

THE MEASUREMENT OF PHILIPPINE NATIONAL WELFARE^v

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Introduction

The term "welfare" is used here in a very broad sense. It is interchangeable with "well-being", "happiness", "quality of life", "state of development", and any other term which is meant to refer to the degree of achievement of the important goals of Philippine society as a whole. Mindful of these goals, and given the nation's limited research manpower and statistical resources, to what extent can this degree of achievement be quantified and made amenable to statistical monitoring over time? This is the basic question which the Social¹ Indicators Project of the Development Academy of the Philippines has sought to answer, over the research period October 1973 - September 1974. This paper is in the nature of a progress report through August 1974.

The results, which constitute neither the first nor the last word on the condition of Filipino welfare, are addressed to the entire Filipino people. We hope they will be of use particularly to political leaders and technicians in government, and lead to better guidelines as to when policies do or do not lead to development. However, it is perhaps equally important that they be useful to the general public. The public definitely deserves to know the extent to which government pledges for more rapid development are fulfilled or unfulfilled, and government itself is obligated to provide this information:

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¹ The term "social" in the title is not meant to imply non-economic or political, etc.; many of the indicators suggested are economic and political variables.

One of the great obligations of the government in the modern world is the dissemination of public knowledge. . . . Every deficiency on this score leaves the field open to the careerists and the demagogues who will then constitute themselves once more in a privileged political class, monopolizing knowledge that is for everyone.²

We should state explicitly, from the very beginning, that the project does *not* seek intentionally glowing or disparaging reports of the New Society. It does seek a system of measurement which is capable of depicting aspects of both improvement and worsening of national welfare. Such a system will require data which government is obligated to provide, and the measures generated by the system should speak for themselves.

As the research proceeded, a number of working principles evolved:

(a) National welfare is usefully treated as a composite of national achievements with respect to a number of identifiable *social concerns*, such as health, employment, peace and order, etc. Social concerns thus consist of the widely accepted, more or less permanent goals of Philippine society.

(b) It is necessary to account for the *sharing* within society of the welfare which accrues from the enhancement of any social concern.

(c) Present welfare consists not only of the welfare of Filipinos alive today but also of the state of present provision for the welfare of future generations. "Social indicators" — perhaps *welfare indicators* is a more descriptive term — are the specific variables to be measured and designed to reflect the degree of enhancement or the sharing of the enhancement, among present-day Filipinos and between those alive and those unborn, of any social concern.

(d) The assigning of weights or ranks or priorities to the welfare indicators, the social concerns and social groups, born and unborn, must be avoided wherever possible and left as the task of the users of the welfare indicators. When value judgments cannot be avoided, they should at least be explicitly stated and clarified.

² Marcos, 1973, pp. 73-74

Ethical Considerations

We have considered national welfare is taken as an abstraction with identifiable and measurable *components*. It is on the *components* that the research has focused. The relationship of national welfare to its components is a subject we have tried to avoid. Every individual citizen has the right, according to the Constitution, to hold and to express his preferences for some component, let us say employment, over any other, say the condition of the environment. For instance, O. D. Corpuz has recently suggested that, under present Philippine conditions, "economic freedom" deserves more priority than "political freedom."³ Those who are by political process the representatives and leaders of groups of citizens, large and small, indeed have the duty to set the priorities. For example, the new National Energy Plan declares that "the ecological equilibrium will be maintained as much as possible but not at the expense of this energy program or industrial growth".⁴ The policies implemented by government will undoubtedly reflect the priorities of some persons taking precedence over the priorities of others. The priorities of those who make welfare decisions will change with circumstances, and in the long run the decision-makers themselves give way to another generation. So it is not the business of a research group to set priorities or weights by which to construct some grand variable called PHILIPPINE WELFARE. Neither is it useful to determine the actual priorities of the present social leadership and use these for weights, for both the priorities and the leadership must change with time.⁵ (Our national priorities need not bear any resemblance to the priorities of any

³ Onofre D. Corpuz, "Liberty and Government in the New Society—An Intellectual Perspective," unpublished paper, October 17, 1973.

⁴ *NEDA Development Digest*, December 15, 1973.

⁵ The following mathematical summary is offered for the benefit of readers. We suggest that every citizen i has his notion of national welfare W_i , where $W_i = W_i(W_1, \dots, X_{30})$, where every X_j is a vector of variables pertinent to the j^{th} welfare indicator (later we suggest 30 major indicators), and elements of X_i refer to disaggregates by region, sex, age, income, class, etc. We assume that the set of X_j 's is the same for all individuals. The statement $W_i(\)$ need not be a real-valued function; it simply is the expression of individual i 's priorities, weights, biases, etc., including the interpersonal comparisons he prefers to make. The signs of the elements of $\partial W_i / \partial X_j$ should be un-ambiguous. The $W_i(\)$ can change over time. At any point in time, by political processes, some $W_i(\)$ dominate others, and set the social priorities.

other country. Malaysia is apparently heavily concerned with the distribution of its national welfare according to race; in Indonesia, the first priority appears to be political calm; Burma's priority appears to be Burmanization of their economy. Japan, according to its economic plan, has made a policy shift towards "realization of a vigorous welfare society." The plan treats, as its first two major goals, the "creation of a rich environment," and "ensuring a stable, comfortable life," i.e., better social security, better housing, and improvement in facilities for leisure.⁶

The proposed set of welfare indicators nevertheless cannot and need not be completely free of ethical judgment. The researchers are human, and obviously part of an educated elite; they have sought and taken advice from other elite from government, academia, etc., through formal conferences and in other ways. Elements of their judgment are to be found in a number of areas, which should be made explicit. It is found, first of all, in the identification of the variables, in the inclusion of some and exclusion of others. This is minimized to some degree by an emphasis on breadth rather than depth. It is felt that a system of welfare indicators will be much more useful if it aims for completeness of coverage, even at the expense of some roughness of measurement of some individual components. Exclusion of some aspect of welfare is similar to giving it an implicit weight of zero. For instance, the list of social concerns does not include "enhancement of Philippine culture," nor does it include "academic freedom". (The first concern is mentioned in the Constitution, Article 15, Section 9 (2), and the second in Article 15, Section 8 (2).) Persons who attach basic importance to these concerns as part of national welfare might feel justified at a sense of betrayal upon reading the list.

Defining objectives, as we were warned by a veteran administrator, is sometimes hard to distinguish from *imposing* objectives. We may proselytize on social indicators in the hope that government technicians and decision-makers will make it a practice to consider, *explicitly*, the wide-ranging implications of a given policy on consumption, employment, the environment, and so on. Ordinarily, for example, they might set low priority

⁶ See Osborne (1973), and Government of Japan (1973).

⁷ Mr. Armand Fabella, head the Commission on Reorganization of the Executive Branch.

on the state of the environment, and not even bother to inquire as to the pollution implications of a policy. But is this a sound practice? The economist John Hicks states:

It is impossible to make 'economic proposals' that do not have 'noneconomic aspects', as the Welfarist would call them; when the economist makes a recommendation, he is responsible for it in the round; all aspects of that recommendation, whether he chooses to label them economic or not, are his concern⁸.

The social indicator checklist might serve as a reminder that (in the judgment of the research team) there are many Filipinos who regard the environment as a social concern, and, in so reminding, induce more weight in the environment as a concern than if the checklist had not existed. The set of information available can, therefore, affect the scale of priorities; but this does not imply that information-gatherers should be chided for over-reaching their function.

Elements of judgment enter in the information of variables by combination. It is impractical, for instance, to require separate indicators for fish consumption and chicken consumption; the two are merely combined on the premise that a peso's worth of fish is as relevant to welfare as a peso's worth of chicken. Probably, there will be no serious objections if all food were combined, or even if food and non-food consumption items were combined, according to peso value⁹. It is possible, however, to go a great deal further. Methods exist by which money imputations can be placed on gains and losses from education, crime, sickness, pollution, and even life expectancy.¹⁰ One could then combine such disparate variables on the assumption that every peso's worth in one item equals that in another. But, very likely, many persons will question

⁸ Arrow and Scitovsky, 1969, pp. 96-97

⁹ When the aggregation is done over the consumers, a problem arises. Samuelson has shown that one cannot infer an increase in consumer welfare from an increase in the total value of goods consumed by all consumers unless some, essentially ethical, assumption is made regarding the welfare derived by individual consumers. See P. A. Samuelson, "Evaluation of Real National Income," in Arrow and Scitovsky (1969). This objective is met by presenting data decomposed according to social group (say income class), allowing users to apply their own ethical standards.

¹⁰ See articles by Juster and Usher in Moss (1973).

this ethical assumption, making the above exercise wasted energy. Thus, one should recognize the ethical element in the combination of welfare components. Obviously, some combinations need not be attempted, while others are unavoidable for practical reasons.

After the choice of social concerns, there is the choice of the social groups (to consider separate individuals would be too costly) which are said to share in total welfare. Some classes of society have been left out of the categories for proposed measurement, for instance, the physically handicapped and the ethnic minorities.¹¹ We assume that data of such detail are of very small significance to national welfare, and not worth the statistical effort. Data in groups focus attention on differences between groups, ignoring possible differences between individuals of any one group. Hence, it is taken for granted that the latter differences are of relatively little social concern, and that what does concern society are the differences between the groups. Technicians should avoid imparting biases in favor of one or other of the social groups which share the national welfare. Nevertheless, it is obvious that social decisions are prepared on the basis of implicit priorities set by those in responsible positions to the welfares of various groups.

Finally, the labels given to the indicators have, in themselves, some measure of ethical content. Indeed, the very words: *welfare*, *development*, *social*, and *national* all have emotive force. The very first ethical premise is that welfare ought to be increased. One should remain aware that definitions can be persuasive, that descriptions which are in effect recommendatory have a measure of value judgment. The following statement, though made in the context of welfare economics, seems applicable to the welfare-oriented aspects of any social science:

Welfare economics and ethics cannot, then, be separated. They are inseparable because the welfare terminology is a value terminology. It may be suggested that welfare economics could be purged by the strict use of a technical terminology, which, in ordinary speech, had no value im-

¹¹ Excluding the Muslim population from this group. Southwestern Mindanao is, roughly speaking, a proxy for the Muslim sector, so that conditions in this sector are revealed insofar as indicators are disaggregated regionally.

plications. The answer is that it could be, but it would no longer be welfare economics. It would then consist of an uninterrupted system of logical deductions, which would not be about anything at all, let alone welfare. As soon as such a system was held to be about anything, for example, welfare or happiness, it would once again be emotive and ethical. Getting rid of value judgments would be throwing the baby away with the bathwater. The subject is one about which nothing interesting can be said without value judgments, for the reason that we take a moral interest in welfare and happiness.¹³

Philippine Social Concerns

The most useful guide to a statement of Philippine social concerns is, naturally, the Constitution, in particular Article II, "Declaration of Principles and State Policies" and Article IV, "The Bill of Rights". As we know, Article II declares the importance of the security of the state (Section 2); that the family is to be strengthened as a basic social institution (Section 4); that the role and the well-being of the youth is considered vital (Section 5); that, in pursuance of social justice, property ownership and profits are to be equitably diffused (Section 6); that the state is to guarantee "a decent standard of living" by providing adequate services in education, health, housing, employment, welfare, and social security (Section 7, a new section); that labor and the rights of workers shall be protected (Section 9, and new section); that the autonomy of local government units shall be guaranteed and promoted (Section 10, a new section). On the other hand, the political freedoms of citizens are found in the familiar Bill of Rights: due process of law; protection against seizure and against ex post facto laws, excess punishment, double jeopardy, etc.; the freedoms of religion and speech, etc. The division of labor implicit in the assignment of separate ministries for health, education, defense, etc., clearly recognizes the multi-dimensionality of national welfare.

The social concerns expressed above are clearly universal in nature, and not unique to the Philippines. Previous research on social concerns and on social indicators done in other coun-

¹³ Little, 1957, pp. 79-80

tries¹⁴ have provided useful guidelines in the drawing up of the following list of *basic Philippine social concerns*:

1. *Health and Nutrition*
2. *Learning*¹⁵
3. *Income and Consumption*
4. *Employment*
5. *Non-Human Productive Resources*
6. *Housing, Utilities, and the Environment*
7. *Public Safety and Justice*
8. *Political Values*
9. *Social Mobility.*

The pattern of concerns is liable to change with development. People who are relatively poor are more concerned with their personal welfare than with the welfare of the nation as a whole¹⁶. They are more concerned with their incomes than their conditions of work and their job situation.¹⁷ So the list of concerns and concomitant welfare indicators cannot be complete once and for all. Certain aspects of life are of less importance at this stage of our development. For the time we exclude such problems as *alienation from schooling* among the young, or *monotony of work* among the employed. We also exclude measurement of welfare derived from *leisure*; the country is not so affluent that the "leisure class" is a meaningful group. Regard for the development of the *cultural heritage* also tends to develop together with affluence. Finally, problems with *family stability and cohesion* tend to arise in a rapidly developing economy, and become a serious social concern; but we feel that such conditions have not been reached in the Philippines.

¹⁴ The most useful references were found to be Bauer (1966), Kendall (1972), Moss (1973), U. S. Office of Management and Budget (1973), U. S. Department of Health, Education and Welfare (1969), OECD (1973), Sheldon and Moore (1968), Stanford Research Institute (1969), and United Nations Statistical Office (1974).

¹⁵ This term is used so as to encompass both formal schooling and non-formal, such as on-the-job learning. So far, however, we have not located indicators for the latter aspect.

¹⁶ Cf. Cantril (1965), pp. 148-149 and 373. In Cantril's study, richer Filipinos in 1959 gave themselves higher welfare ratings than poorer Filipinos gave themselves; but the richer group also gave national welfare a lower rating than the poorer group.

¹⁷Cf. B. Strumpel (1972).

There are welfare concerns, on the other hand, that we would have wanted to include, but could not, due to lack of data: national security; working conditions, with reference to fringe benefits and worker safety; protection against economic hazards; and household wealth. National security, though obviously a prime concern, is a special case in that it can be jeopardized by release of data. On the other hand, it may be noted that there are two general areas, not commonly found in lists of social concerns, which we have included, namely the stocks of *non-human productive resources*, and *political values*. The former concern is relevant to the welfare of future generations of Filipinos. We feel that the latter-mentioned concern is so important as to justify efforts to devise special indices and means of gathering the pertinent data.

Welfare Indicators

For each of the social concerns, the Project has devised a limited number of measurable variables, which are the welfare indicators.¹⁸ The list, given in Table 1, contains thirty major indicators and twenty sub-indicators, not counting de-

¹⁸ The U N System of Demographic, Manpower and Social Statistics defines social indicators as "derived summary series of data 'designed to portray the state of, and trends in, social conditions that are, or are likely to become, the subject of public action or concern'. They would therefore focus on (i) the main facets of the well-being of the population; (ii) the performance, that is, effectiveness and efficiency, of the social services; and (iii) the distribution of the well-being and of the use of, and benefit from, the social services over the population (Kendall, 1972, p. 2)". The U. S. H E W Department (1969, p. 188) defines a social indicator as "... a statistic of direct normative interest which facilitates concise, comprehensive and balanced judgments about the condition of major aspects of a society. It is in all cases a direct measure of welfare and is subject to the interpretation that, if it changes in the 'right' direction, while other things remain equal, things have gotten better, or people are 'better off.'" Juster, on the other hand, uses a rather narrow definition: social indicators are supplementary indicators for dimensions of welfare which are not or cannot be fitted within a system of accounts that requires a homogenous unit of measure' (such as money). Apparently, the main reason he favors social indicators is that no methods have yet been devised to obtain money equivalents for *distributive* measures of welfare or for *subjective* perceptions of well-being. See Moss, 1973, pp. 37-38.

compositions.¹⁹ Sixteen of the indicators are listed as "experimental", implying that they are not ordinarily measured or computed within the present Philippine statistical system. Detailed expositions of the processes by which these measures were chosen are forthcoming in technical papers by members of the Project. In this report, I will discuss the general guidelines used in selecting the indicators, and comment briefly on those indicators whose definitions or methods of construction are not self-evident.

In the first place, we seek indicators which are relevant and comprehensive. This depends mainly on the list of social concerns which has been drawn up. The indicators within each concern reveal the several aspects of the concern which the Project has found relevant as well as feasible (at least in principle) to measure. We prefer indicators that are simple to interpret (though not necessarily simple to construct), given the objective of communicating not only with technicians and political leaders but also with the general public.

Obviously, we prefer indicators which are reliable. The measurement taken must first of all accurately reflect that phenomenon which is being measured. This is a technical problem. Next, the measurement taken should be truthfully reported, even when it may tend to cast unfavorable light on certain individuals or institutions within government. This is a matter of integrity. The project's view is that both problems can be met, and the criterion of reliability assured, pro-

¹⁹ Judgments vary on the necessary minimum number of indicators. According to Dudley Seers (1972), there is no development, regardless of the state of per capita income, unless there is a lessening of (1) poverty, (2) unemployment, and (3) inequality. Kendall (1972) suggests the following ten principal indicators of "social development": (1) the population growth rate; (2) the expectation of life at birth; (3) the percentage of households, in urban and rural areas, in "permanent" and "semi-permanent" dwellings; (4) calories available *per capita* for domestic consumption; (5) the first [schooling] level entry rate at the normal age; (6) the second [schooling] level entry rate at the normal age; (7) the literacy rate; (8) the percentage of the population at working age, who are gainfully employed, by sex in urban and rural areas; (9) the percentage of the economically active population who are covered by social security schemes; and (10) the crime rate. Other useful references were Taylor and Hudson (1972), Asian Development Bank (1973), and Adelman and Morris (1967).

vided that the indicator is replicable, that is, provided that it is feasible for an interested party to repeat the procedures taken and thus come up with a check on an official estimate. Thus, all requisite sources of data should be public. There should be no legal restrictions on private individual's making the same inquiries as an official statistical service engaged in constructing a welfare indicator.²⁰

The welfare indicators should have the nature of final, rather than intermediate, variables, or should reflect the outputs rather than the inputs of the social system.²¹ To cite familiar examples, it is preferable to try to measure the proportion of people who are ill than to measure the number of hospital beds available; and the crime rate is a preferable indicator to the number of policemen per city block. In exception to this principle, however, are the variables which indicate provision for the welfare of future generations, i.e., the stocks of socially productive human, natural and reproducible physical resources. These stocks reflect potential future flows of welfare along every social concern.

Analysis of the inputs or determinants of the welfare variables is not considered here, or else a great deal of social science and physical science research in the world today would fall under the scope of the project. This is not to deny that policy-makers need to know what the chief determinants are, and need measurements of them over time. A complete system of *social accounts* would encompass both welfare variables and their determinants.

We do wish to stress that measurement of intermediate variables is not an adequate substitute for measurement of the final variables. Some cases bear citing: (a) *Population per se* is not a welfare variable, even though it is obviously one of the most important driving forces in the economy; (b) The

²⁰ We concur with Kendall's remark (1972, p. 5) that a 'weak' indicator whose documentation is strong may be more acceptable than a 'strong' indicator whose documentation is weak.

²¹ The distinction between "output" and "input" is not always clear-cut. Although we normally think of food consumption as a variable directly linked to welfare, a purist might claim that food is merely an input towards the creation of satisfaction in a human stomach. A line must be drawn somewhere, and in many cases we find it practical to draw it short of the subjective reactions felt by people.

size of the *international reserve* is not a welfare variable, despite the degree to which it may be glorified. Its growth simply implies greater unexercised command over foreign products. When this is due to an export surplus, it implies some net foregone domestic consumption; and sometimes the increase in reserves is due to an increase in foreign debt; (c) *Prices* of individual commodities subject to government controls are not adequate proxies for the consumption of the commodities. This applies, for instance, to *rice*, to *housing rents*, and to *foreign exchange*, all of which tend to be in short supply, and are distributed by some (not necessarily equitable) rationing device precisely when their prices are artificially low.

TABLE 1

A PROPOSED SET OF INDICATORS OF PHILIPPINE
WELFARE

	<i>Desirable Frequency</i>
<i>Health and Nutrition</i>	
1. Infant mortality rate	annual
2. Expectation of life	quinquennial
3. Days disabled due to illness per capita per year in disability days equivalent, by membership in the labor force, and by family status (<i>experimental</i>)	annual
3.1. Proportion of persons who are ill (prevalence), by degree of disability and by occupation	semestral
3.2. Proportion of persons who become ill during the period (incidence of undernourishment)	semestral
4. Available supply of calories per capita per day	annual
4.1. Proportion of children under 7 who are underweight, by degree	annual
5. Available supply of proteins per capita per day, by origin (animal or vegetable)	annual
6. School enrollment ratio, per level of schooling (primary, secondary, tertiary)	annual

*Desirable Frequency**Learning*

- | | |
|---|--------|
| 7. Value of human capital stock created by schooling (experimental) | annual |
| 7.1. Ratio of mean educational capital in the most educated quintile to mean educational capital in the least educated quintile | annual |

Income and Consumption

- | | |
|---|---------|
| 8. Net Beneficial Product per capita (experimental) | annual |
| 9. Proportion and number of families below the food poverty threshold (experimental) | annual |
| 9.1. Proportion and number of families below the total poverty threshold (experimental) | annual |
| 10. Ratio of mean income of richest quintile to mean income of poorest quintile | annual |
| 11. Rate of inflation of consumer prices | monthly |

Employment

- | | |
|---|-----------|
| 12. Unemployment rate of the totally unemployed, by occupation and by educational attainment | quarterly |
| 12.1. Underemployment rate, in totally unemployed equivalent, by occupation and by educational attainment | quarterly |
| 13. Real wage rate index, skilled vs. unskilled workers, by occupation | monthly |

Non-Human Productive Resources

- | | |
|--|--------|
| 14. Reproducible capital stock | annual |
| 15. Arable land | |
| 15.1. Concentration ratio of agricultural land ownership | annual |
| 16. Forested land | annual |

Desirable Frequency

- | | |
|---|-----------|
| 17. Mineral reserves, by type of mineral | annual |
| <i>Housing, Utilities, and the Environment</i> | |
| 18. Proportion of occupied dwelling units adequately served with water | biennial |
| 19. Index of housing adequacy (<i>experimental</i>) | annual |
| 19.1. Proportion of households with three persons or less per room | annual |
| 19.2. Proportion of occupied dwelling units made of strong materials | annual |
| 19.3. Proportion of occupied dwelling units with toilets | annual |
| 19.4. Proportion of the population served by electricity at home | annual |
| 20. Air pollution index for Greater Manila (<i>experimental</i>) | quarterly |
| 20.1. Pollution concentration levels, by type of pollutant, by station | quarterly |
| 21. Proportion of river-lengths polluted (<i>experimental</i>) | biennial |
| 21.1. Rivers polluted, by degree of pollution | biennial |
| <i>Public Safety and Justice</i> | |
| 22. Crime incidence rate, by type of crime | monthly |
| 22.1. Index of citizens' perception of public safety and justice (<i>experimental</i>) | annual |
| 23. Backlog of judicial cases | annual |
| 23.1. Ratio of judicial cases disposed to total cases needing disposition, by court of jurisdiction | annual |
| 24. Number admitted to penal institutions | annual |
| 24.1. Number confined in penal institutions | annual |

*Desirable Frequency**Political Values*

25. Ratio of votes cast to registered voters	every election
25.1 Ratio of registered voters to population aged 21 and over	every election
26. Index of political mobility (<i>experimental</i>)	biennial
27. Index of political participation (<i>experimental</i>)	biennial
27.1. Index of political awareness (experimental)	biennial
27.2. Index of freedom of political dissent (experimental)	biennial
28. Index of political efficacy (experimental)	biennial

Social Mobility

29. Index of occupational mobility (gross mobility) (experimental)	quinquennial
29.1. Coefficient of openness of occupations (circulation mobility)	quinquennial
30. Index of perceived social mobility (experimental)	quinquennial

Modes of Disaggregation

There are innumerable ways in which the indicators might be disaggregated. We have tried to select only those modes which are relevant per se to national welfare. One set of modes consists of the suggested classifications listed following the indicators in Table 1. For instance, it is suggested that disability due to illness be classified according to those who are in the labor force and according to those who are heads of families or not. Given the number of days lost due to illness, society is obviously worse off when the persons afflicted are workers than when they are non-workers, and worse off when they are family heads, who have more responsibilities, than when they are family dependents. The proportion ill should be classified by disease because seriousness of diseases vary; and classified by occupation because the

importance to society of occupations can vary. Proteins are distinguished by origin because amino acids come in essential (those the body is unable to synthesize) and unessential forms, and the source of essential amino acids in animal protein. The level of schooling is also used for disaggregation; it is presumed worse for college graduates to be unemployed than for unschooled persons to be unemployed, since college graduates are supposed to be more productive members of society. The reasons for disaggregating mineral reserves by type of mineral, pollution concentration levels by station, and cases disposed by court of jurisdiction should now be obvious.

A second set of modes of disaggregation pertains to the social groups which share in national welfare. In general, we recommend that the welfare indicators be disaggregated according to

- (a) Urban vs rural
- (b) Region
- (c) Sex
- (d) Age
- (e) Family income.

Some of the forms of disaggregation are not applicable to certain indicators. The non-human stocks of resources are not classifiable under 'sex' or 'age', and there are other obvious instances.

Summary

It is felt that national welfare can be meaningfully described in terms of a set of indicators which cuts across social concerns and which also reflects the sharing of welfare among the present population, and between the present population and the generations unborn. Nine social concerns were identified and thirty major indicators suggested. Some of the indicators suggested are experimental in nature. Where it was a matter of applying new procedures on extant data, preliminary estimates of the new indicators were made. For cases where basic data were lacking, these were gathered in a pilot survey in Batangas province last June. Analysis of the survey returns is still in progress.

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