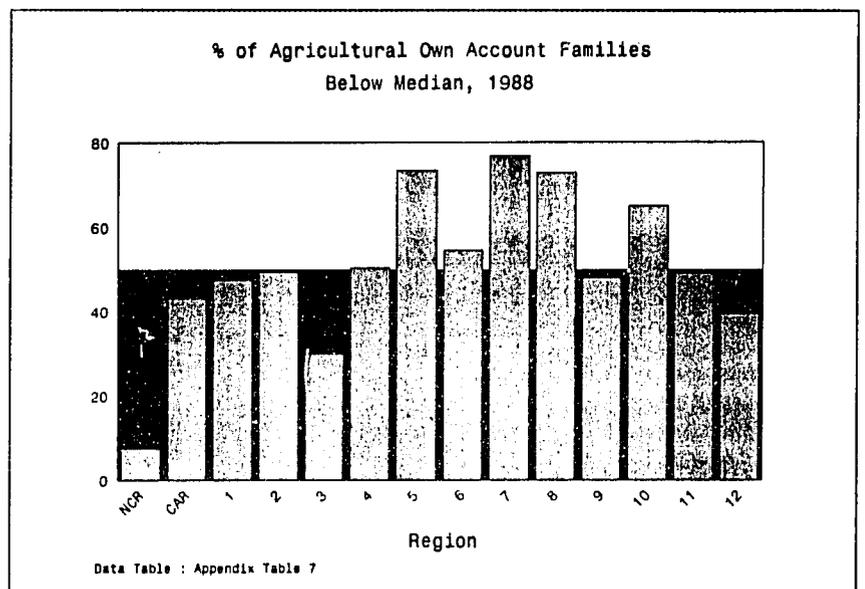


Figure 12

the NCR has less than 10 percent earning below the median income, less than 30 and 40 percent for Regions III and XII (Figure 12). Regions V, VI, VII, VIII and X, however, have about 55 to 77 percent families with incomes lower than the national median income, or currently not eligible for P1 coverage.

In general, there are more agricultural families in the Visayas geographical region earning less than the national median income and compared to other regions. If premium is to be based on the capacity to pay and assuming a progressive premium structure, these regional differentials suggest that more families from the Visayas will be paying less than those of other regions.

Poverty Incidence. The median income used above as a benchmark for comparative purposes does not give any indication of the state of well-being of agricultural families. It does not consider, for instance, the cost of living in each region and the fulfillment of basic needs. Those from the NCR are not necessarily better off compared to those from the other regions just because majority of them are earning higher than the national median income.

A useful benchmark for comparing their state of well-being is the poverty threshold which is defined for each region. The use of this benchmark for comparative purposes, however, is limited by the characteristic of the published FIES data as follows: (1) the number of family members widely varied within each income class and region because of the use of the FIES of the "extended" family definition, while

the poverty threshold is defined for a family of six members; and (2) the families are classified by income classes while the poverty threshold is defined at a particular income level. Using the poverty threshold as a benchmark given the FIES data therefore requires the strong assumptions that the average agricultural family size is six⁷ and that the poverty threshold may be equated to an income class as a closest approximation.

The national/regional poverty threshold for 1988 and the poverty incidence, i.e., the number of families below the poverty threshold, are presented in Table 6. At the national level, roughly 90 percent of agricultural families whether self-employed or

wage/salary earner are below the poverty threshold. This is well below the poverty incidence of 50 percent for all families, qualifying the description of the agricultural families as the "poorest of the poor" segment of Philippine society.

Except for the NCR, CAR and the Mindanao geographical region, all the other regions have poverty incidence of at least 90 percent among wage/salary workers. Agricultural families in the remaining regions of Luzon whose main source of income is from entrepreneurial activities, however, are generally better-off than their wage/salary counterparts. It is only in the Visayas geographical region where poverty incidence is over 90 per-

Table 6 Incidence of Poverty by Region, 1988

Region	Poverty Threshold 1/	Poverty Incidence 2/		
		National	Agriculture	
			W & S	SE
Philippines	32,508	49.5	90.1	90.4
NCR	48,444	31.8	85.6	71.8
CAR	31,164	47.5	84.5	77.9
Region 1	31,164	47.5	93.6	73.1
Region 2	30,912	48.9	91.2	74.7
Region 3	34,574	39.6	92.8	78.3
Region 4	33,984	49.3	91.6	88.7
Region 5	29,316	65.3	92.7	93.7
Region 6	31,848	61.8	94.5	93.3
Region 7	26,076	54.6	93.9	93.0
Region 8	27,156	60.5	93.8	91.3
Region 9	27,468	52.0	87.0	79.6
Region 10	29,268	51.5	60.1	83.2
Region 11	33,156	52.2	79.5	85.2
Region 12	29,616	47.1	77.4	68.2

1/ Minimum average annual income that a family of 6 members should receive to be considered above poverty.

2/ Proportion of families below poverty level.

Sources of Data: 1992 Philippine Statistical Yearbook; 1988 Family Income and Expenditures Survey

⁷ The assumption that the average size of agricultural families is six is not so serious since calculation reveals that the average size of rural families based on 1988 FIES data is 5.26.

cent; the rest of the regions have poverty incidence below this figure.

Thus, both measures, i.e., poverty threshold/incidence and median income, indicate the pervasive poverty of agricultural families in the Visayas geographical region. This may justify a geographical basis for "price" discrimination, i.e., charging premiums differently based on where they live.

Medical Expenditure of Agricultural Families

The assessment of premium of paying members in Medicare, or any social health insurance for that matter, is usually based on the individual's capacity to pay. An indication of a person's willingness to pay, however, may prove useful in the process of setting the premium rate. The amount currently spent for health care services is treated as a proxy for "willingness to pay" in this study. The actual spending on health services is stated as a proxy for "willingness to pay" because currently, P1 coverage and thus Medicare benefit package, is not available to the P2 population. It is also possible that the health services that they currently utilize is a combination of inpatient and outpatient health services, compared to only inpatient services in the case of Medicare. Moreover, the utilization of Medicare benefit entitlement would still require copayment from the member because of the less than one-hundred percent support

At the national level, medical expenditures by lowest income group (below 6,000) is 96 per annum, while those in the highest income group (100,000 and over) is 1,900 per annum.

value of Medicare. Thus, it is conceivable that some would be willing to pay more, and some less, for a health insurance coverage as an alternative for out-of-pocket payments.

The FIES reports the proportion of total family expenditures devoted for medical/health purposes by income class, but not for each sector. In order to obtain indications of the willingness to pay among agricultural families, expenditure levels by income class is assumed to be equal across sectors allowing the use of FIES data for this purpose.

A cursory review of the data does not show a consistent trend in medical expenditures as a percentage of total expenditures across income classes both at the national and regional levels⁴ (Appendix Table 8). At the national level, medical expenditures as a percentage of income is about 1.7 percent on average. Those belonging to the 6,000 - 9,999 income class in NCR spend the lowest proportion at 0.4 percent, while those belonging to the highest income class in Region III spend the highest proportion at 3.5 percent.

⁴ The delineation between these two mutually-exclusive categories, however, becomes blurred when one analyzes sector-specific data. For instance, own-account workers are commonly referred to in the sector as agricultural operators. Wage and salary earners on the other hand, are generally referred to as agricultural laborers but largely connotes seasonal workers. Elaboration on the nuances of the terms as used in the sector and as used in labor and employment statistics, and a presentation of the corresponding estimates, are presented in Technical Annex A at the end of this chapter. So as not to create confusion at this point and to maintain consistency across sectors, the terminologies used in labor statistical publications as adopted in Chapter 3 are maintained throughout this report.

The peso level of medical expenditures⁵ (maximum), computed by multiplying the proportion devoted for medical purposes and the upper limit of a particular income class (except for the highest income class), shows interesting results. Medical expenditures are consistently rising from the lowest to highest income levels. At the national level, medical expenditures by lowest income group (below 6,000) is 96 per annum, while those in the highest income group (100,000 and over) is 1,900 per annum. For the observed national median income of agricultural workers of 20,000 and national average medical expenditure of 1.7 percent of income, medical expenditures is about 340 (20,000 median income x 1.7 percent average medical expenditures).

These monetary values of willingness to pay by different income groups are compared to what would have been paid as (individual) premium if these agricultural families were P1 beneficiaries. Currently, the payroll tax is 2.5 percent of a member's monthly salary credit shared equally between the employer and employee for wage and salary workers and shouldered entirely by self-employed workers. The monthly salary credit is the compensation base for Medicare contributions, with a maximum salary credit of 3,000 per month or 36,000 per annum. For an agricultural family earning the

national median income of 20,000, the monthly salary credit is 1500 or 18,000 per annum. The latter is based on the SSS schedule of salary and premium rates for privately employed workers. The required annual contribution of a median agricultural family for Medicare P1 benefit entitlement would therefore be about 450. This is higher than the current annual medical expenditures of 340.

Up to the P1 salary credit ceiling of 36,000 per annum, expected contributions are consistently higher than what families are actually spending and presumably are willing to pay as Medicare premium. Beyond the P1 ceiling, agricultural families are actually spending more than the amount they are expected to pay as premium contributions for P1 entitlement. This result has important implications on the amount of subsidy that would be required if agricultural workers are placed under P2 coverage. Among agricultural workers earning below the Medicare wage ceiling, it would appear that counterpart contributions from employers or subsidy from government, either national or local, are critical to the provision of a benefit package which is comparable to that of P1. The level of subsidy, i.e., the difference between actual expenditures and expected contribution, varies among income classes. The amount of subsidy per member-family ranges from 32 for the lowest income class, to 220 for the 30,000-39,000 income class. For a median agricultural family, a subsidy of 110 would have been required to have become eligible for P1 benefits. Agricultural families earning at least

Among agricultural workers earning below the Medicare wage ceiling, it would appear that counterpart contributions from employers or subsidy from government, either national or local, are critical to the provision of a benefit package which is comparable to that of P1.

40,000 do not require any subsidy if actual medical expenditures can be collected fully for Medicare benefit entitlement. Admittedly, these estimates of willingness to pay for Medicare will have to be refined to take into consideration the copayment that would still be required if a Medicare beneficiary actually uses his/her entitlement.

Other Socio-Demographic Characteristics of Agricultural Workers

A review of the literature yields an array of socio-economic factors hypothesized to affect the demand for, or the utilization of health care services. These factors are generally categorized into economic, usually referring to income and prices; non-economic, which includes biological, physiological, demographic, environmental, other supply factors; and a host of other non-economic factors. Empirical results, however, are not conclusive as to the magnitude and direction of the effects of these factors on demand even within specific socio-demographic groups and geographical regions.

This study does not intend to establish the relationships between these factors and the demand for health care of potential P2 beneficiaries in the agriculture sector through rigorous modelling and econometric estimation of the relationships. These may be undertaken as follow-up research activities. What is done instead is a presentation and description of selected socio-demographic characteristics of the target population. General statements are then made on what these imply on P2 particularly with respect to demand for health care services given the hypothesized theoretical relationships and initial empirical results of Philippine studies where available.

Gender. At the national level, about three-fourths of employed persons (including unpaid family workers) in the agriculture sector are males (Table 7). This distribution holds true in most of the regions, except in the NCR where males are about 90 percent of the employed workers, and the CAR where there are about equal number of male and female workers.

There are no conclusive findings on the effect of gender on the demand for health care services. The general perception is that females demand more health care than males, arguably due to pregnancy-related medical needs. Actual utilization data, however, do not strongly support this. Ching (1992) explains that in many societies, women have low economic values which lead to their low use of health services. This result derives from human capital theory. Families tend to invest more on members whose economic value is perceived to be greater. If this pre-

diction of the theory is valid in the case of the Philippines, males in the agricultural sector may tend to demand more health care than females, all other factors held constant.

Education. Except for the NCR, majority (50 to 75 percent) of those employed in the agriculture sector are either elementary level or elementary graduates (Table 8). Comparing across geographical regions, a larger proportion of agricultural workers in the Visayas are elementary level/graduates. Only about 5 percent have had college education, or obtained a college degree.

It is hypothesized that there is a positive correlation between education (usually measured in terms of the number of years of formal education) and demand for/utilization of health services. Presumably, higher education leads to better appreciation of the positive benefits of maintaining good health. Ching (1992) argues, however, that this does not necessarily result in higher demand for all types of health services. Greater amount of education is supposed to enable a person to recognize early symptoms of illness, resulting in the patient's greater willingness to seek early treatment. This may result in higher demand for promotive/preventive care, but considering that health is a continuum, one may expect a corresponding reduction in the demand for curative care which is relatively more costly.

Considering the low levels of educational attainment of agricultural workers, current health care service utilization could

Table 7 Agricultural Workers by Gender, 1990					
Region/Sex	Total	% of Region	Region/Sex	Total	% of Region
Philippines	10,037		Region 6	1,102	
Male	7,501	74.73	Male	795	72.14
Female	2,536	25.27	Female	307	27.86
NCR	35		Region 7	802	
Male	32	91.43	Male	570	71.07
Female	3	8.57	Female	232	28.93
CAR	320		Region 8	823	
Male	190	59.38	Male	589	71.5
Female	130	40.63	Female	234	28.43
Region 1	682		Region 9	654	
Male	510	74.78	Male	549	83.94
Female	172	25.22	Female	105	16.06
Region 2	584		Region 10	760	
Male	425	72.77	Male	534	70.26
Female	159	27.23	Female	226	29.74
Region 3	748		Region 11	858	
Male	619	82.75	Male	647	75.41
Female	128	17.11	Female	211	24.59
Region 4	1,109		Region 12	651	
Male	890	80.32	Male	492	75.58
Female	218	19.68	Female	158	24.27
Region 5	912				
Male	659	72.26			
Female	253	27.74			

Source of Data: Integrated Survey of Households Bulletin No. 63, October 1990

possibly be biased towards curative care. If this is the case, a benefit package similar to the current P1 may then be seen as a substitute for current health care service utilization by agricultural families. This could serve as an incentive to willingly participate in the Medicare program.

The current utilization rate for P1 may have to be revised upwards with the inclusion of the agricultural population. Utilization rate for Medicare inpatient services is currently estimated at 15 percent. This is

derived from actual Medicare P1 avilment of about 5 percent, and assuming that 3 out of the 5 members of an average household avail themselves of inpatient services⁹. It is probable that utilization rate among agricultural families is higher than the P1 Medicare experience which currently do not include these families. This has implications on actuarial assumptions concerning utilization and eventuality.

⁹Based on the actuarial estimates provided by Horace Templo, Chief Actuary, SSS, in connection with the Bukidnon Health Insurance Project.

**Table 8 Agricultural Workers by Highest Grade Completed, 1990
% of National/Regional Total**

Region	No Grade Completed	Elementary	High School	College & Higher
Philippines	6.63	63.17	25.21	4.99
NCR	0.00	45.71	37.14	14.28
CAR	11.25	56.87	26.87	5.00
Region 1	4.25	52.64	36.07	7.04
Region 2	4.11	61.48	28.08	6.33
Region 3	2.01	64.58	28.75	4.68
Region 4	3.79	64.26	27.35	4.60
Region 5	3.18	68.42	24.45	3.95
Region 6	4.81	63.70	25.40	6.07
Region 7	10.85	73.19	12.85	3.12
Region 8	6.08	70.96	19.32	3.64
Region 9	16.06	61.62	18.81	3.52
Region 10	4.47	66.97	23.81	4.74
Region 11	4.20	58.04	31.35	6.41
Region 12	19.20	49.62	25.35	5.84

Source of Data: Integrated Survey of Household Bulletin No. 63, October 1990

ally the cost of providing a Medicare benefit package comparable to P1 benefit package.

Potential Members of P2: Agriculture, Fishery and Forestry Sector

Employment categories, in terms of class of worker and sectoral affiliation, are the primary bases for the estimation of potential paying members of P2 in this study. Proceeding from the negative employment list of P1, a total estimate of 5.795 million potential P2 paying members is derived in the preceding chapter. About 4.469 million are in the agriculture sector. This estimation process takes the individual worker as the potential P2 paying member. The above discussion, however, highlights

the need to shift from an individual to a family or household as the unit of membership in the agriculture sector. A recapitulation of the estimation with an individual as the membership unit is done in the following section, with the end in view of comparing estimates using the family/household as the membership unit.

Individual Membership. By class of worker, there are two broad categories of gainfully employed persons in the agriculture, fishery and forestry sector which have been identified in the earlier chapter as constituting the potential paying members of P2. These are the self-employed persons and the wage and salary agricultural workers.

Agricultural Wage and Salary Earners

Current SSS/Medicare membership policies exclude wage/salary earners in the sec-

tor who are share and leasehold tenants¹⁰ and agricultural workers who are not paid any regular or base pay and who do not work for an uninterrupted period of at least six months. Due to the lack of estimate for this specific group, the estimate for total private agricultural workers is used. From Table 4 of Chapter 3, these are estimated to be about 1.915 million, or 98 percent of total agricultural wage and salary earners. This excludes the agricultural workers in the public sector since all government workers, regardless of tenure, are supposedly covered mandatorily by the social insurance program inclusive of Medicare. However, there is a certain degree of overestimation since the estimate used includes those employed as permanent (regular) workers in plantations or *haciendas*. Nevertheless, this is considered not significant enough as to invalidate the results of the estimation process and the findings of the study.

The regional distribution of private agricultural workers is presented in *Figure 13*. About 67 percent of these are concentrated in five regions as follows: Region VI, accounting for 23.03 percent of the total seasonal farmworkers; Region IV, 12.69 percent; Region III, 11.44 per-

¹⁰ Note that the full implementation of the Comprehensive Agrarian Reform Program (CARP) effectively abolishes all tenancy and leasehold arrangements in the sector. In addition, the expanded coverage of the CARP under RA 6657 also includes regular and seasonal farmworkers as qualified beneficiaries. As a result, tenure and employment classification in the agricultural sector will be reduced to owner-cultivatorship, or self-employment in the labor terminology. Thus, these tenurial arrangements may be considered transitory if not artificial.

cent; Region V, 9.76 percent, and Region XI, 9.61 percent. The noticeably high proportion of agricultural workers in Region VI may be attributed to the concentration of vast sugarcane plantations in the area, which are known to employ large number of seasonal laborers locally known as *sacadas*.

It is emphasized that this regional distribution is based primarily on the worker's usual place of residence, and not his place of work unless the two are the same. This distinction is important in the design of an administrative/operational structure for P2 if a significant number of these seasonal workers are itinerant or ambulant workers. Decentralization of P2 down to the provincial level as currently being considered would raise concerns on the portability of benefit entitlements, the point and timing of premium collection, and the administrative burden on the part of service providers in processing claims with presumably the decentralized units.

Another desirable level of disaggregation is the sub-sectoral affiliation of these agricultural workers. These data, however, are not reported in statistical publications hence cannot be presented here.

Self-employed Agricultural Workers

A self-employed person, as defined in labor and employment statistics, is one who is working for profit or fee in own business, farm, profession or trade *without any paid regular employee*. A person employing purely unpaid labor as is

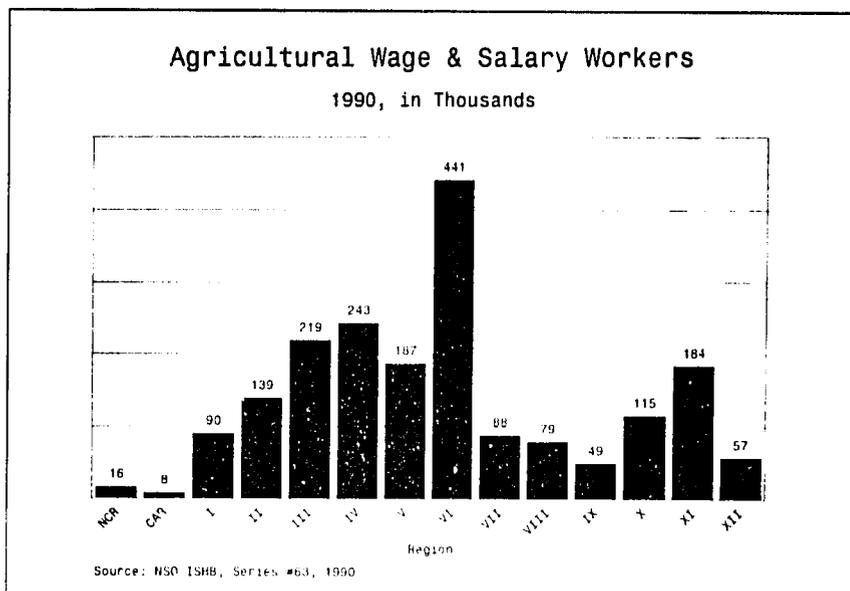


Figure 13

commonly the case in the sector is therefore considered as a self-employed. As of 1990, there are about 4.61 million self-employed workers in the agriculture sector. At the time the P1 was implemented in 1972, it was not clear if self-employed agricultural workers are eligible for P1 coverage. In January 1992, the SSS placed under compulsory coverage all self-employed agricultural workers earning at least 18,000 per annum. The 1988 FIES indicates that about 55 percent of own-account workers have incomes below 20,000. Applying all these conditions in 1990, about one-half of the total self-employed are thus not coverable by P1 because of the failure to hurdle the minimum income eligibility requirement.

There are about 2.554 million self-employed workers who are potential P2 paying members. This is estimated by applying the proportion of self-employed workers earning less than 18,000 per annum in each region as reported in the 1988

FIES to the total self-employed in the corresponding region.

The distribution of self-employed agricultural workers differs from that of the private wage and salary workers (*Figure 14*). The top five regions account for only 57 percent. In descending order as follows: Region VII, 14.21 percent of total self-employed persons; Region VIII, 12.45 percent; Region V, 11.71 percent; Region IV, 10.42 percent; and Region X, 8.65 percent. Except for Regions IV and V, the composition of the ranking regions differed from that of the wage/salary earners. P2 may also take into consideration these differences in the relative distribution of the two types of agricultural workers. Although seasonality is a pervasive characteristic of the sector, the migrational issue and the related concerns on the portability of benefits, point of collection, etc., raised in relation to itinerant agricultural workers will probably have less prominence in the case of the self-employed workers.

By subsector, various types of self-employed, or commonly referred to in the sector as agricultural operators, are identified in the literature. The estimates for each category are not available under the strict definition of the self-employed as stated above, but are available under the sector-specific terminology of agricultural operators. In order to get a sense of the relative distribution among and within subsectors, the relative distribution of each sub-category using agricultural operators' data as base figures, are presented in *Figure 15*.

About 86 percent of the "self-employed" are in the crops subsector, 11 percent in the fisheries subsector, and less than 1 percent in each of the forestry and livestock subsectors. Since the seasonality of production in the crops and fishery subsectors is more pronounced than in forestry and livestock, this pattern of distribution points to greater attention on the seasonality factor in the design of P2 should these types of workers are brought under Medicare coverage. The timing of premium collection, for instance, should consider the reality that the income of agricultural workers is highly irregular both in terms of level and timing. The regularity of premium payment and collection as currently prevailing in P1 may not be appropriate to the agricultural sector. For those in the crops subsector, premium payment and collection may have to be made during harvest time and in the fishery subsector, during "peak" seasons (Jeffers 1993).

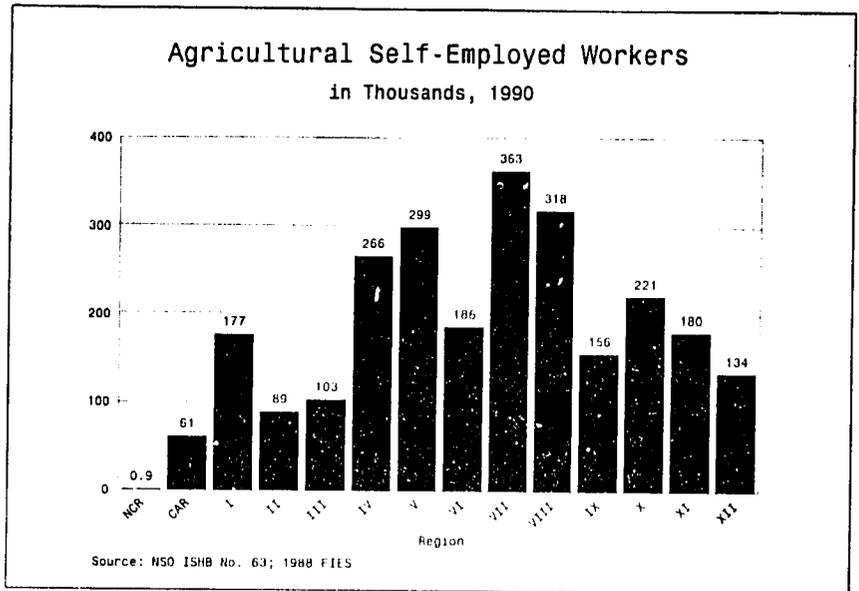


Figure 14

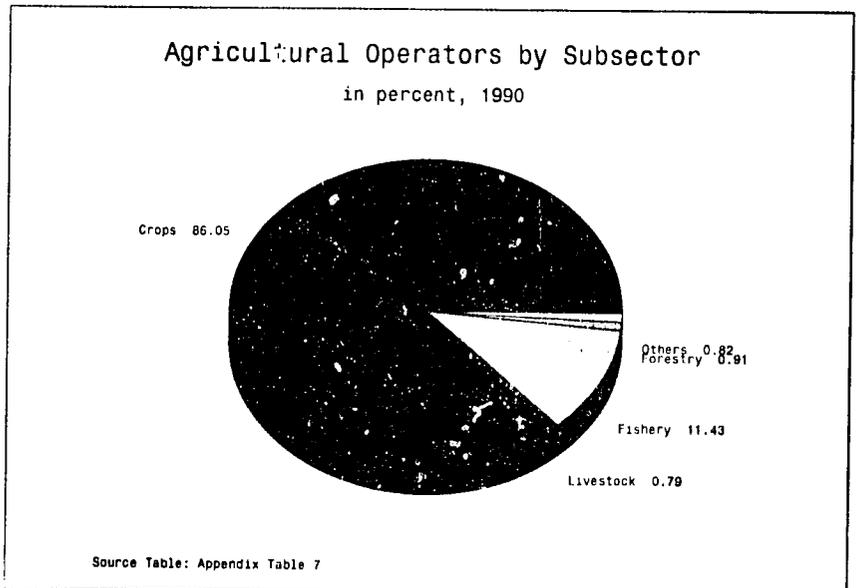


Figure 15

Family/Household Membership

A comparison of the magnitudes of the *total* (inclusive of employers and self-employed earning at least 18,000) number of individual workers in the agriculture sector as reported in labor statistics and ag-

ricultural families as reported in the FIES show that the latter, whether wage/salary or own-account, are about one-half of the former. This difference could be attributed to either or both of the following reasons: (a) agricultural workers may belong to the same family - on average, the data indicate that there are about

two agricultural workers in each family; and/or (b) although a member of the family may earn income from agricultural activities, the main source of income of the family unit may be from non-agricultural activities. This also tends to give a lower number of agricultural families than workers.

Thus, an agricultural family as the paying membership unit would result in the following changes in figures:

The self-employed estimates includes only those earning below 20,000 as was done earlier. The cut-off rate of 18,000 cannot be enforced because of the income class construction of the FIES data. Thus, the potential P2 paying members in the agriculture sector is now 2.494 million with households as the membership unit.

P2 Coverage in the Agriculture Sector

The non-paying population in the agriculture sector is also estimated using the derived national dependency rate of 2.2. It might be recalled that the non-

	Worker		Family		Worker to Family Ratio
Wage and Salary	From	1.959 m	To	0.995 m	1.97
Self-Employed		2.554 m		1.499 m	1.70
Total P2 Paying Members		4.513 m		2.494 m	1.81

paying population consists of persons below 15 years of age, and those 15 years who are either (a) not in the labor force, such as full-time students, housewives, pensioners and disabled; and (b) the unemployed. The individual paying membership of 4.513 million therefore translates to about 9.929 million (4.513 million x 2.2 national dependency rate) non-paying members in the agriculture sector. This brings P2 agricultural coverage, i.e., paying plus non-paying members, to about 14.442 million.

An alternative measure of P2 coverage in the agriculture sector is derived by using an estimate of the average agricultural family size, or in its absence, the average rural family

size. The 1988 FIES data show that the average rural "extended" family size is about 5.26. This translates to about 13.118 million (2.494 million x 5.26 average family size) P2 coverage in the agriculture sector. The use of the "extended" family concept ensures comparability of the derived estimate with the earlier measure of coverage.

Instead of viewing these as competing measures, these are considered as mutually reinforcing. These two estimates provide a reasonable range of P2 coverage in the agriculture sector, from a low 13.118 million to a high 14.442 million individuals.

Chapter V

CONCLUDING COMMENTS

Some Implications on Medicare Program 2 Design Development

The ultimate objective of the foregoing analyses is to identify their possible policy, financial and operational implications on P2, especially in connection with the basic design elements of a social health insurance. This study focuses only on certain aspects which it was able to obtain strong, if not entirely conclusive, findings. The following will touch only lightly on the benefit package, while nothing will be said on the supply aspect of health service since this study basically tackles the demand-side.

Equity Considerations

The non-coverage of a segment of the population arising from membership eligibility requirements, as distinguished from those not in compliance, creates an equity issue. This study shows that majority of the non-covered population are in the agriculture sector, estimated to be within the range of 13 to 15 million individuals. In addition to this concentration of non-coverage in just one sector, ag-

ricultural families are in the bottom of the income spectrum. About 90 percent of all agricultural families, both wage/salary earners and entrepreneurs, are below the poverty threshold. This pervasive poverty in the sector could altogether deny their access to health services in the absence of publicly-provided health services. These considerations of equity imply that priority-wise, the agriculture sector should be at the top of the P2 coverage list. The complete coverage of the sector would have reduced considerably the members of the population without access to Medicare.

Financial Implications

The coverage of the agriculture sector has two significant financial implications. First, it could possibly optimize the use of currently-available resources for health service provision. Data shows that agricultural families are currently spending about 1.7 percent of their income for medical purposes. These show that agricultural families, even in extreme poverty, could possibly contribute to a Medicare fund that would insure them against a financially catastrophic event. Individual spending on insurable health risks would be less than optimal. Risk sharing and fund mobilization on a large scale such as the

sectoral level allows aggregate optimization of the utilization of limited resources.

The second implication relates to the amount of subsidy or counterfunding that would have been required in the year 1990 to have extended P1 coverage to the potential P2 beneficiaries in the agriculture sector, the largest single occupational grouping of persons not covered by P1 and a population segment generally regarded as constituting a large portion of persons below the poverty line. Based on the analysis of 1988 FIES data, a median agricultural household received roughly 20,000 annually. In addition, these households were estimated to have spent about 1.7 percent of income, or 340 per annum, for health services. Under P1 regulations, a 2.5 percent of the salary credit (for the median income of 20,000, the salary credit is 18,000) or 450 would have been required for P1 benefit entitlement for a median agricultural family. This suggests that a subsidy of only about 110 (450 expected premium contribution less 340 actual medical expenditures) per agricultural household would have been sufficient to enable each of the estimated 2.494 million agricultural families to have become eligible for P1 benefits in that year. Assuming that the picture has not

changed appreciably from that time, and holding other factors equal, it would appear that in principle, P1 benefit entitlement could be extended to an estimated 2.494 million agricultural families or 13 to 15 million persons for a total cost of roughly 274 million (2.494 million x 110 per family). This amount is well within the 1.0 billion per annum recently announced by the legislature as earmarked from cigarette taxes for the expansion of Medicare coverage to the rest of the population. Thus the 1.0 billion of earmarked "sin taxes" could be very important in the future expansion of Medicare coverage. This is in addition to financial resources that may be made available in the form of counterfunding from employers of agricultural wage earners. These financial estimates should be interpreted with caution for several reasons:

1. *the data are several years old;*
2. *total premium subsidy requirements do not reflect those required out-of-pocket, i.e., the difference between Medicare support values and actual cost to beneficiaries;*
3. *the cost to members of all other health services not included in the Medicare benefit package; and*
4. *that 340 per year will have to be collected from each of 2.494 million agricultural families.*

In addition, consideration remains to be given to the investment and operational costs that may be required in the health delivery system to meet probable increased demands that are likely to be induced.

Paying Membership and Assessment Unit

Current P1 paying membership unit is the individual gainfully employed worker, whether as a wage/salary earner or a self-employed. The unique characteristics of the agriculture sector where majority of the P2 beneficiaries are found may require a shift from the current individual membership unit to a family, or household, membership unit. Agricultural production is pursued as a family activity. Members of a household contribute individual effort to the realization of income, without receiving any formal compensation in return. The head of the household is usually reported as the only gainfully employed in an agricultural family, while the rest of the household are reported as unpaid family workers. This explains the high proportion of unpaid workers reported in the sector.

This shift in membership unit may also allow for innovative ways of assessing the level of premium. In addition to the purely

income-based premium assessment as is currently prevailing in P1, other parameters such as the number of members in the family or household, and family wealth or property may be taken into consideration in implementing a "means test" to the determination of the ability to pay. Premium assessment methods that take into consideration these factors are currently practiced in South Korea; these may be adapted here in relation to the coverage of the agriculture sector.

Enlistment and Collection Mechanism

Unlike the formal wage/salary sector, enlistment of and premium collection from the private informal sector pose a formidable challenge to the Medicare system. In the formal sector, except for the initial individual enlistment for SSS membership, the succeeding Medicare premium collection is already facilitated by the employer. Self-employed workers, however, are required to enlist with, and subsequently make periodic contributions to, the SSS. This cumbersome process for the self-employed has not encouraged compliance to mandatory coverage under P1.

It is likely that the P2 program, especially with regards the coverage of the agriculture sec-

tor, will encounter similar challenges. The following are important considerations in regards the design of enlistment and collection mechanism:

1. Seasonality of Production

P2 clientele consists primarily of those employed in the informal sector. Employer-employee relationships, especially among agricultural workers, are not on a sustained basis as in the formal sector due to the seasonality of agricultural production. Agricultural employers are thus likely to view the enlistment and premium collection process as additional administrative work, in addition to the financial burden on them, that will discourage compliance.

Another implication of the seasonal nature of agriculture production is on the regularity of premium collection. Collection period for P1 is based on calendar-months which coincides with the pay periods of the wage and salary earners in the formal sector. Agricultural income, however, is realized only at a point in time, such as during harvest season in the crops sector, or only during specific periods, such as during "peak" season in the fishery sector. Collection of premium should be scheduled in such a way that it coincides with the agricultural production timetable.

2. Physical Access

Agricultural activities are in rural areas where physical access remain restrained. A P2 collection system similar to the existing P1 collection system where the self-employed member, or the

Collection of premium should be scheduled in such a way that it coincides with the agricultural production timetable.

... A reversal of roles where the collecting agent "goes" to the member as practiced by private insurance companies, or the tapping of locally-based organizations such as agricultural cooperatives to serve as collection points, are some of the alternative options for premium collection.

employer of the wage/salary earner, remit contributions to SSS offices or accredited banks is likely to create compliance problem as is currently prevailing with P1. A reversal of roles where the collecting agent "goes" to the member as practiced by private insurance companies, or the tapping of locally-based organizations such as agricultural cooperatives to serve as collection points, are some of the alternative options for premium collection. The designation of primary collection point remain necessary even if Medicare is decentralized at the provincial level as currently discussed in the legislative arena.

3. Mobility of Agricultural Workers

A decentralized structure of P2 or a national coverage health insurance program is likely to create special problems regarding enlistment of and collection of premium from ambulant or itinerant workers. For instance, will an itinerant worker have to enlist, and pay contributions, in each local Medicare as he moves

from one place of work to another? Taking the family or household as the membership and assessment unit offers a solution to this special problem. Itinerant workers are more or less permanently attached to a particular household even though they temporarily migrate to other regions for seasonal employment. Their household becomes the point where they are enlisted as members, and where they pay their premiums. While this household membership does away with the issues on enlistment and premium collection, it raises another problem on portability of benefits which is discussed immediately below.

Portability of Benefits

The "portability" of benefits is a special concern which arises if Medicare is decentralized to provinces or regions. The same issue on portability of benefits may be raised with regards ambulant or itinerant workers who temporarily migrate to other provinces or regions for seasonal employment. Since his membership is in his permanent place of residence, special provisions will have to be made that will allow an itinerant worker to avail of benefits in another place not covered by his local Medicare unit. This may require formulation of mechanisms and procedures that will allow utilization of a basic Medicare benefit entitlement in another place,

which is not necessarily the same as his entitlement in his local unit. Special billing procedures for health service providers, or alternatively, special arrangements between local Medicare units, will also have to be devised.

Benefit Package

Research results reviewed in this study indicate that health service utilization among agricultural families maybe biased towards curative health care, and most possibly to male-related illnesses. While these patterns of health service utilization still need further verification, these serve to highlight the need to review or to obtain sector-specific measures of rates of inpatient care utilization and

other parameters that will be used for actuarial estimation and forecasting of the financial implications of P2.

Need for Additional Research

The foregoing points to two important areas where additional research is needed:

1. *Further study on the health seeking-behavior of P2 beneficiaries:* This study is able to pinpoint the agriculture sector as the P2 major clientele. A sector-specific research which will provide information on patterns of utilization, expenditure, and demand for health care serv-

ices may be undertaken. Rigorous econometric analysis of factors affecting health service utilization can also be implemented, which in turn can be used in actuarial studies for purposes of designing a P2 for this group.

2. *Supply-side analysis:* A social health insurance is supposed to financially enable the population to avail themselves of health services. The capacity of the health sector to absorb new, or enhanced, demand is critical to the success of a health insurance program. An analysis of the mix and distribution of existing health infrastructure and personnel will reveal supply deficiencies or surpluses useful for policy purposes.

- **Technical Annex**
 - A. Agricultural Employment: Terms, Definitions and Estimates
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Technical Annex A

Agricultural Employment: Terms, Definitions and Estimates

Labor and employment statistical publications identify two classes of workers in different sectors. The first category are the own-account workers, or those working for profit or fee in own business, farm, profession or trade with or without any paid regular employee. The second category are the wage and salary workers, or those who work in either the public or private sectors for pay either in cash or in kind. This delineation between these two mutually exclusive categories, however, becomes blurred when one analyzes sector-specific data. For instance, the term agricultural operators is commonly used to refer, but not exclusively, to own-account workers. The 1991 Census of Agriculture defines an agricultural operator as one "who takes the technical and administrative responsibility of managing a farm/holding. He is responsible for making the day-to-day decisions in operating the farm, including the management and supervision of hired labor. The operator may work on the land alone or with members of the household, or he may not work on the land but employs others to work on it. He may or may not be the owner of the land." Agricultural employers and the self-employed are covered in the definition. However, a regular farmworker, such as a farm manager, and sharehold tenant would also be categorized as an agricultural operator when applying this definition. Labor statistics would classify farm managers and sharehold tenants as wage and salary workers. Wage earners, on the other hand, are commonly referred to in the sector as agricultural laborers but largely connotes seasonal workers.

Due to the broader coverage implied by the definition of agricultural operators, we expect a much higher estimate than that of own-account workers as reported in labor statistics. Inversely, sectoral estimates of agricultural laborers are expected to be lower than labor statistics estimates. The following is a comparison of the sectoral and labor data on the levels of the two categories, which bear out the foregoing expectations :

	Number, millions
Agricultural Operators 1/ Own-Account 2/	6.590 <u>5.078</u>
Difference	1.512
Agricultural Laborers 1/ Wage & Salary Workers 2/	1.304 <u>1.959</u>
Difference	(0.655)
Overall Discrepancy	0.857

1/ Source: 1990 Census of Population and Housing

2/ Source: 1991 Yearbook of Labor Statistics

Technical Annex B

Sources of Data

1. The National Statistics Office (NSO): The NSO is the primary data-generating agency of the Philippine government. It conducts various census and surveys at periodic intervals on characteristics of the entire population or of specific sectors of the economy. An enumeration and description (purpose, sampling method, content, etc.) of the data-generating activities of the NSO has been done by the Data Management Unit of the Health Policy Development Program (HPDP) of the UPecon. This is contained in HPDP-DMU Report No. 2, and NSO censuses and surveys described in the report which are of particular relevance to this study are summarized below:

The *Census of Population and Housing (CPH)* aims to make a complete count of individuals residing in the Philippines, and to gather information on demographic and socioeconomic characteristics such as age, sex, relationship to household head, marital status, citizenship, religion, educational attainment and occupation. The Census also provides information on residents that have any physical or mental disability. The CPH is done every 10 years, the last two of which were in 1980 and 1990.

The *Family Income and Expenditures Survey (FIES)* collects data on family income sources and consumption expenditures, including factors affecting the level and pattern of income and expenditures. The FIES is done every 3 years, the latest two of which were done in 1988 and 1991.

2. The Bureau of Labor and Employment Statistics (BLES) of the Department of Labor and Employment (DOLE): Another important source of data for the study is the annual publication of the BLES called the *Yearbook of Labor Statistics*. It provides historical and comprehensive statistics on labor, employment and related socio-economic information. Data published in the Yearbook comes from various sources. Some are generated by the BLES through its Employment and Wage Structure Survey, and others are culled from the reports submitted by other units and attached agencies of the DOLE. Other sources of data are those surveys conducted by the NSO, particularly the Labor Force Survey, the statistical publications of the National Statistical Coordination Board (NSCB), and reports of other government agencies such as the Professional Regulation Commission (PRC), Civil Service Commission (CSC), etc.

3. The National Statistical Coordination Board (NSCB): In providing the macroeconomic perspective for this study, data are drawn primarily from the *Philippine Statistical Yearbook*. This is an annual publication of the NSCB summarizing data on various sectors of the economy. Primary data for the publication also originates from the NSO.

4. Philippine Institute for Development Studies (PIDS): The PIDS has undertaken or is currently undertaking research related to health policy and health financing which provides useful information in constructing the health profile of the non-covered population. One PIDS project is the currently on-going Health Policy Development Program (HPDP), which is a joint project with the Department of Health (DOH), aimed at informing the health policy formulation process spearheaded by the DOH. In order to support the data requirements of the research studies under the HPDP, the PIDS embarked on primary data generation through a survey conducted in four regions (NCR, Regions 2, 7 and 10), covering two provinces in each region except NCR. Respondent households total 2798, about 53 percent

of which came from the NCR. The survey gathered information on the use of health service facilities, sources of health financing including Medicare, and epidemiological and socio-economic profile of respondents. On-going research studies under the HPDP reviewed for this study are : (a) Demographic, Socioeconomic and Epidemiological Profile of Health Care Beneficiaries, by Fr. Wilhelm Flieger; (b) Rural Poverty Groups and Their Current Health Care Status, by Michael A. Costello and Marilou P. Costello; (c) Health Care Financing for Special Beneficiary Groups : Urban Poor, by Dr. Olympia Malanyaon; (d) Patterns of Utilization, Expenditures and Demand for Health Care Services in the Philippines, Ms. M.C.G. Bautista; and (e) on The Feasibility of Alternative (Non-Insurance) Financing Scheme, by Irene Lanuza.

5. In view of the sectoral approach which is employed in this study, sector-specific data are also taken from the following statistical publications:

Census of Agriculture, National Statistics Office

Statistical Handbook of Agrarian Reform, Department of Agrarian Reform

Philippine Forestry Statistics, Department of Environment and Natural Resources

Additional data and research results are collected from the Departments of Agriculture, Agrarian Reform, Environment and Natural Resources, Trade and Industry, Cooperative Development Authority, Bureau of Rural Workers of the DOLE, and other government agencies.

6. Additional sources of information are academic and private research organizations, such as the Social Weather Station, the De La Salle University, Ateneo.

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Virata, Cesar E.A., Froilan M Bacungan, and Linda Luz Guerrero, "Expanded Number of People Covered by Medicare Program 1 of Medicare," Draft Final Report, Health Finance Development Project, November 1993

Appendix Table 1. Medicare Program I Coverage, 1972-1991 In Millions								
YEAR	PAYING MEMBERS			DEPENDENTS & RETIREES			TOTAL COVERAGE	AS PERCENT OF POPULATION
	SSS	GSIS	TOTAL	SSS	GSIS	TOTAL		
1972	1.27	0.51	1.78	5.08	2.04	7.12	8.90	22.797
1973	1.61	0.51	2.12	6.44	2.04	8.48	10.60	26.356
1974	1.75	0.53	2.28	7.00	2.12	9.12	11.40	27.498
1975	2.01	0.71	2.72	8.04	2.84	10.88	13.60	32.182
1976	2.29	0.79	3.08	9.16	3.16	12.32	15.40	34.994
1977	2.52	0.84	3.35	10.08	3.35	13.43	16.79	37.052
1978	2.78	0.87	3.65	11.12	3.48	14.60	18.25	38.941
1979	3.03	0.94	3.97	12.12	3.76	15.88	19.85	41.248
1980	3.30	1.05	4.35	13.20	4.20	17.40	21.75	45.015
1981	3.50	1.06	4.56	14.00	4.24	18.24	22.80	46.027
1982	3.70	1.14	4.84	14.80	4.56	19.36	24.20	47.678
1983	4.24	1.20	5.44	16.96	4.80	21.76	27.20	52.314
1984	4.41	1.28	5.69	17.64	5.12	22.76	28.45	53.438
1985	4.51	1.49	5.98	18.04	5.96	24.00	30.00	55.058
1986	4.72	1.39	6.11	18.88	5.56	24.44	30.55	54.810
1987	3.24	1.28	4.52	12.96	5.12	18.08	22.60	39.660
1988	3.32	1.28	4.60	13.28	5.12	18.40	23.00	39.502
1989	3.38	1.25	4.63	13.52	5.00	18.52	23.15	38.937
1990	3.78	1.28	5.06	15.12	5.12	20.24	25.30	41.700
1991	3.87	1.30	5.17	15.48	5.20	20.68	25.85	41.781

Source: Beringuela, M.L., The Performance of Medicare I: An Economic Evaluation, July 1992, Progress Report, DOH-PIDS Baseline Studies

**Appendix Table 2. Medicare Program I
Actual vs. Potential Coverage, 1972-1991**

YEAR	EMPLOYED PERSONS											PROGRAM I MEMBERS		
	TOTAL			INDUSTRY			SERVICE 1/			AGRICULTURE			TOTAL	AS % OF NON-
	MILLION	Annual Growth, %	MILLION	% of Total	Annual Growth, %	MILLION	% of Total	Annual Growth, %	MILLION	% of Total	Annual Growth, %	MILLION	AGRICULTURAL EMPLOYMENT	
1972	12.58	a/	1.84	14.63	a/	3.88	30.84	a/	6.86	54.53	a/	1.78	31.12	
1973	13.87	10.25	1.83	13.19	-0.54	4.27	30.79	10.05	7.77	56.02	13.27	2.12	34.75	
1974	13.82	-0.36	1.91	13.82	4.37	4.23	30.61	-0.94	7.68	55.57	-1.16	2.28	37.13	
1975	14.52	5.07	2.21	15.22	15.71	4.54	31.27	7.33	7.77	53.51	1.17	2.72	40.30	
1976	14.24	-1.93	2.16	15.17	-2.26	4.42	31.04	-2.64	7.66	53.79	-1.42	3.08	46.81	
1977	14.33	0.63	2.18	15.21	0.93	4.68	32.66	5.88	7.47	52.13	-2.48	3.35	48.83	
1978	16.10	12.35	2.14	13.29	-1.83	5.56	34.53	18.80	8.40	52.17	12.45	3.65	47.40	
1979	16.27	1.06	a/	a/	a/	a/	a/	a/	a/	a/	a/	3.97	a/	
1980	16.43	0.98	2.48	15.09	a/	5.5	33.48	a/	8.45	51.43	a/	4.35	54.51	
1981	17.45	6.21	2.55	14.61	2.82	5.97	34.21	8.55	8.93	51.17	5.68	4.56	53.52	
1982	17.37	-0.46	2.47	14.22	-3.14	5.98	34.43	0.17	8.92	51.35	-0.11	4.84	57.28	
1983	19.21	10.59	2.76	14.37	11.74	6.57	34.20	9.87	9.88	51.43	10.76	5.44	58.31	
1984	19.67	2.39	2.91	14.79	5.43	7.03	35.74	7.00	9.73	49.47	-1.52	5.69	57.24	
1985	19.80	0.66	2.81	14.19	-3.44	7.29	36.82	3.70	9.70	48.99	-0.31	5.98	59.21	
1986	20.96	5.86	3.11	14.84	10.68	7.56	36.07	3.70	10.29	49.09	6.08	6.11	57.26	
1987	20.80	-0.76	3.05	14.66	-1.93	7.81	37.55	3.31	9.94	47.79	-3.40	4.52	41.62	
1988	21.50	3.37	3.35	15.58	9.84	8.23	38.28	5.38	9.92	46.14	-0.20	4.60	39.72	
1989	21.85	1.63	3.46	15.84	3.28	8.54	39.08	3.77	9.85	45.08	-0.71	4.63	38.58	
1990	22.53	3.11	3.40	15.09	-1.73	8.95	39.72	4.80	10.18	45.18	3.35	5.06	40.97	
1991	22.98	2.00	3.70	16.10	8.82	8.88	38.64	-0.78	10.40	45.26	2.16	5.17	41.10	
20-year Average	17.81	3.30	2.65	14.73	3.46	6.31	34.73	5.17	8.94	50.53	2.57	4.42	46.61	

1/ Includes those in wholesale and retail trade; transportation, storage and communication; financing, insurance, real estate and business services; community, social and personal services.

Source: 1988 and 1992 Philippine Statistical Yearbooks

Appendix Table 3. Population and Labor Force, 1990, in thousands	
Total Population	60,559
Persons 15 years and over	37,999
As % of total population	62.75
In the Labor Force	24,525
As % of popn. 15 yrs. & over	64.54
Employed	22,532
- Gainfully Employed	18,924
- Unpaid Worker	3,608
Unemployed	1,993
Not in the Labor Force	13,474
As % of popn. 15 yrs. & over	35.46

Source of Data: Integrated Survey of Households
Bulletin #63, October 1990

Appendix Table 4. Number of Employed Persons by Class of Worker and Sector,
in thousands, 1990

	All Sectors	Agriculture		Non-Agriculture	
		Number	% of Row Total	Number	% of Row Total
Gainfully Employed Persons	18,924	7,037	37.19	11,887	62.81
Wage and Salary Workers	10,299	1,959	19.02	8,340	80.98
- Worked for private household/ establishment/family-operated activity	8,380	1,915	22.85	6,465	77.15
% of total/sectoral wage & salary	81.37	97.75		77.52	
-Worked for government/ government corporation	1,919	44	2.29	1,875	97.71
% of total sectoral wage & salary	18.63				
Own-Account Worker	8,625	5,078	58.88	3,547	41.12
- Self-employed	7,901	4,610	58.35	3,291	41.65
% of total/sectoral own-account	91.61	90.78		92.78	
- Employer	724	468	64.64	256	35.36
% of total/sectoral own account	8.39	9.22		7.22	

Appendix Table 5. Dependent Population, 1990, In Thousands	
CATEGORY	NUMBER
Persons not gainfully employed, 15 years and over: a/	
Not in the labor force:	
	b
Students	5,832
	b
Pensioners	638
	b
Housekeepers, own home	9,004
	c
Disabled	473
Sub-total	15,947
In the labor force:	
	d
Unemployed	1,788
Population 14 years and below	e 23,987
TOTAL	41,722

a/ Includes persons who are not working, but may include those who are wanting and looking for work

b/ 1990 Census of Population and Housing, Table 15

c/ 1990 Census of Population and Housing, Table 7
This includes persons with the following disabilities: blindness, deafness, muteness, speech impairment, mental illness or retardation, orthopedic handicap, multiple disability and other disabilities. Some of these disabled persons may actually have gainful employment; in which case the figure is an over estimate of persons not gainfully employed.

d/ 1990 Census of Population and Housing, Table 18

e/ 1992 Philippine Statistical Yearbook, Table 1.4

Appendix Table 6. Agriculture, Fishery and Forestry Output, Export and Employment, 1972-1991

Year	Total GNP		Agriculture, Fishery and Forestry GNP				Total Employed Persons	Employed Persons in A, F & F Sector		Average Product of Labor 1/	Total Exports, FOB, US\$ M	A, F & F Exports	
	M, current P	M, 1985 price	M, current P	% of total	M, 1985 price	% of total	M	M	% of Total			FOB, US\$ M	% of Total
1980	243,270	608,600	61,219	25.17	143,295	23.55	16.43	8.45	51.43	16,958	5,788	2,362	40.81
1981	280,543	628,325	70,092	24.98	148,479	23.63	17.45	8.93	51.17	16,627	5,722	2,281	39.86
1982	313,544	646,186	74,055	23.62	149,641	23.16	17.37	8.92	51.35	16,776	5,021	1,846	36.77
1983	363,268	655,483	82,545	22.72	144,586	22.06	19.21	9.88	51.43	14,634	5,005	1,719	34.35
1984	508,485	598,340	129,824	25.53	143,247	23.94	19.67	9.73	49.47	14,722	5,391	1,837	34.08
1985	556,074	556,074	140,554	25.28	140,554	25.28	19.80	9.70	48.99	14,490	4,629	1,307	28.24
1986	596,276	579,175	145,807	24.45	145,725	25.16	20.96	10.29	49.09	14,162	4,842	1,236	25.53
1987	673,130	608,729	163,927	24.35	150,414	24.71	20.80	9.94	47.79	15,132	5,720	1,396	24.41
1988	795,159	652,293	183,515	23.08	155,292	23.81	21.50	9.92	46.14	15,654	7,074	1,484	20.98
1989	913,843	689,693	210,009	22.98	159,964	23.19	21.85	9.85	45.08	16,240	7,821	1,153	14.74
1990	1,076,841	716,964	235,956	21.91	160,734	22.42	22.53	10.18	45.18	15,789	8,186	1,063	12.99
1991	1,251,690	716,216	262,342	20.96	161,859	22.60	22.98	10.40	45.26	15,563	8,840	1,402	15.86
Average	631,010	638,007	146,654	23.75	150,316	23.62	20.05	9.68	48.53	15,562	6,170	1,591	27.38

Source of Data: 1992 Philippine Statistical Yearbook

1/ Derived by taking the ratio between A, F & F GNP at constant prices and total sectoral employment.

Appendix Table 8. Medical expenditures of families, by income class, by region, 1988

	Total		Under 6,000		6,000 - 9,999		10,000 - 14,999		15,000 - 19,999		20,000 - 29,999		30,000 - 39,999		40,000 - 59,999		60,000 - 99,999		100,000 and Over			
	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.	% of TE a/	Exp.		
Medical Expenditures																						
Philippines	1.7	1.6	96.0	1.2	120.0	1.3	195.0	1.5	300.0	1.4	420.0	1.7	680.0	1.7	1020.0	1.8	1800.0	1.9	1900.0			
NCR	1.3	0.6	36.0	0.4	40.0	0.7	105.0	1.2	240.0	1.1	330.0	1.1	440.0	1.2	720.0	1.3	1300.0	1.5	1500.0			
CAR	1.3	0.8	48.0	0.7	70.0	1.0	150.0	1.3	260.0	1.5	450.0	1.7	680.0	0.9	540.0	1.6	1600.0	0.7	700.0			
Region I	2.1	2.8	168.0	1.4	140.0	0.9	135.0	2.0	400.0	1.3	390.0	1.7	680.0	3.3	1980.0	2.3	2300.0	2.3	2300.0			
Region II	2.1	0.8	48.0	1.1	110.0	1.0	150.0	1.9	380.0	1.7	510.0	3.7	1480.0	2.9	1740.0	1.4	1400.0	1.8	1800.0			
Region III	2.0	0.6	36.0	0.8	80.0	1.6	240.0	1.8	360.0	1.4	420.0	1.9	760.0	1.5	900.0	1.7	1700.0	3.5	3500.0			
Region IV	1.8	1.4	84.0	2.6	260.0	1.5	225.0	1.4	280.0	1.6	480.0	1.9	760.0	1.5	900.0	2.0	2000.0	1.9	1900.0			
Region V	1.8	1.7	102.0	1.4	140.0	1.2	180.0	1.1	220.0	1.2	360.0	1.4	560.0	3.3	1980.0	2.5	2500.0	2.7	2700.0			
Region VI	2.2	3.2	192.0	1.5	150.0	2.0	300.0	2.3	460.0	1.6	480.0	2.1	840.0	2.0	1200.0	2.9	2900.0	2.8	2800.0			
Region VII	1.3	1.2	72.0	0.7	70.0	1.0	150.0	0.7	140.0	0.9	270.0	1.5	600.0	1.3	780.0	2.8	2800.0	1.3	1300.0			
Region VIII	1.3	1.2	72.0	0.6	60.0	1.0	150.0	1.1	220.0	1.6	480.0	0.8	320.0	1.2	720.0	1.7	1700.0	1.6	1600.0			
Region IX	1.2	0.7	42.0	0.8	80.0	1.2	180.0	1.1	220.0	0.9	270.0	0.7	280.0	1.4	840.0	1.1	1100.0	2.0	2000.0			
Region X	2.0	1.8	108.0	1.0	100.0	1.3	195.0	1.5	300.0	1.7	510.0	1.4	560.0	3.1	1860.0	1.5	1500.0	2.6	2600.0			
Region XI	2.0	1.2	72.0	1.1	110.0	1.4	210.0	2.0	400.0	1.8	540.0	2.0	800.0	1.5	900.0	3.2	3200.0	1.7	1700.0			
Region XII	1.9	1.9	114.0	0.9	90.0	1.2	180.0	1.5	300.0	1.6	480.0	1.8	720.0	1.7	1020.0	2.9	2900.0	2.0	2000.0			
Medicare Premium b/		150.0		250.0		375.0		500.0		750.0		1000.0		1000.0		1000.0		1000.0		1000.0		

a/ Proportion of total expenditures devoted for medical purposes

b/ Computed as 2.5 percent (with a wage ceiling of P36,000) of the upper limit of the corresponding income class, except for the highest income class where the lower limit is used.

Source of Data: 1988 Family Income and Expenditure Survey

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Appendix Table 9. Subsectoral Distribution of Self-Employed Persons: Agriculture Sector, 1990		
Category	% of Total Subsector	% of Total
Crops Subsector		86.05
Crop Farmers	91.73	
Orchard Farmers	8.15	
Ornamental & Other Plant Growers	0.12	
Livestock Subsector		0.79
Livestock & Dairy Farmers	61.54	
Poultry Farmers	34.61	
Other Animal Producers	3.85	
Fishery Subsector		11.43
Aquafarm Cultivators	9.83	
Inland & Coastal Water Fishermen	42.63	
Deep Sea Fishermen	47.54	
Forestry Subsector		0.91
Forest Tree Planters	3.33	
Loggers	36.67	
Charcoal Producers & Related Workers	13.33	
Forest Products Gatherers	45.00	
Hunters and Trappers	1.67	
Fishermen, Hunters & Trappers not elsewhere classified		0.82

Source of Basic Data: 1990 Census of Population and Housing