

TOWARD A SOCIAL REPORTING SYSTEM: A CRITICAL ASSESSMENT OF ITS CURRENT STATUS, REPUBLIC OF KOREA*

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This study is designed to review, for the purpose of establishing a social reporting system in the Republic of Korea, (1) theoretical and methodological considerations, (2) the development of the social indicator movement in Korea, (3) the current status of the social indicator system, and (4) the quality and suitability of various data available for measures of social indicators.

Three major arguments are presented in this paper. A social reporting system, first of all, has to be designed in such a way that it reflects and measures social welfare. Welfare is regarded more as a collective social condition than as a summation of the psychological dispositions of individuals. Therefore, emphasis must be given to the collection and presentation of data which allow us to appraise the complex problems of large-scale social systems and the collective activities of a society. It is also stressed that subjective indicators consisting of individual perceptions, evaluations and attitudes should be used only sparingly and with great discretion since problems of improvement of welfare conditions and equity cannot be reduced to those of satisfaction and happiness at the individual level.

Second, the necessity of institutionalizing the system of social reporting is highlighted. The ongoing method of data collection has to be critically reexamined and a new way of data compilation has to be pursued since government data—mostly of the “aggregated, type—fail to meet the needs for more practical and refined information. Finally, having raised the question of the purposes underlying the establishment of a social reporting system, two possible and mutually reinforcing alternatives are presented; i.e., to inform citizens and to guide policy planning.

I. INTRODUCTION

In recent years, there have been increasing efforts among the academic community and government officials throughout the world to assess the effects of economic growth on people's life. Their inquiry has basically directed toward whether “economic development improves the human lot” (e.g., Easterlin, 1973, 1974; Shin, 1980). To deal with this question various measures of economic performance have been created and used as indicators of individual and societal well-being. However, both social scientists and policy makers need a more comprehensive and broader range of indicators to measure social welfare and living standards. The necessity of a social indicator system has been perceived mainly in industrialized societies where the prime concern of the national policy is in welfare, and accordingly much of its development has chiefly taken place within these countries.

* The authors would like to thank Drs. Yunshik Chang, Doh C. Shin and John Slovoda for their constructive comments, and the UNESCO for its financial support.

Social structure and value systems in industrialized countries differ widely from those in industrializing countries. Difference in the degree and area of interest in social welfare is also marked between the two groups of nations. As a result, social indicator systems developed in industrialized countries may not be appropriate to industrializing countries. Moreover, various concepts and models of social indicators which originate from the former cannot be readily applied to the latter because of inadequate statistical compilation and poor data quality. This study, therefore, is designed to review, for the purpose of establishing a social reporting system in the Republic of Korea, (1) theoretical and methodological considerations, (2) the development of the social indicator movement in Korea, (3) the current status of the social indicator system, and (4) the quality and suitability of various data available for measures of social indicators.

That is, Section II deals with theoretical issues and discusses some methodological problems associated with the concept of social welfare underlying the social indicator movement. The concept of social welfare is examined as linked to both major social institutions and components of socioeconomic development.

In Section III, we review the efforts of the Korean government to establish social welfare system and to measure each area of social welfare: earlier efforts to institutionalize a social welfare system based on findings from survey research; recent social indicator movement; and other related endeavours.

Following this review, Section IV examines the status of the currently evolved social indicator system within a suggested framework of social reporting. Included in the discussion are the main objectives of the Korean indicator system, criteria in selecting indicators, data sources, methods of data collection, and the format of data presentation. In Section V, the quality and usability of various kinds of data which were utilized in constructing social indicators are examined. The data are evaluated by type; i.e., demographic statistics, economic data, other official statistics, and the results of the Social Statistics Survey which is conducted to supplement measures from the secondary sources.

In the concluding section, we summarize a number of theoretical and methodological problems associated with the current social indicator system, and propose some recommendations to improve the indicator system and to establish a system of social reporting for lay users as well as for policy makers.

II. SOME THEORETICAL CONSIDERATIONS

The rapidly disseminating concept of social indicators and social reporting systems undoubtedly reflects an increasing demand for direct measurement of social welfare in order to monitor changes in living conditions. However, it is proved to be unrealistic to develop or expect an universal system of social indicators which allow us compile a series of statistics in a determinate form in all situations and countries (Zapf, 1975). The system should differ from one another in purpose and content, according to the social conditions under consideration as well as the conceptual framework adopted for the investigation of social conditions. The effort to develop a viable system of social indicators and reporting for Korea is thus justified. The main question here is how to construct a coherent conceptual framework which suits to the examination of the current and evolving situation of Korea. In this section the conceptions of welfare problems underlying the social indicator movement is first reviewed as a guide to theoretical issues, which are discussed subsequently, particularly relevant for establishing a social reporting system in this country.

Background of Social Indicator Movement

The social indicator movement has grown out of the grave deficiencies of economic indicators in measuring the conditions or quality of life. Measures of economic growth fail to indicate changes in living conditions, since economic development neither necessarily improves economic conditions, nor does bring happiness to every sector of the population. Thus the primary aim of the social indicator movement is to solve, through monitoring changes in social conditions, various problems newly emerging from socio-economic development.

In response to the early social indicator movement, some economists have proposed the concept of Net Economic Welfare (NEW) as a modification of the GNP concept. The concept takes into consideration the negative "externalities" or "disamenities" such as conservation and environmental costs as well as the value of consumer durables, leisure time, and household work (Sametz, 1968; Nordhouse and Tobin, 1972). This concept may improve the measurement of economic welfare, but is known to reveal many critical problems which are summarized below:

1. It fails to present a complete picture of complexity of social conditions when used as an all-encompassing indicator of welfare (Gross and Straussmen, 1974).
2. The NEW measure involves a host of problems of theory and evaluation: for instance, how to assess the value of leisure time and to what extent investments as prerequisites to future consumption can really be excluded (Zapf, 1975).
3. Taking the Garn-Flax model as an example (Garn and Flax, 1972; Flax, 1972), Hayden criticizes (1977) such concepts as to blur the original purpose of the social indicator movement. The movement, according to him, was to avoid the meaningless results of neoclassical cost-benefit analysis based on the criteria of atomistic individuals, summative welfare, hedonism, and Pareto optimality.¹

The economic models of welfare tend to reduce the complexity of social and institutional conditions associated with the quality of life to individual consumption preferences in a market system. In explicating the methodological problem in the study of social welfare, it is worthwhile to introduce Olson's analysis of the behavior of individuals regarding collective goods such as roads, hospitals and sewer systems (Olson, 1971). Olson finds that behavior differs markedly among groups of varying size: in small groups, especially when characterized by great disparity in wealth among the members, collective goods are likely to be provided by individual voluntary action; in large groups, especially where relative differences in wealth are less noticeable, provision of collective goods will not occur unless coerced through some means such as taxation.

This aggregate property of unwillingness to provide collective goods in large groups is generally explained by tendency of individuals to maximize their own benefits. Thus the property of a group (or an emergent property in methodological holism) is not predictable from psychological theories of individual behavior (Webster, 1973). Although methodological individualism has become a predominant mode of thinking among both

1. Underlying the criticism is the argument that the individual, as an historical actor, has a much more limited view than the welfare economists assume. In other words, it is unrealistic to suppose that the individual is consciously familiar with the hierarchy of socio-cultural values which circumscribe the notion of welfare. Furthermore, individual preferences for consumption may be inconsistent with the cultural values which transcend the individual.

economists and sociologists, it may be noted that insofar as an inquiry into social welfare is concerned, much of the problem concerns emergent collective properties.

Social Indicator as a Measure of Welfare

Thus far, we have argued that welfare is a collective social problem rather than a psychological one. But we do not mean that the concept of welfare is unrelated to the problem of individual desires, satisfaction, and happiness. Rather, it implies that methodologically the problem of welfare can hardly be resolved by conceiving of it at an individual level for it is logically untenable to analyze the emergent properties, the problems of social welfare, in terms of individual dispositions. Such a view is well reflected in various definitions of social indicators.

In *Toward A Social Report* (U. S. Department of Health, Education, and Welfare, 1969), a social indicator is defined as:

“a statistic of direct normative interest which facilitates concise, comprehensive and balanced judgments about the conditions of major aspects of society. By the above definition, a social indicator is a direct measure of welfare, subject to the interpretation that, if it shows change in the ‘right’ direction, other things being equal, things have gotten better, or people are ‘better off’. Thus statistics on the number of doctors or policemen could not be social indicators, whereas figures on health or crime could be.”

Some theorists of social change reject this definition (Duncan, 1969; Sheldon and Freeman, 1970; Land, 1974). In their view, such a definition of social indicator solely based on direct normative interest may be too restrictive because the normative interest itself can change. Also, the definition is not adequate for a proper conception of social welfare problems because it does not reflect many important aspects relevant to an understanding of the indicators of social welfare.

Land (1975) defines social indicators in terms of statistics which measure social conditions and changes herein over time for various segments of a population. Here, the problem of social welfare is located in the context of social conditions and changes. By social conditions he means both the external (social and physical) and the internal (subjective and perceptual) contexts of human existence in a given society. In this definition, social welfare is “the grand function of utility functions of all persons in a society” and each of these utility functions as being a function representing the satisfaction level of an individual. Then Land raises the question of how to identify the areas of social interest. Concerning the question, he rejects to decide the areas based on the opinions of experts. This “concensus” approach may lead to ignore the interrelatedness of social conditions and social institution.

In fact, however, we can identify, from various systems of social indicators, the areas of social concern or welfare according to the major institutional foci of the societal community; family, education, work, economy, polity, health, environment, public safety, and social security. These systems emphasize the compilation of statistics for each area of social welfare by socioeconomic groups of people, either according to individual life-cycle stages or with respect to hierarchical social status or both.

This general agreement about the areas of concern and the recognition of different socioeconomic groups is not an accidental coincidence. It rather reflects the acknowledgement of the universality of these major institutions and of the importance of two ultimate values, improvement and equity.

Welfare and Development

Social welfare is defined as an institutionalization of the equity value in the context of socio-economic development. Our intention is to approach social welfare and inter-related phenomena in the context of socioeconomic development.

Portes (1976) defines "national development" with reference to major themes raised by scholars and leaders of underdeveloped countries: economic transformation toward a sustained and rapid increase in the national product with a substantial rise in manufacturing output; social transformation toward a more egalitarian distribution of income and other social goods; and cultural transformation toward reaffirmation of national identity and traditions. This definition is not an analytical construct but a statement of national goals or a series of values concerning national development which are subject to scientific inquiry. It is simply because the definition is not abstracted from the realities of national development; it is rather exclusively derived from the valued ends of the national political and intellectual leaders in the less developed countries. In reality, rapid economic growth does not necessarily lead to a more egalitarian distribution of income and other benefits from the growth, nor vice versa. In addition, the encouragement of egalitarian values and nationalism may not be consonant with the secular interest in economic improvement.

As regards national development, some scholars tend to give primacy to industrialization or economic growth and analyze subsequent social differentiation or structural change, while others consider social differentiation as the key to understanding economic development. Still others attempt to investigate the interconnection between the two processes. No matter how we conceive of national development it may be generalized that the two processes are simultaneous and interconnected. The differentiated structure of a given societal community can be considered as a mechanism of industrialization or economic growth, while the process of social differentiation as an adjustment of the social structure to the process of industrialization. Social differentiation means a process whereby one social role or organization undergoes differentiation into two or more roles or organizations which function more effectively in the new historical circumstances. The new social units are structurally distinct from each other, but, taken together, are functionally equivalent to the original unit. Development proceeds as a contrapuntal interplay between differentiation, which is divisive of established society, and integration, which unites differentiated structures on a new basis (Smelser, 1959).

Within this conceptualization we propose three general postulates concerning linkages between the conceptual components of societal development and social welfare: (1) industrialization brings about an increment of well-being resources, both economic and social; (2) the distribution of these resources among different groups of people is largely dependent upon the differentiated structure of the societal community under consideration, i.e., the system of social stratification; and (3) integration processes within the differentiated structure can come to play a major role in resolving much of the inequity problem through redistribution of well-being resources.

These general postulates may serve as theoretical guidelines for establishing the system of social indicators, especially in developing countries including Korea. If this is so, the system should be a basis for compiling statistics indicating the different conceptual components of social welfare and socioeconomic development. Accordingly it should serve as a basis for systematic analysis of the interrelatedness among the variables, that is, as a set of data, for social reporting.

Institutionalization of Social Reporting system

The problems associated with data collection and institutionalization of social reporting system consist of the final issue in this chapter. Data collection is an integral part of the social reporting system. This should be done with respect to a conceptual and analytical framework. The institutionalization of the social reporting system is concerned with procedures and practices which ensure the continuation of social reporting, legitimize its concepts and help formalize methods.

Statistical data on social indicators in most countries are obtained primarily from secondary sources such as census reports, government administrative statistics, and survey reports. It should be noted that since these data are drawn from various sources compiled for different purposes, they are frequently inconsistent with each other in definition and classification. Therefore, such statistical reports rarely allow a systematic analysis of the interconnection of welfare conditions; i.e., the relationships among various components of welfare as we have suggested.

In data compilation and presentation, one important consideration should be given that social welfare is a holistic concept, while the data compiled are mostly of "aggregated" nature. The aggregated data which are based on information collected about individual members of society consist of sums, frequency distribution, measures of central tendency and dispersion, and proportions. These data are attractive in that they are so naturally quantitative and easily obtainable.

However, it should be noted that these data tend to end up with reductionism rather than to indicate properties of a system as a whole. The aggregated data alone are not sufficient to characterize the complex social problems of large-scale social systems. For this, the multidimensionality of indicators should be taken into consideration, and explanatory and elaboratory variables be introduced. Such in turn necessitate the provision of a holistic analytical framework congruent with the social welfare perspective adopted.

Thus the format of data presentation should reflect analytical concerns in order that the data presented can be indicative of system properties, i.e., those of a social system that exist irrespective of its particular member. The fundamental requirement in this sense is naturally the classification of data by socioeconomic groups of people which are determined by the introduction of explanatory and elaboratory variables.

Regarding the problem of data collection, it would be worthwhile to distinguish between subjective and objective indicators with respect to social conditions. In relation to this, it is worth reiterating the argument that the holistic concept of social welfare should not be reduced to the psychological dispositions of individuals. In other words, the institutionalized values of improvement and equity concerning well-being resources cannot be reduced to the subjective perceptions and evaluations made in terms of satisfaction and happiness. For instance, it would not be much meaningful to ask individuals to evaluate air pollution in their community, if most of them do not have sufficient knowledge of its effect on health. Another example is that if we survey subjective evaluations of housing conditions among migrants from rural villages to urban slums, many of them would say "satisfactory" regardless of the actual condition in which they are found.

By this argument we do not mean that many surveys of subjective perceptions and evaluations of objective conditions are meaningless. They may serve as a useful device for identifying citizen's demands. For this reason, subjective indicators of life quality are surveyed and reported in publications from many countries. However, there are

many reasons why social indicators should primarily focus on objective living conditions rather than subjective perception of the conditions.

Johansson (1974) has argued that a social report should present living conditions as they are, rather than citizen's opinion about how they ought to be or what should be done. For the direction and design of social reporting, he suggests the following assumptions about citizen's need for information: (1) The individual demands information to test their own macro-perspective on society and societal development by assessing the development of the total welfare of the people; (2) The citizen requires information about levels and changes in different welfare sectors (health, knowledge, working conditions, purchasing power, etc.); (3) The citizen also must be able to assess the balance in the development of welfare among various population groups; and (4) The individual citizens want to be able to evaluate their own welfare in comparison with that of others. Therefore, social reports ought to be designed to make it possible for all citizens to construct their own macro-views on the development of various welfare sectors for different groups of citizens, and thereby to weigh their own interests against those of other citizens. For this reason it would be inappropriate to design a social reporting system as a means for citizens to arrive at what should be done, based on their own opinions elicited in an opinion-poll. Social reporting must account for living conditions as they are and as they have changed.

The above assumptions are closely in agreement with our earlier discussions on theoretical issues. The main difference may be noticed in that Johansson emphasize the primary function of a social reporting system as a "citizen report", whereas the use in social welfare policy has been implied as its major function in our discussion. There is no particular conflict in underlying premises between the two positions. The difference is rather a reflection of distinctiveness in sociopolitical milieu between advanced and developing countries.

There have been continuous efforts to set up and institutionalize social indicators and social reporting systems in various countries and by international organizations such as the United Nations, UNESCO, UNSRID, and OECD. The procedures and practices for such systems may vary widely, but the establishment of a coherent system for social reporting almost always demands successive surveys on living conditions at the national level. As indicated above, data from the secondary sources are neither sufficient to provide measures of important indicators nor appropriate for constituting the basis of systematic reporting of social welfare.

Within the theoretical framework discussed above, we shall trace, in the following sections, the development of the social indicator system, institutionalization of the social indicator movement, evolution of social indicator system, and current status of the system and its problems in Korea.

III. SOCIAL INDICATOR MOVEMENT IN KOREA

As discussed in Section II, concern with social welfare is essential for the initiation of social indicator system. Also, efforts of the Korean government to create a social indicator system since 1975 have had a clear articulation with the enhancement of social welfare through social development planning. Accordingly, it would be proper to relate social indicator movement in Korea to the development of social welfare concerns which started in 1962 with the establishment of the Council for Social Security (CSS) in the Ministry of Health and Social Affairs.

The Council was founded to oversee welfare and social insurance matters. As a prelude to a full-scale plan of social development, the legal basis was set up for

public aid and social insurance to support the government's concerns; for instance, the Life Protection Act was put into action in 1961, the Child Welfare Act in 1961, the Disaster Relief Act in 1962, etc. But it was not until the mid-1970s, however, that a system was developed by policy makers which could be genuinely characterized as *social indicators*. In 1975, the Bureau of Statistics, Economic Planning Board (EPB) and the Korea Development Institute (KDI) began to systematize social indicators with financial assistance of the United Nations Fund for Population Activities (UNFPA). More recently, a growing interest in welfare problems is witnessed among various public and private sectors.

Early Welfare Concerns

The earliest efforts relating to the development of social indicators surface in 1968. In that year the Council for Social Security issued a publication entitled *Social Development: A Summary of Basic Ideas and Long-term Prospects*, which purported to provide a conceptual framework for the "social" development plan to be developed together with the Third Five-Year Economic Development Plan beginning in 1972. This was the partial outcome of a government project initiated in 1966. Presupposing social development as a prerequisite of national security (note that each regime has given highest priority to national security matters), the project identified two levels of objectives; i.e., immediate and long-term ones. Immediate objectives were to set up a new value system amenable to economic development, to enhance the quality of manpower, to secure a minimum basic living standard, and to rationalize the processes underlying the distribution of social resources.

On the other hand, the core elements in the long-term objectives were to build a welfare state by expanding family welfare and facilitating community development. To this end, emphasis was given to the necessity of quantifying elements of social conditions for social development planning so as to eliminate the adverse side-effects of economic development.

Specific issues to be addressed included strengthening the moral spirits, expanding social facilities, attaining full employment by 1986, and improving living conditions and the quality of life.²

As the subtitle of this early report implies, it was intended to develop a fifteen-year

2. The detailed contents are:

- (1) *Strengthening Moral Spirit*. Emphasizing the significance of human spiritual aspects as a subject and prime mover of social development; establishing a proper value system; encouraging a productive way of life by reforming social institutions, and thereby providing a spiritual basis for better social environments.
- (2) *Manpower Development*. Minimizing the imbalance of employment structure both in quality and quantity; developing manpower effectively to meet the needs of the modern industrial structure; and training specialists on management-labor relations.
- (3) *Improvement of Social Environments*. Providing a better living environment through improved housing, health and medical services, pollution control, recreation facilities, etc.; expanding production resources for continuous economic development; providing more social facilities for work and life; and promoting a sense of community in order to lessen the disruption caused by inequality in income and life chances.
- (4) *Expansion of Social Insurance*. Guaranteeing a minimum level of subsistence for the disabled, such as the aged, handicapped and others; providing extensive welfare services; introducing and/or expanding economic and social insurance systems such as pension systems for wage and salary workers and thereby establishing permanent measures for social security.

long-term plan for social development in parallel with the Third and later Five-Year Economic Development Plans, with an emphasis on national security as a prerequisite for economic and social development. Thus, for government planners, social development was viewed as necessary to consolidate the belief system of the people and thereby strengthen national identity, preserve the national territory and sustain a high rate of economic growth without disruption.

To this end, the Council for Social Security proposed governing principles for activities by period. In the first period, 1972-1976, efforts should be made to eliminate various factors which may have adverse effects on economic development. In the second period, 1977-1981, stress should be laid on the balanced development of the economy and the society directed toward the establishment of a welfare state. In the final period, from 1982 on, social development planning is to focus on the creation of a *Koreanized* welfare state.

Subsequently, the Council published a nearly seven-hundred page report, *Social Development: Long-term Plans, 1972-1986*. This time they suggested more comprehensive and concrete planning for social development. The content of this report included: population, manpower, education, health, nutrition, housing and social environment, income growth and social security, social welfare, and community development planning. In the concluding section, the Council proposed seven concrete projects:

- (1) Improvement of the quality of education and the development of human resources.
- (2) Effective performance of family planning program and the improvement of health and medical services in rural areas.
- (3) Improvement of housing and living environments.
- (4) Introduction and expansion of social security programs.
- (5) Effective performance of social welfare programs.
- (6) Active implementation of community development programs.
- (7) Improvement of various structural and institutional conditions

In parallel with the above policy suggestions, the same Council sponsored a sample survey during 1968-1969 to gain basic data for social welfare planning. Sample surveys can usually make up the lack of measures for "subjective" conditions which cannot be observed in normal census-type data. This survey thus had an advantage in that it covered both objective and subjective aspects of living conditions. Interviews were administered to 1,733 households in eleven regions, including the city of Seoul. The primary purpose of the survey was to locate changes in household structure caused by rapid social change, and to find problems appearing in the preservation of the "healthy" family. The key idea was well summarized in the report: "To identify problems and demands of the living conditions and social welfare status of the average family which have been underestimated by national policy planners, and then to collect basic data for establishing essential plans in the field of social welfare". The questionnaire included items on: housing; attitudes toward social welfare policies; problems of children, adolescents, women, the aged and the handicapped; economic conditions; leisure and cultural activities; employment; child-rearing.

Throughout the report it was intended to identify deficiencies in the welfare services for individual households and to explore indicators for the improvement of family welfare. It was also attempted to help establish plans suitable to individual communities by comparative observations of large cities, medium-sized cities, rural towns, farming and fishing villages, and to find the problems of each group of people (e.g., the mentally or physically disabled, the elderly, women, etc.) needing welfare services.

Recent Social Indicator Movement of the Government

Although unrelated to the previous concerns on welfare discussed above, a more systematic and overarching effort was made jointly by the Economic Planning Board (EPB) and the Korea Development Institute as late as 1975.

In an attempt to establish a full-fledged socioeconomic indicator system, they classified social concerns into eight areas based primarily on the recommendations from the United Nations which apparently reflect 'the major institutional foci of the societal community' (see p.4). The areas selected cover population, income and consumption, employment and manpower, education, health, housing and environment, family life and leisure, and public security. As social indicators a total of 350 items were selected. The basic strategy for constructing indicators was to utilize available official statistical data from various sources and to conduct additional *ad hoc* surveys to collect data not readily available. It was identified that 184 indicators could be drawn from the secondary sources and 166 items should have been newly developed (see Data Production and Compilation in Section IV and Appendix B).

By the definition [employed, a system of social indicators is intended to depict an overall picture of social conditions including social performance and welfare. The system is also to contribute to our knowledge of where we are now, where we are going, and where we ought to go in many aspects of human life. Institutionalization of social reporting also makes members of a society effectively informed and thus raises their level of self-consciousness and eventually consolidates them into a feedback system underlying that particular society. The immediate objective of the system was to provide an aid to the social policy by means of systematizing social objectives, developing social policy alternatives, and detecting emerging social problems. The main features of Korean social indicators are specified in a preliminary report published in 1978 (see the next section for details). At this stage, the government gave priority to the selective development of statistical data concerning various problem areas as viewed from long-term development prospects. Particularly in the areas that have been underdeveloped and neglected. Pilot developments of subjective and indirect indicators have been pursued.

Other Related Movements

In the late-1970s, several other research institutes became concerned with living conditions of a fraction of the whole population. For instance, a group of social scientists attempted to explore the living conditions of the low-income strata in Seoul with financial assistance from the Metropolitan Government of Seoul (MGS) in 1979 (MGS, 1979). Their study purported to set up an effective and future-oriented policy model toward the extremely poor stratum; the model developed in this study was designed to be distinct from the hitherto nearsighted, temporary and therapy-oriented one. The survey on which the study was based was conducted over ten days from June 15 to June 24, 1979, and the sample size was 2,290. The report contained an evaluation of municipal administration, participation in community activities, and attitudes toward service providers.

More recently, an attempt was made by members of the Institute of Social Sciences at Seoul National University to measure the quality of life *perceived and desired* by Koreans, i.e., the subjective dimension of welfare among Korean people (Shin et al., n.d.). Data was collected from personal interviews with a national sample of 1,500

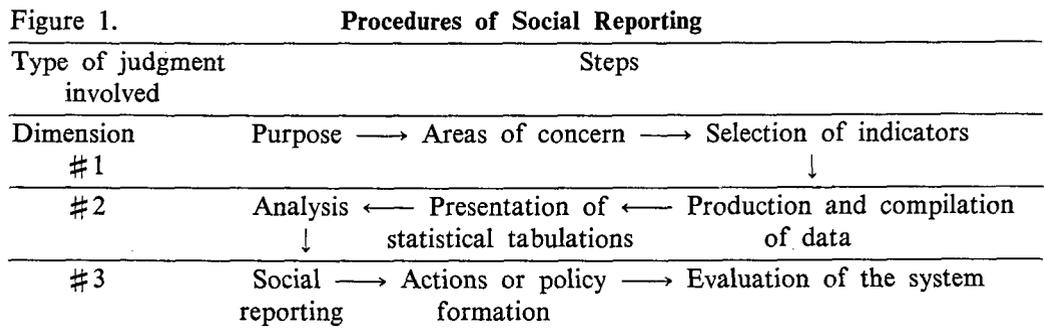
heads of household with unmarried children during the summer of 1980. Although the major findings of their research are to be publicized soon, a close examination of the findings which are made privately available to us reveals that the quality of life experienced by Koreans means different things from those applied to other industrialized countries.

Before concluding this section, we must point out that the issues set forth by the Council for Social Security have never been fully explored by the Economic Planning Board in its effort to design the social indicator system. It seems to us that many of the critical problems already raised by CSS in the mid-1960s were not seriously taken into account and even ignored by those who participated in the preparation of social indicators in the late-1970s. The disconnectedness of governmental efforts in this regard resulted in unnecessary repetition in the planning stage, and the government also failed to incorporate the conceptual bases, which had been developed as part of social development planning, into the new attempt. In parallel to this, the findings or results of many individual research reports produced by private institutes, which would otherwise have been most informative, have not been adequately explored and assessed in setting up the Korean indicator system. Systematic coordination between the government and private research organizations, as well as intra-governmental coordination, would have greatly improved the quality and utility of the system.

IV. CURRENT STATUS OF KOREAN SOCIAL INDICATOR SYSTEM

As has been mentioned, a social statistics (or indicator) system was adopted in 1978 in response to the recommendation of the U.N. statistical committee in 1969. Feasibility research based on the U.N. model was carried out by the Economic planning Board jointly with the Korea Development Institute. The general features of the system suggested from the research have been described in the previous section. However, a great discrepancy is noticed between what was proposed from the feasibility study and what was evolved. In this section our discussion is solely based on the Korean social indicator system now in operation, in reference to the theoretical considerations discussed in section II.

To examine the social indicator system which the Korean government is currently undertaking, it seems desirable to identify the major procedural steps in social reporting. The procedural framework we have adopted for this purpose is illustrated in Figure 1.



In Figure 1, arrows indicate the process of building and utilizing social indicators. Dimensions draw attention to the types of judgment involved. A certain type of “general value orientation” on human beings as individuals and members of a society or of a state are involved in Dimension 1, while chiefly “technical considerations” enter into

Dimension II. Overall “evaluation on the adequacy and relevancy” of the presupposed values as well as technical judgments will play a crucial role in Dimension III.

In the sense that a complete procedure for social reporting should include all the above steps, the current Korean system cannot be considered to have been completed or close to completion. The system has evolved up to the stage of ‘presentation of statistical tabulations’. Beyond that, the government has not yet developed any clear and concrete plans, including the plan for reporting though the necessity is widely admitted by government authorities and the would-be users of these reports. Therefore, our discussion on the status of the Korean social indicator system will be restricted to the reported statistical tabulations. We shall now examine the current social indicator system with the first two components in the framework suggested above; purpose and the areas of concern.

Major Purposes and Concerns

Apart from what is apparent in the feasibility research report (pp. 10–11 in Section III), the purpose of introducing social indicators into the government statistical system of Korea is not explicitly stated in any official document on social indicators. However, from the introductory statements of the statistical report of social indicators and other preparatory documents published by the Korean government, we can identify the following major concerns; (1) measurement of the average level of living of the citizens, (2) measurement of social conditions, (3) anticipation of social change, and (4) measurement of the effectiveness of social development policy.

These major concerns enable us to surmise some of the important problems of the Korean indicators with respect to our conceptions of social reporting described in Section II. First, the level of concern is neither an individual nor a group, but the nation as a whole; thus the system cannot deal with the questions of equity. Second, the major purpose of introducing the indicators is to obtain an overall impression on social condition of the country rather than to pinpoint various types of existing or newly emerging social problems. Third, the main purpose of statistical presentation does not lie in qualitative evaluation, but in the quantitative measurement of social conditions in question. Finally, the underlying principles are development-oriented rather than welfare-based, as is reflected by the fact the term “social development” is occasionally used interchangeably with “social welfare”. No mention is made of the major audience to which the report is directed. However, judging from the aforementioned concerns, the supposed audience is highly limited. The public or lay citizens do not constitute a part of the users, and even the publication *Social Indicators of Korea* conveys an impression that it was designed for the internal use of the government. Moreover, although some concern with social development is noticed, no strong belief of the government in its significance for policy formation is revealed.

From these general observations, it is apparent that no clear underlying principles were employed in constructing or introducing social indicators in Korea; the indicators were rather built upon ideas which are loosely related. As is discussed below, this has obstructed the development of a coherent social indicator system in this country, and has had profound implications for the quality and usability of the system which eventually evolved.

Selection of Indicator Items

As shown in Table 1, a total of 350 indicators representing eight areas of interest were recommended from the feasibility research described in Section II (pp. 10–11). It is noteworthy that the recommendations of the research report urge the development of 166 new indicators not available in existing statistical systems. This clearly points up the fact that

the existing official or administrative statistics (or statistical systems) are not suited for the development of a viable social indicator system in Korea. However, this recommendation, which is crucial to create a new system for the comprehensive evaluation of social conditions in Korea, has not been reflected adequately in the statistical reports published so far. Out of those 166 newly recommended items, only nine were adopted in the first official statistical report of social indicators which was published in 1979. Although continuous attention will be given to the recommendations furnished by the 1975 preparatory research, no satisfactory accommodation to them is expected in the near future.

The Social Statistics Survey is an annual survey designed to provide data for social indicators. One of its important characteristics is that each annual survey focuses on one or two selected special issues. For example, the 1979 survey had as its partial aim the collection of information on *kwa-oe* (private extra-curricular tutoring) which was then exposed as one of the most serious social as well as educational problems of the country. Similarly, the 1980 survey included special questions on economic activities and a perception of social changes. Household income has been selected to be the major focus of the 1981 survey.

The primary strategy of the Social Statistics Survey is to collect such socially significant information not in every annual survey but once in every five years. The strategy was adopted to ensure a trend analysis on basic social issues and thus to enable us to have a perspective on the direction of social change. Accordingly, the general spectrum of social indicators in Korea will be made available in 1983 at the earliest when the fifth survey will take place. The issues or topics to be dealt with in 1982 and 1983 are not yet decided and it is also highly probable that some important social issues will be of relatively short duration so that a resurvey at five-year intervals is inadequate. The strategy of conducting an annual survey with different contents in each year has both merits and defects. While it economizes on survey costs, field interviewing, and data processing, it does not allow the analysis of an issue in relation to other issues.

Table 1. Number of Social Indicator Items by Areas of Concern

Area	Recommended by feasibility study	1978 Social Indicators	1979 Social Indicators	1980 Social Indicators
Population	26 (0) ¹	14 (1) ²	16 (2) ² (0) ³	18
Income and Consumption	11 (3)	9 (1)	9 (2) (0)	11
Employment and Manpower	67 (20)	23 (2)	25 (1) (1)	32
Education	55 (24)	17 (4)	21 (3) (0)	22
Health	59 (40)	23 (4)	18 (3) (3)	26
Housing and Environment	33 (17)	13 (5)	13 (2) (1)	19
Family Life and Leisure	65 (38)	7 (1)	17 (5) (3)	15
Public Security	34 (24)	8 (0)	7 (2) (1)	8
Total	350 (166)	114 (18)	128 (20) (9)	151

1: To be newly developed.

2: Developed by the Bureau of Statistics (BOS)

3: Adopted from the recommendations on the items to be newly developed.

Source: BOS, 'Social Indicators of Korea (Plan)', mimeo., (Materials prepared for a consultation meeting); August 1979, p. 13; Economic Planning Board (EPB), *Social Indicators of Korea 1979*, and *Social Indicators of Korea 1980*.

Preliminary selection of indicators for the statistical report was made within the Bureau of Statistics, Economic Planning Board with only limited consultations with four or five specialists representing economics, sociology, education and other disciplines. Final selection of the indicator items and formats was made from the list of preliminary selection with only cursory expert review. The review itself is fragmentary and on an item-by-item basis; connections between items and the significance of the items on review were rarely considered with reference to the entire system.

Data Production and Compilation

The official social indicator measures are heavily drawn from the official or administrative statistics which have been published in various government statistical reports or produced by government agencies. The major statistical publications and data produced for social indicators are listed in Table 2.

As noted above, an annual survey entitled *Social Statistics Survey* has also been conducted. Although the survey is designed to collect basic data required for supplementing and developing social indicators in Korea, it rarely produces any new types of data which are essential in informing a coherent system of social indicators. The survey is solely intended to provide some subjective or attitudinal data and the supplementary information not available at the national level.

After a preliminary trial, the first official survey on social statistics was conducted for ten days in March, 1979. The second survey with a similar sample size was carried out in March 1980. A total of 27 questions were included in the 1979 survey. They are:

- (1) Background: name of each household member, relationship to head of the household, sex, age, marital status, level of educational attainment;
- (2) Health: duration of illness, place of treatment, hospitalization and operation, place of child delivery, delivery aids, prenatal care, folk medical treatment, self-judgment on eyesight;
- (3) Social aspects: amount of time watching T.V., favoured T.V. programs, leisure activities, desired residence in old age, attitudes toward dependency in old age;
- (4) Education: *kwa-oe* (extra curricular private tutoring);
- (5) Housing and environment: ownership of living quarters, desired type of living quarters, desired size of house, subjective evaluation of the degree of pollution;
- (6) Income: income for non-farm households or size of farm land and number of domestic animals raised by farm households.

In the 1980 survey, two new areas of interest were introduced; economic activity and perceptions of change during the last and expected during the next 10 years. The section on income was excluded. In the sections on health and social aspects some alterations were made in the questionnaire items.

One interesting observation regarding the survey is that in conflict with its ostensible purpose, the use of the results in constructing social indicators has been greatly restricted. Out of 128 selected indicator items in 1979, only 14 were adopted from the survey results. The number increased to 18 out of 151 items in 1980.³ Most of other data were drawn from

3. According to *Social Indicators of Korea 1979*, the indicators are: desired level of education for children; proportion of students who have received extra-curricula teachings; proportion of persons who were ill; number of days in illness, number of visits to doctors; proportion of women who had prenatal medical check-up; types of child delivery aid; place of delivery; amount of time needed to visit clinics or health centers, living space in the house per person; perception of pollution; favored child to live with, or living arrangement, in old age; proportion of persons watching T.V.; and hours watching T.V.

Table 2. Major Sources of Data for Social Indicators of Korea 1979

Source	No. of Tables
Reports of Population and Housing Census (EPB)	15
Economic Statistics Yearbook (Bank of Korea)	4
Annual Report on the Family Income and Expenditure Survey (EPB)	7
Report on the Results of Farm Household Economy Survey (Ministry of Agriculture and Fishery: MAF)	6
Annual Report of the Economically Active Population (EPB)	5
Report of Monthly Labour Survey (Office of Labour Affairs: OLA)	4
Survey Report on Occupational Wage (OLA)	3
Yearbook of Labour Statistics (OLA)	5
Yearbook of Educational Statistics (Ministry of Education: MOE)	11
Yearbook of Public Health and Social Statistics (Ministry of Health and Social Affairs: MHSA)	8
Crime Analysis (High Public Prosecutor's Office)	5
Social Statistics Survey (EPB)	14
Others : EPB	6
: MOE	2
: MHSA	2
: MAF	1
: Ministry of Transportation	1
: Miscellaneous	3

various official statistical publications.

One of the most critical problems in this sort of data compilation is inconsistency among data. The government statistical yearbooks and survey reports are known to differ considerably from each other in objectives, data collection methods and the format of data presentation. It has been already pointed out that for the same kind of data there is significant variation in quality or completeness of enumeration according to the method of data collection. It is also well known that the purpose of data collection is a major constraint upon the quality, comparability and usability of the data produced. It has been pointed out in Section II (p. 6), that the introduction of a new data system is theoretically justified in order to establish a coherent social reporting system. With enlarged objectives and reformulation, the Social Statistics Survey is expected to meet such a need.

In relation to the Social Statistics Survey, it may be useful to look at the extent to which the government actually put emphasis upon the development of subjective or attitudinal indicators. As mentioned in the above, one of the major aims of the survey is to develop subjective indicators, which are not available from other official statistics. It is, however, noticed that the number of subjective social indicators surveyed and reported are highly limited: according to the 1979 survey, attitudes toward dependency in old age, desired housing conditions and subjective evaluation of the degree of pollution belong to this category; in the 1980 survey, items on perceptions of change were added. Insofar as "normative aspects of individual life" consist one of the major concerns in the current Korean social indicator system, some more attention should have been given to the basic understanding of "normative activities" and "value orientations" of individuals.

Format of Data Presentation

Basically, crude summary statistics constitute the majority of indicator items. For most items, only the national averages for selected years are presented. Cross-tabulation is used in a very limited way; most cross-tabulations, if available, are made in terms of an urban-

rural distinction or by sex. Break-downs of data into socioeconomic background of individuals are rarely done. A few exceptions are found in the 1979 and 1980 reports; i.e., three items on health conditions are classified by the level of educational attainment of the respondents.

In each table, the sources of data are given very incompletely; the exact location of data cannot be identified and sometimes secondary sources are presented. Furthermore, no description is made as to the nature of the data, the methods of enumeration, or other specifications that should be considered in the use of the data. In a word, no proper attention is paid to the utility of the data as social indicators.

Some Implications

From the above observations, there appear to be profound discrepancies between the major aims and the outcomes of the endeavour to develop a social indicator system in Korea. Apart from what has been stated in various preparatory documents, though not always consistently, neither a coherent system nor the recognition of the need for such a system is reflected in the resulting statistical report. Despite the introduction of a new type of official survey to fulfill a partial need for a social indicator system, the survey seems to have played relatively minor role in producing important statistical materials of social concern. The indicators adopted from the survey (footnote in p. 14) are hardly considered to be of crucial importance in the whole system. Furthermore, as discussed in Section V, the validity of data drawn from the survey is highly questionable; subjective judgments of various environmental and health situations cannot be a substitute for measurement of objective conditions. Such subjective judgments can be of significance in measuring the willingness of the public to participate in voluntary actions to solve problems arising from such conditions. However, social participation of the public was not one of the major concerns in introducing social indicators in Korea. And such items are rarely sufficient for evaluating the readiness of the public for voluntary social participation in general.

Why do there exist large discrepancies between the stated aims of the social indicator system and the end results? Given profound problems in the technical domain, the more fundamental one seems to be the lack of concerns with "value" questions or theoretical guidelines. A question can be raised of whether the government authorities have deliberately sought to avoid such seemingly delicate questions. However, in so far as the quality of life is the primary concern of the Korean social indicator system and thereby links the system to judgments on values and the value-involved term "social development," any attempt to build a value-free system or to avoid value judgments will only lead to a vacuous hodge-podge of statistics. Clear value judgment, as suggested in Section II, must be a necessary condition for a coherent social indicator system. The meaning of each indicator item will then stand out in view of a given value system. This aspect is particularly relevant when the social indicator is designed as a guide for monitoring social change by the government. Explicit value involvement is more than justified in the case of the Korean social indicator system; such expressions as "quality of life," social change in a "normatively desired" direction, and measurement of "dysfunctions" in the current social development policy are found to be inseparably linked to the major concerns of the system (EPB, 1979; 1980).

V. QUALITY AND USABILITY OF KOREAN SOCIAL INDICATORS

Statistics which comprise the social indicators used in Korea can be broadly classified into demographic, economic, and other statistics. Information on population and house-

hold type will rightly be considered as demographic data, while that on income, consumption, employment and manpower belongs to the economic data category. As indicated in the previous section, demographic statistics are generally the best in quality, although certain types of demographic information are highly defective. Social statistics including health data are known to be subject to various kinds of serious errors which are difficult to control. Economic statistics are estimated to lie between the other categories in their general quality. Ordered in this way data quality appears to be directly linked, as expected, with conceptual clarity, the possibility of objective judgment, and the degree of personal involvement with the data required.

Demographic Data

Two types of demographic data are presented as measures of social indicators in Korea: they are (1) age, sex and household composition, and primary demographic indicators based on the age-sex composition; and (2) estimates of population growth rates, vital rates and the volume of migration. The first type of data are drawn exclusively from the censuses which have been taken at approximately five-year intervals. Basic demographic indices adopted as social indicators are also the estimates based on census in most cases. Only vital rates are known to have in part utilized special sample registration data.

In general, age and sex information from the census is fairly reliable. Nevertheless, some distinctive patterns of errors in the completeness of population enumeration are apparant in the censuses after 1955. For example, relative under-enumeration is seen in the ages 0-4 and 60 or more for both sexes, in the ages 15-29 for males and in 15-24 for females (see Chang et al., 1974: 26-30). One important observation on the types of errors in the census, particularly in relation to comparability and usability of the data, is that the error patterns are consistent between different censuses. This consistency suggests the existence of the common factors affecting the quality of the census, but guarantees relatively accurate trend and pattern analysis of various demographic events. The common factors discerned from a rigorous analysis are briefly listed below (Chang et al., 1974: 39-40; Kwon, 1977: 7-17):

- (1) The methods of reckoning age have been partly responsible for errors in census age statistics, particularly in single year of age data;
- (2) Migration is one of the most important causes of the patterns and differentials of enumeration errors which in turn have a significant effect in migration statistics;
- (3) Such institutional factors as military service, schooling and marriage are known to have affected to some extent the quality and patterns of the Korean census data;
- (4) Some psychology associated with passing certain age milestones appears to have caused slight age misreportings;
- (5) Position in the household is related to the patterns of enumeration errors; and
- (6) Timing of a census which overlaps with a national holiday affects the quality of the census.

The quality of the censuses regarding household or family composition is also believed to be satisfactory. But the reportings of census results is known to suffer from inconsistencies in the use of such terms as "relative" and "ordinary" households. No proper consideration is given to the type of comparability problem in adopting figures from the census reports as measures of social indicators.

Some statistics from the census, such as migration status during the five years prior to the census show a very low level of completeness and are subject to differential rates of under-enumeration among various groups (ESCAP, 1980: chapter 1). Though adjusted figures on migration status are presented in the official social indicator reportings, exten-

sive care is still required in analysing the data.

Looking at vital rates in *Social Indicators of Korea*, an unlikely trend of change is discerned, which is undoubtedly caused by errors in the enumeration of vital events. Due to the poor quality of the official registration data (Kwon, 1977: 17-20), the government utilizes the results of sample registrations through the Continuous Demographic Survey (CDS) in calculating the official vital rates. Although the quality of data from the CDS has improved greatly in recent years, the problem of quality control has not yet been fully resolved.

According to various documents on Korean social indicators, it is apparent that demographic statistics are conceived as background or supplementary information. Very crude demographic trends can be identified with the statistics presented in the report, but they do not allow any substantive analysis. One of the important functions of demographic data in a social indicator system may be to assist us in identifying the problem areas in the society. For example, changes in age structure may shed light on the emerging of the problem of the elderly. However, even such an indirect contribution of demographic information is not to be expected from the data given in the published statistics on Korean social indicators. In a word, the usability of demographic data in the reports is highly limited; they can hardly contribute to assessing social welfare of living conditions.

Economic Data

The major part of economic data in *Social Indicators of Korea* consists of data drawn from the surveys on urban household and expenditure, farm household economy, the economically active population and labour force (for details, see Appendix A). Because of the diversity of economic data in both content and the methods of data collection, we cannot fully discuss the quality and characteristics of economic data. Nevertheless, it is necessary to point out important problems associated with the economic data presented in the social indicators reports.

Information on income and consumption is almost exclusively based on the results of two household economy surveys, one in urban areas and the other in rural areas. The urban household economy survey is known to have the following defects (Bae, 1978: 280-282):

- (1) Since the major purpose of the survey is to calculate the weight of consumer price index and to measure the level and behaviour of consumption, the data are rarely proper for the study of income distribution;
- (2) The sample size is too small;
- (3) In the sample both low and high income brackets are excluded; and
- (4) In the sample design the aspects of income distribution are not considered.

Very similar observations can be made with respect to the rural household economy survey. The primary purpose of the survey does not lie in grasping the structure of income distribution. The survey suffers from the low level of reliability due to small sample size. In the sample, very low income households are excluded (Bae, 1978: 282-284).

The survey on the economically active population is conducted on a quarterly basis and is well known for its good quality control. The survey adopts the labour force approach, however, which raises a number of conceptual problems when applied to a working population in which the majority is engaged in farming and where a labour market is not clearly established. In Korea the labour market is not yet well developed, and significant portion of the population still engages in farming. Small family businesses which rely on family labour are also very numerous. Under this situation, the labour force approach suffers from ambiguity in defining employment and unemployment, and poses difficulties

in the measurement of the size of labour force (Chang, 1974). There is no satisfactory solutions to these problems, but it is apparent that despite them, the data from the economically active population survey are highly consistent, which undoubtedly enhances their usability.

Statistics on the conditions of individual workers including wage, working hours and labour turnover are adopted from two major surveys by the Office of Labour Affairs, the Monthly Labours Survey and the Occupational Wage Survey. Both surveys employ the same sample, covering approximately 3,350 establishments. Although the information on individuals is supposed to be furnished by individual employees, it is almost certain that employers fill out the questionnaires. The surveys provide many unique and extensive data, but have been utilized only occasionally in economic analysis, perhaps due to the poor quality of the results. Such establishment surveys must address many serious problems: it is rarely possible in Korea to ensure a complete listing of establishments at any one point; and employers tend to provide false or biased information to protect their own vested interests. In addition, the budget and the experience and quality of field workers are often mentioned as partial handicaps to improving the surveys. It shall be noted here that statistical data produced by the Office give average values, and disregard the characteristics of individual workers. In addition, the survey has not paid much attention to wage earners employed in the "informal" sector.⁴ The number of workers engaging in the informal sector seems substantial in Korean economy. Furthermore, significant discrepancies between the survey results and the equivalent figures from other sources such as *A Survey on Scientific and Technical Manpower* are frequently observed.

Unlike demographic indicators, indicators concerning economic and working conditions constitute one of the major areas in *Social Indicators of Korea*. Nevertheless, the basic problems in utilizing the economic data are fairly similar to those facing demographic data. The economic statistics presented in the report would be useful in describing the overall national situation on the topics addressed in the tables. However, considering the differential quality among the economic indicators together with the simple tabulation format, it seems difficult, if not impossible, to carry out in-depth analysis on economic conditions of the country solely based on these social indicator statistics. A significant problem with the economic indicators is that no important *social* meaning can be attached to them. In the area of economic statistics, the socially meaningful indicators would concern poverty, income inequality, differential consumption patterns among different sectors of the population, the nature of employment and unemployment, job security and so forth. However, we cannot identify economic situations by social class or strata from the reports on social indicators, or in fact, from any other official economic statistics. In a word, most economic data available in Korea are not fully adequate as social indicator measures, and this is one of the crucial problems restricting the utility of economic data with regard to areas of social concern.

Other Official Statistics

Other official statistics adopted as social indicators are chiefly of three types; education, health, and public safety statistics. Among them, statistics on education are of good

4. The informal sector is characterized by:

- (1) arrangements typified by self-employment or loose and often temporary agreements, lack of coverage by minimum wage laws, social security, and other types of government regulations, and without union contracts when such exist,
- (2) ease of entry and high turnover of employment, and
- (3) smaller scale and less capitalized establishments (Merrick, 1976: 338).

quality, but the remaining two are known to have low reliability. As noted before, most of the official statistics on education consist of educational facilities, budget, and number of students classified by the level of schooling. The information is compiled through related government agencies and schools and is not susceptible to enumeration errors. But there is constant criticism that the current educational statistics system pays little attention to the quality of education, which our society emphasizes overwhelmingly.

All the crime statistics adopted as measures of social indicators in Korea were drawn from the data compiled by High Public Prosecutor's Office. The data consist of arrest statistics and reportings from the victims. It is, however, well known the rates of arrest for a certain kinds of crimes are fairly low. Also the reporting of crimes is far from complete in Korea. The completeness of some public safety statistics can be improved greatly if they are compiled through social surveys, and the Social Statistics Survey can be utilized very effectively for this purpose.

Health statistics presented in *Social Indicators of Korea* consist of the data on health and medical personnel and facilities, and the information on the status of illness and child delivery. The former types of data are drawn from *Yearbook of Health and Social Affairs* published by the government and based on health registration statistics. These data are regarded to be of acceptable quality for the government's license is mandatory in the field of health and medicine. Beside this type of information, the official statistics on health, which include morbidity and service statistics, are known to suffer greatly from the lack of reliability or under-enumeration. The current status of Korean health data is well documented in Hak-chung Choo's report submitted to USAID/Korea (Choo, 1974).

The problem underlying the Korean national health data and information, as Choo points out, "is not primarily one of technical incompatibility between data storage and access, but one of recurrent definitional incompatibility between conventional data resources and the developing requirements of use." Choo states that the highest priority should be given to the design of a national health data and information system itself. Therefore, *improvement* rather than *establishment* was considered as more important; i.e., "the major question is not whether such a system should be established, but rather how the present system can be improved, considering the constraints which have been discussed, to obtain an effective health information system." The improvement encompasses the reforms of administrative and organizational settings.

It is also observed in Korea that accessibility of the public to health delivery system constitutes one of the major sources of error in health statistics. Even if the improvement is made in the current system of collecting health statistics, the availability of, and easy access to, effective health and medical services on the community level is essential in obtaining reliable and somewhat objective data on health. However, in reality the health delivery system is rarely adequate in most rural areas and the costs of proper medical care are too expensive to be borne without strain by the majority of the population.

Due to such problems, some measures on morbidity and child delivery were collected through the Social Statistics Survey. Discussions on the quality and usability of the survey data are presented below.

Data from the Social Statistics Survey

What is meant by social statistics is not clear in the reports on social indicators in Korea. It appears to have two meanings; the term is sometimes applied to the data produced through the Social Statistics Survey and at other times to the data on "family life and leisure" which constitute a major area of concern in the Korean system. In the current

discussion, we take the first usage since the data on family life and leisure are mostly drawn from this survey.

The quality of Social Statistics Survey cannot be easily assessed because of its very short history. However, some problems are already apparent. They are:

- (1) The design of questionnaire and the methods of data enumeration are not adequate for a social statistics survey;
- (2) It seems that little attention is paid to the reliability and validity of questionnaire items; and
- (3) The selection of questionnaire items is not systematic.

It was pointed out in the above that the purpose of the survey is not to create new types of data which fit to a new statistical system but to collect complementary or supplementary data which are not readily available. This narrow scope has resulted in low quality data of limited usability since the survey could escape critical attention of the public and scholars. In fact, the survey was rarely publicized even in academic communities.

That the survey data are of only limited use is indicated by the fact that the data collected through the survey have been used to produce only a small number of tables on social indicators. It is also questionable whether even the data used has any significance as social indicators. In some cases, it is difficult to justify fully reporting subjective self-judgments when objective measurements are required. For instance, one may question the rationale for asking individuals about their illnesses during the last one year. The reporting cannot be objective as originally intended in the sense that the same or similar criteria of judgment cannot be applied to all the respondents and the criteria will differ considerably in terms of the place of residence and the socioeconomic background of the respondents. The answer to such questions changes easily with slight, but unnoticed, changes in wordings and interview technique. The doubling in the rate of illness between the 1979 and 1980 surveys may well be an example of this problem. It should also be noted that purely attitudinal data have little practical application. For instance, reported attitudes toward old age dependency without proper information to the current family structure of the respondents will shed little light upon the prospect of old age problems in Korean society.

The above arguments do not necessarily mean to reject or devalue the significance of subjective or attitudinal data as measures of social indicators in Korea. It has been intended only to point to the problems in those data which have been produced through the Social Statistics Surveys. The meanings of subjective indicators should be determined in the context of the social indicator system as a whole, particularly in relation to the main purposes and concerns of the system adopted, as discussed in Sections II and IV.

To sum up the above discussion of the usability of various kinds of statistics appearing in the reports on social indicators, the following general points can be made:

- (1) For most statistics, the main purpose of data collection is far distant from that of social indicators, and as a result, it is extremely difficult, if not impossible, to reorganize this data to reflect specific social concerns within a systematic whole;
- (2) Lack of coherence among the components of the Korean social indicator system makes it difficult to examine or determine the adequacy of the data selected and the format of presentation;
- (3) In general, social concerns regarding the distribution and of socially meaningful items including norms and values among various social groups are not clearly discerned in the statistics selected as measures of social indicators;
- (4) Due to the unsystematic presentation of the data, the analysis of indicator items in a given conceptual framework is highly problematic; and
- (5) Differential quality and lack of comparability between the selected data put important limits upon the extent and intensity of the analysis which can be based on the social

indicator statistics.

VI. TOWARD A SOCIAL REPORTING SYSTEM

In this concluding section we sum up the basic theoretical and methodological guidelines presented earlier, discuss issues related to these, and finally offer a draft proposal for improving the Korean indicator system in the foreseeable future.

Summary and Discussion of the Key Ideas

To recapitulate the three major arguments, a social reporting system, first of all, has to be designed in such a way that it reflects and measures social welfare. Welfare is regarded more as a collective social condition than as a summation of the psychological dispositions of individuals. Therefore, emphasis must be given to the collection and presentation of data which allow us to appraise the complex problems of large-scale social systems and the collective activities of a society. It has also been stressed that subjective indicators consisting of individual perceptions, evaluations and attitudes should be used only sparingly and with great discretion since problems of improvement of welfare conditions and equity cannot be reduced to those of satisfaction and happiness at the individual level.

Second, the necessity of institutionalizing the system of social reporting was highlighted. The ongoing method of data collection has to be critically re-examined and a new way of data compilation has to be pursued since government data—mostly of the “aggregated” type—fails to meet the needs for more practical and refined information.

Finally, having raised the question of the purposes underlying the establishment of a social reporting system, two possible and mutually reinforcing alternatives were presented; i.e., to inform citizens and to guide policy planning.

To expand upon this it should be added that in order for a viable system of social reporting to be institutionalized in Korea, its purpose must be clearly determined prior to determinations on system form and content in such a manner that the social reporting system meaningfully reflects social concerns. In the case of Korea, it is particularly true that the problem lies more likely in the conceptual domain than in technical areas. As has been pointed out in Section IV, the purpose behind social reporting and the areas of social concern are not explicitly stated in any statistical documents or government publications. Roughly four major concerns were identified which had an eventual linkage with the improvement of the quality of life. Without specification of social concerns, however, aggregate measures of social conditions, such as the economic growth rate, the number of unemployed, and the enrollment rate of the school-age population, may not meaningfully speak to the problems we are facing and expected to face in the future.

Although still at a formative stage, government social concerns in Korea seems to be directed toward social development rather than welfare. It was pointed out in Section II that concerns and problems in social welfare is inevitably linked with socioeconomic development and that the social indicators should measure emergent problems from the development. However, the question whether the priority should be laid on welfare or development has important implications in a social reporting system. For the former concerns primarily the distribution of resources and values among various social strata, or the problems of equity, whereas the latter is interested in the aggregate changes of the society as a whole. Also as examined in Section III, the government concern in social welfare is fairly recent and the welfare planning is now in the stage of articulation. Accordingly, we recognize that, in matters of the Korean social reporting system, initial

efforts have to address concerns about social welfare.

If a systematic social reporting system is to be more than simple aggregates of scattered statistical data, the system may have to reflect trends in the quality of human life on subjective as well as objective dimensions. In fact, the social indicator movement in the advanced nations has increasingly placed more emphasis on the “subjective” dimension of the system. In these nations subjective attitudes are apparently regarded as indispensable to the system because they reveal how people actually perceive their living conditions and how they respond to the social environment in which they live—an environment which encompasses available resources in the community and services provided by the national or local government.

In the typical less developed countries where the level of citizens’ self-consciousness is low and the people are prone to governmental manipulation, we suspect that subjective perceptions and evaluations of living conditions may not contribute much to the social reporting system. Subjective aspects of citizens’ life seem particularly difficult to measure in a consistent way over certain periods of time, for there will always exist some portion of the population who express dissatisfaction with work and life no matter how materially affluent they may become. The opposite case would also be possible. For example, many Koreans have a strong tendency to give positive responses to certain types of questions, so that the extent of actual dissatisfaction is not revealed. In addition, it is highly probable that many arbitrary and random factors are intertwined with systematic changes in people’s perceptions.

Coherence in data reporting would appear to require the development of new types of data by conducting periodic surveys of social conditions. Once “social indicators” are designed to be based upon such survey results, items and definitions can be custom-tailored and consistency in reporting can be sustained through successive reports. As to the survey method we must consider both the sample size and frequency of each survey because of budget constraints. That is, it must be determined how often the survey should be administered (e.g., annually or biennially) and whether the items asked should be the same in each round, or whether a fraction of the total set of items should be changed periodically.

The next issue concerns the form of data presentation. Currently the presentation of social indicator data in Korea is problematic. More specific and refined information must be inserted in reported tables as to make social reporting theoretically sound, efficient, practical, and above all, more readily usable. Simple frequency tabulations are usually the most lucid way to present data, but tables broken down by meaningful variables such as socioeconomic status are occasionally badly needed.

Recommendations for Further Research

This study is only a preliminary attempt to improve the currently inadequate social reporting system in Korea, but it turns out that a research plan is feasible and clearly its need is justifiable for establishing a coherent system. Thus it is recommended that a more extensive research in this vein should be pursued in the next few years. Meanwhile, the following stepwise phases for action are suggested.

Phase 1A: Analyze and reassess the contents of the current Social Statistics Survey with respect to specification of problem areas.

Phase 1B: Conduct research on the basic conditions of social welfare in each area of concern.

Phase 2: Based upon the results of Phase 1, study the system itself and systematically design a series of surveys for implementation of a new system.

Phase 3A: As to organizational aspects, specify a division of labor between varying

levels of government bureaus and clarify a role distinction between the government and private research institutes. If feasible, establish an *ad hoc* office within the national government to deal with reporting.

Phase 3B: As to personnel, devise a plan for training specialists and technicians on administration of reporting and the government officials at a supervisory level.

Preferably, implementation of the system design is suggested to be conducted by private research institutes rather than government bureaus. In addition, an active participation in, or an collaboration with, international organizations should be highly encouraged. Due to budget constraints of the Korean government, an extensive support from the international organizations is almost mandatory to make the above plan put into action at least in the immediate future.

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APPENDIX A: INTRODUCTION TO MAJOR SOURCES OF DATA FOR SOCIAL INDICATORS

As a supplement we review in the following the government efforts during the last 20 years to develop various data systems which became, and can be used as, the base for formulating social indicators in Korea by areas of social concern.

Population

The government became interested in population problems after the Military Coup of 1961. But population policy has been primarily directed toward population growth problems, and emphasis has been given to family planning with relative neglect of other demographic aspects. An extensive family planning project was launched in 1962 together with the First Five-Year Economic Plan. Prolific research reports on family planning have been publicized by the Institute for Family Planning since the early 1970s, producing some essential demographic data through a series of fertility surveys. Also Korea has a reputation for having relatively good quality demographic data (see Kwon, 1978).

Income and Expenditures

At the government level, the major surveys on income and expenditures of individual households have been conducted by Economic Planning Board since 1963. Data derived from such annual surveys are indispensable for planning and evaluating various economic and social policies. In 1963, the first full-fledged survey was administered to around 1,800 households in major cities throughout the nation, while in 1977 the sample was expanded and revised to cover approximately 4,000 households so as to enhance the representativeness of the sample and the quality of the survey analysis. Until 1974, the questionnaire items were confined to food expenditures, but since 1975 all types of household expenditures have been included.

The annual survey aims at obtaining data on living standards; (1) in order to determine weights necessary in constructing the consumer price index, (2) for estimating national income, and (3) for establishing economic and social policies. The survey includes the

major items on income and expenditures which have been recommended by the International Labor Office and the United Nations Statistics Organization.

In the case of farm households, the Ministry of Agriculture and Fisheries (former Ministry of Agriculture and Forestry) has annually conducted a farm household economy survey since 1962 in order to grasp the status of the agricultural economy and farm household management, to provide basic data for research on agriculture and for the estimation of national income. The sample size of the survey was originally 1,182, but in 1974 it was expanded to cover over 2,500 farm households and the survey items were likewise increased from 124 to 546.

Employment and Manpower

Efforts to gather manpower data have been exerted by several governmental agencies in charge of manpower policy planning. A general, though somewhat cursory, survey on the labor force has been conducted by the Economic Planning Board since 1963. Prior to 1961, a so-named "Labor Force Survey" was carried out by the Ministry of Home Affairs through the local administrative hierarchy. The EPB's annual report on the labor force is based on a quarterly survey of persons aged 14 years old and over who usually reside in the sample households. The sample for the survey has been periodically rotated following the completion of the regular censuses. The major purpose of this survey is to provide up-to-date information on changes in the labor force with respect to employment and unemployment, and thereby to contribute to formulating and evaluating government plans for employment and manpower policies.

More specific surveys on manpower utilization have been mostly administered by other offices, such as the Office of Labor Affairs (OLA) and the Ministry of Science and Technology (MOST). The Office of Labor Affairs has conducted a monthly labor survey since the early 1970s in order to measure changing patterns in labor turnover and wage levels by examining monthly changes in employment, wages and hours worked, and thus provide basic data for employment and wage policies. This Office normally deals with all industries except agriculture. For the survey, a stratified sampling procedure is employed to select about 3,350 establishments hiring at least 10 regular employees. This monthly survey particularly concerns the labor turnover rate and wage levels of "regular" employees. As a supplement, an occupational wage survey has been done with the same sample establishments each year. The Office also conducts an annual survey on actual labor conditions with all establishments employing five or more workers.

As regards scientific and technical workers, since the mid-1960s the Ministry of Science and Technology has published numerous reports based on a series of studies on scientific and technical manpower. Most MOST's studies were performed by private research institutes on a contract basis with the Ministry. One of the earliest reports under the responsibility of MOST was *A Demographic Study on Scientific and Technical Manpower in Korea* submitted by the Institute of Population Problems in 1967. This study was intended to provide basic data for developing manpower in the field of science and technology in order to support the Second Five-Year Plan for Economic Development.*

* The main purposes of this study were:

- (1) to collect data which are expected to indicate the status of manpower in science and technology,
- (2) to obtain data which are expected to facilitate the effective placement or utilization of manpower in science and technology and for the development of plans and programs for training technicians and craftsmen,
- (3) to facilitate an understanding of the structure and regional distribution of manpower in science and technology, and of factors which influence their movements (MOST, 1967).

To disclose the current status of manpower in science and technology for planning purposes, particularly in connection with the Fourth Economic Development Plan, a series of surveys covering all industries have been conducted by MOST since 1969 (PDSC, 1976 & 1977). Particularly, the 1975 survey contains questions concerning both establishments and individual workers. Included were such items as entrance procedures and personal attitudes toward scientific and technical jobs. Also included were personal problems in raising the workers' level of skill or competence, and the degree of job satisfaction. In this survey, the following policy recommendations were made: active utilization of scientists; training and retraining of technical workers; expansion of educational institutions for science and technology; systematic dissemination of information on technology; and improvement of the reward system for manpower in the field of science and technology.

Education

Basic data on education have been compiled annually since the early 1960s, and presented *Statistical Yearbook of Education*, by the Ministry of Education since the early 1960s. Statistical data contained in the Yearbook are collected by means of a complete enumeration of schools, classes, students, teachers and facilities at various levels in the educational system; i.e., the Yearbook mainly presents "numbers" regarding the most readily countable aspects of an educational system.

As for educational planning, the Ministry of Education has made an attempt to integrate education into the economic development plan under the Park Chong-hee Military Government in 1961, resulting in the Five-Year Educational Reconstruction Plan, 1962-1966. Special consideration was given to the problem of educated unemployment (McGinn et al., 1980).

In 1969, the National Council for Long-Term Educational Planning, which was established under the Prime Minister, drafted a fifteen-year plan for educational development in which emphasis was placed on the expansion and development of secondary and higher education rather than primary education. Throughout, the lack of systematic educational planning has led to disorder in the government's support of and intervention in the educational system (McGinn et al., 1980). Although the Ministry of Education has published several reports on education either periodically or occasionally, information contained in the reports does not adequately reflect issues associated with education. This is in part because yearbook-type statistical reports never fully reveal how much education individual persons actually desire for themselves and their offspring, or how they perceive the way in which the current education system should be changed and modified in order to meet people's needs.

Health and Nutrition

Most statistics on public health and social affairs have been periodically made available by the Ministry of Health and Social Affairs (MHSA) since 1954. The MHSA's data included all health and social activities of the government so as to serve as a basic tool for policy-making and implementation of health and social programs. Now that medical and social welfare systems constitute part of the economic development plan, the importance of health and nutrition data has become even more apparent. The MHSA's official publication covers status and service statistics reported via the administrative hierarchy as well as some essential demographic indicators.

As regards health data, professional organizations such as the Korea Medical Association, the Korea Hospital Association, and the Korea Nurse Association, are also engaged

in regular and/or irregular health data collection activities.

Housing and Environment

Although several research reports on housing have been issued by the Korea Housing Corporation and the Ministry of Construction, most of basic statistics on housing can be sought out in the periodic censuses of population and housing by the Economic Planning Board. Housing data in Korea seems remarkably rich for the years since 1970.

As for environmental quality, it was not until recent that the government recognized the necessity of investing in water supply and sewage disposal facilities. The Third Five-Year Plan called for only 0.5 percent of total governmental investments to be spent on water supply and sewage treatment, while the Fourth Five-Year Plan, 1977–1981, called for a tripling of expenditures in these areas. At this time, environmental planning is mostly devoted to investment on improving water supplies in large cities and constructing sewage treatment plants (see Mills and Song, 1979: Chapter 10)

Family Life and Leisure

Most information that should be included in this section may be obtained from various other surveys executed by the Ministry of Health and Social Affairs and the Economic Planning Board. The first attempt by the EPB to measure public perceptions of various social issues and their life attitudes through the 1979 Social Statistics Survey. Results from this survey are now contained in *Social Indicators of Korea 1980*.

Public Safety

The High Prosecutor's Office has issued a quarterly report on crime and juvenile delinquency since the early 1960s. This report is compiled from the original copies of all kinds of crime statistics which are prepared by all levels of law enforcement agencies such as public prosecutor's office, police and special investigation forces. Included in this report are the occurrence and arrest status for crimes, and the main causes of crime and the home environment of criminals. Special consideration is given to juvenile delinquency.

In addition to this report, statistics on juvenile delinquency have been made available as a separate publication since 1963. The purpose is to provide basic data for guiding juveniles and preventing their wrongdoing and ultimately for improving rehabilitation policies. The statistics compiled in this publication are based upon reports from juvenile courts, the headquarters of national police, juvenile training schools, and juvenile correctional institutes.

APPENDIX B: LIST OF INDICATORS AND THEIR DEFINITION 1980

Sector	No.	Indicator	Definition and Formula	Table Reference Number
(1) Population	1	Total Population	Census and Mid-year Population	1-1
	2	Pop. Growth Rate	$\frac{P_t}{P_o} = e^{rt}$ Po: Population of Base Year Pt: Population of a Given Year r: Average Rate of Pop. Growth t: A Given Number of Years e: Natural Logarithm	1-1
	3	Crude Brith Rate	$CBR = \frac{\text{Births Per Year}}{\text{Mid-year Pop.}} \times 1,000$	1-2
	4	Crude Death Rate	$CDR = \frac{\text{Deaths Per Year}}{\text{Mid-year Pop.}} \times 1,000$	1-2
	5	Natural Rate of Pop. Growth	Birth Rate—Death Rate	1-2
	6	Total Fertility Rate	$TFR = \sum_{i=15}^{49} ASFR \times i$ *ASFR: Age-Specific Fertility Rate i: Age Group	1-3
	7	Mean Age at Marriage	Calculated by the Hajnal Method	1-4
	8	Child-bearing Women Ratio	$\frac{\text{Female Pop. from 15 to 49 Years Old}}{\text{Total female pop.}}$	1-5
	9	Total Dependency Ratio	$\frac{\text{Pop. Under 14 Years Old} + \text{Pop. 65 Years Old and Over}}{\text{Pop. from 15 to 64 Years Old}}$	1-6
	10	Young Dependency Ratio	$\frac{\text{Pop. Under 14 Years Old}}{\text{Pop. of Ages 15 to 64}}$	1-6
	11	Old Dependency Ratio	$\frac{\text{Pop. 65 Years Old and Over}}{\text{Pop. of Ages 15 to 64}}$	1-6
	12	Pop. by Sex and Age	Pop. by Sex and 5-Year Age Group	1-7
	13	Sex Ratio by Age	$\frac{\text{Male Pop. by Age}}{\text{Female Pop. by Age}}$	1-7
	14	In-Migration Rate by Province	$\frac{\text{In-migration by Province}}{\text{Population by Province}}$	1-8
	15	Out-Migration Rate by Province	$\frac{\text{Out-migration by Province}}{\text{Population by Province}}$	1-8
	16	Net Migration Rate	In-migration Rate—Out-migration Rate	1-8

* Source: EPB, *Social Indicators of Korea 1980*.

Sector	No.	Indicator	Definition and Formula	Table Reference Number
(2) Income and Consumption	17	Ratio of Urban Pop. to Total Pop.	$\frac{\text{Urban Pop.}}{\text{Total Po.}}$	1-9
	18	Pop. Density	$\frac{\text{Total Pop.}}{\text{Land Area (Km}^2\text{)}}$	1-9
	1	Per Capital GNP	$\frac{\text{GNP}}{\text{Total Population}}$	2-1
	2	Per Capita Personal Disposable Income	$\frac{\text{Personal Disposable Income}}{\text{Total Pop.}}$	2-1
	3	Ratio of Employee Compensation	$\frac{\text{Compensation of Employees}}{\text{National Income}}$	2-1
	4	Domestic Saving Ratio	$\frac{\text{Domestic Savings}}{\text{GNP}}$	2-2
	5	Foreign Saving Ratio	$\frac{\text{Foreign Savings}}{\text{GNP}}$	2-2
	6	Tax Burden Ratio	$\frac{\text{Total Taxes}}{\text{GNP}}$	2-2
	7	Ratio of Private Consumption Expenditure	$\frac{\text{Private Consumption Expenditure}}{\text{GNP}}$	2-3
	8	Ratio of Food Expenditure to Private Consumption Expenditure	$\frac{\text{Food \& Beverages Expenditures}}{\text{Total Consumption Expenditure}}$	2-3
	9	Average Rate of Household Food Expenditure Expenditures	$\frac{\text{Household Food Expenditure}}{\text{Total Consumption Expenditure}}$	2-3
10	Average Rate of Household Recreation Expenditure	$\frac{\text{Household Recreation Expenditure}}{\text{Total Consumption Expenditure}}$	2-4	
11	Ratio of Average Urban Household Income to Rural Household Income	$\frac{\text{Rural Household Income}}{\text{Urban Wage-earner Household Income}}$	2-5	
(3) Employment and Manpower	1	Employment Ratio of Primary Industry	$\frac{\text{Employment of Primary Industry}}{\text{Total Employment}}$	3-1
	2	Employment Ratio of Manufacturing Industry	$\frac{\text{Manufacturing Employment}}{\text{Total Employment}}$	3-1
	3	Labor Force Participation Rate	$\frac{\text{Economically Active Population}}{\text{Population 14 Years Old and Over}}$	3-2

Sector	No.	Indicator	Definition and Formula	Table Reference Number
	4	Ratio of the Employed to Total Employment	$\frac{\text{The Employed}}{\text{Total Employment}}$	3-3
	5	Full-time Employment Rate	$\frac{\text{Full-time Employment}}{\text{The Employed*}}$ *The Employed = Full-time Employment + Temporary Employment + Day-Laborers	3-3
	6	Underemployment Rate	Employment of Less than 18 Hours Per Week	3-4
	7	Unemployment Rate	$\frac{\text{Employment}}{\text{The Unemployed}} \div \text{Economically Active Population}$	3-5
	8	Work Satisfaction		3-6
	9	Average Weekly Working Hours	Average Monthly working Hours $\times \frac{7}{30.4}$	3-7
	10	Norminal Wage Index	Nominal Wage (Montnly Average) of a Given Year	3-8
			Nominal Wage (Montly Average) of the Base Year	
	11	Real Wage Index	Teal Wage (Monthly Average) of a Given Year	3-9
			Real Wage (Monthly Average) of the Base Year	
	12	Wage Levels by Occupation		3-9
	13	Wage Levels by Industry		3-10
	14	Reasons for Job Selection		3-11
	14	Wage Levels by Sex		3-12
	16	Ratio of Job Duration by Sex	Average Working Years of Female Workers	3-12
			Average Working Years of Male Workers	
	17	Placement Rate	Workers Placed During this Month $(\text{Wage Earners at the End of Previous Month} + \text{Those at the End of This Month}) \div 2$	3-13
	18	Displacement Rate	Workers Displaced this Month $(\text{Wage Earners at the End of Previous Month} + \text{Those Those at the End of This Month}) \div 2$	3-14

Sector	No.	Indicator	Definition and Formula	Table Reference Number
	19	Ratio of Subsidiary Income	$\frac{\text{Subsidiary Earners' Income}}{\text{Total Household Income}}$ *Subsidiary Income: Income of Those Other than Primary Earners	3-15
	20	Frequency Rate of Industrial Accidents	Number of Industrial Accidents Per 1,000,000 Hours	3-16
	21	Intensity Rate of Industrial Accidents	Number of Lost Days Per 1,000 Hours	3-16
	22	Rate of Workers Covered by Industrial Accident Insurance	$\frac{\text{Workers Covered by Industrial Accident Insurance}}{\text{Total Workers}}$	3-17
	23	Rate of Workers With Occupational Diseases	$\frac{\text{Workers with Occupational Disease}}{\text{Total Workers}}$	3-17
	24	Rate of Workers Covered by Medical Insurance	$\frac{\text{Workers Covered by Medical Insurance}}{\text{Total Workers}}$	3-17
	25	Job Applicant Rate	$\frac{\text{Job Applicants}}{\text{Job Openings}}$	3-18
	26	Job Opening Rate	$\frac{\text{Job Openings}}{\text{Job Applicants}}$	3-18
	27	Employment Service Ratio	$\frac{\text{Workers Placed through Employment Service}}{\text{Job Applicants}}$	3-18
	28	Average Number of Workers Per Establishment	$\frac{\text{Total Workers}}{\text{Total Establishments}}$	3-19
	29	Ratio of Workers Employed by Big Firms	$\frac{\text{Workers Employed by Firms with 500 Workers or More}}{\text{Total Workers}}$	3-19
	30	Union Membership Rate	$\frac{\text{Members of Labor Unions}}{\text{Total Workers Eligible}}$	3-20
	31	Number of Registered Labor Unions		3-20
	32	Index Number of Vocational Trainees		3-21
(4) Education	1	Level of Education Expected of Children	By Householders' Educational Level	4-1

Sector	No.	Indicator	Definition and Formula	Table Reference Number
	2	Enrollment Rate	$\frac{\text{Students at Each Level of School}}{\text{School Ages Population}}$	4-2
	3	Average Years of Education of Pop.	$\frac{\text{Total Weighted Number of Educational Years}}{\text{Population 6 Years Old and Over—Number of Students}}$	4-3 4-4
	4	Ratio of Elementary School Students	$\frac{\text{Elementary School Students}}{\text{Total Students}}$	4-5
	5	Ratio of Students to Total Population	$\frac{\text{Number of Students}}{\text{Total Population}}$	4-5
	6	Composition Ratio of College Undergraduates by Department		4-6
	7	Number of Schools		4-7
	8	Number of Teachers		4-7
	9	Number of Students Per Teacher	$\frac{\text{Number of Students}}{\text{Number of Teachers}}$	4-8
	10	Average Schooling Years of Teachers	$\frac{\text{Cumulative Years of Education Received by Teachers (Weighted)}}{\text{Number of Teachers}}$	4-8
	11	Average Years of Teaching Experience	$\frac{\text{Cumulative Years of Teaching of Teachers (Weighted)}}{\text{Number of Teachers}}$	4-8
	12	Average Age of Teacher	$\frac{\text{Cumulative Ages of Teacher (weighted)}}{\text{Number of Teacher}}$	4-8
	13	Resignation Rate of Teachers	$\frac{\text{Number of Teachers Leaving School Per Year}}{\text{Total Number of Teachers}}$	4-9
	14	Number of Preschool Educational Facilities and Kindergarten Children		4-10
	15	Number of Students Per Class	$\frac{\text{Number of Students}}{\text{Number of Classes}}$	4-11
	16	Average Space of School Buildings and Grounds Per Student	$\frac{\text{Comulative Total of Floor Space}}{\text{Number of Students}}$	4-12
	17	Advancement Rates of Students to Higher Level	$\frac{\text{Students going to Higher Level School}}{\text{Graduates at Each Level of Schools}}$	4-13

Sector	No.	Indicator	Definition and Formula	Table Reference Number
(5) Health	18	Schools Diffusion Rate of Correspondense Education	$\frac{\text{Numbers of High School and College Students Receiving Education Through Radio}}{\text{Non-student Population of High School and College Ages}}$	4-14
	19	Ratio of Students Receiving Tutoring	$\frac{\text{Students Receiving Tutoring}}{\text{The Surveyed Students}}$	4-15
	20	Wage Levels by Education Level		4-16
	21	Ratio of Household Educational Expenditure to Total Consumption Expenditure	$\frac{\text{Household Education Expenditure}}{\text{Total Consumption Expenditure}}$	4-17
	22	Ratio of M.O.E. Budget to Government Budget	$\frac{\text{Ministry of Education Budget}}{\text{Government Budget}}$	4-18
	1	Morbidity Rate	$\frac{\text{The Inflicted by Diseases}}{\text{The Surveyed Population}}$	5-1
	2	Disability Days	$\frac{\text{Total Days Disabled}}{\text{The Inflicted by Diseases}}$	5-1
	3	Days Confined in Bed	$\frac{\text{Total Days Confined in Bed}}{\text{The Inflicted by Diseases}}$	5-1
	4	Visits to Medical Doctors	Patients Treated Doctors	5-2
	5	Infant Mortality Rate	$\frac{\text{Deaths at Age 0}}{\text{Total Births}}$	5-3
	6	Attitude Toward Medical Personnel		5-4
	7	In-patients Rate	$\frac{\text{No. of In-patients}}{\text{Total Patients Treated}}$	5-5
	8	Average Days of Hospitalization	$\frac{\text{No. of Bed Days}}{\text{No. of In-patients}}$	5-5
9	Bed Utilization Rate	$\frac{\text{Daily Average No. of In-patients}}{\text{No. of Beds}}$	5-6	
10	Rate of Parasitic Infection		5-7	
11	T.B. Pervelence Rate		5-8	
12	Rate of Prenatal Care	$\frac{\text{Visits for Prenatal Care}}{\text{Total Deliveries}}$	5-9	
13	Care Rate of Delivery Assistance		5-10, 5-11	

Sector	No.	Indicator	Definition and Formula	Table Reference Number
	14	Number of Medical facilities		5-12
	15	Distribution of Medical Facilities by Province		5-13
	16	Persons Per Medical Personnel	$\frac{\text{Population}}{\text{Medical Personnel}}$	5-14
	17	Persons Per Hospital Bed	$\frac{\text{Population}}{\text{Hospital Beds}}$	5-14
	18	Average Height	Elementary, Middle, and High School Students	5-15
	19	Average Weight	Elementary, Middle, and High School Students	5-16
	20	Average Breast Circle	Elementary, Middle, and High School Students	5-17
	21	Per Capital Rice Consumption		5-18
	22	Per Capita Meat Consumption		5-18
	23	Caloric Intake	Per Capital Daily Caloric Intake	5-19
	24	Protein Intake	Per Capital Daily Protein Intake	5-19
	25	Ratio of Household Health Expenditure to Total Consumption Expenditure	$\frac{\text{Household Health Expenditure}}{\text{Total Consumption Expenditure}}$	5-20
	26	Distribution of Households by Time-distance to Medical Facilities		5-21
(6) Housing and Environment	1	Per Capita Housing Space	$\frac{\text{Floor Space}}{\text{Total Households or Household Members}}$ $\frac{\text{Land Site}}{\text{Total Households or Household Members}}$	6-1
	2	Number of Utilized Rooms Per Household	$\frac{\text{Total Utilized Rooms}}{\text{Total Households}}$	6-1
	3	Dwelling Persons Per Room	$\frac{\text{Total Household Members}}{\text{Total Utilized Rooms}}$	6-1
	4	Housing Supply Rate	$\frac{\text{Total Houses}}{\text{Total Households}}$	6-2

Sector	No.	Indicator	Definition and Formula	Table Reference Number	
	5	Housing Ownership Rate	$\frac{\text{Total House Owners}}{\text{Total Households}}$	6-2	
	6	Annual Housing Construction		6-2	
	7	Housing Investment Ratio	$\frac{\text{Housing Investment}}{\text{GNP}}$	6-2	
	8	Price Index of Major Building Materials		6-2	
	9	Types of Fuels Used		6-3, 6-4	
	10	Time-distance to Schools		6-5	
	11	Time-distance to Work		6-6	
	12	Piped Water Supply Rate	$\frac{\text{Residents Supplied with Piped Water}}{\text{Total Population}}$	6-7	
	13	Per Capita Daily Piped Water Supply	$\frac{\text{Annual Water Supply}}{\text{Residents Supplied with Piped Water}} \times \frac{1}{365}$	6-7	
	14	Rate of Telephone Supply		6-7	
	15	Ratio of Paved Road		6-7	
	16	Attitude Toward Environmental Pollution		6-8	
	17	Ratio of Household Housing Expenditure to Total Consumption Expenditure	$\frac{\text{Household Housing Expenditure}}{\text{Total Consumption Expenditure}}$	6-9	
	18	Storms and Floods Damages		6-10	
	19	Fire and Traffic Accidents		6-10	
	(7) Family Life and Leisure	1	Composition Rate of Household by Type	$\frac{\text{Different Generation Households}}{\text{Total Ordinary Households}}$	7-1
		2	Average Size of Household		7-1
		3	Population by Martial Status	$\frac{\text{Population by Martial Status}}{\text{Population 15 Years Old and Over}}$	7-2
		4	Attitudes Toward Old-age Dependency		7-3, 7-5

Sector	No.	Indicator	Definition and Formula	Table Reference Number	
	5	Family Planning Practice Rate	$\frac{\text{Women Practicing F.P.}}{\text{Married Women Age of 15-49}}$	7-5	
	6	Future Expectation of Family Income		7-6	
	7	Rate of Household with Major Household Goods		7-7	
	8	Population on Public Assistance		7-8	
	9	Numbers of Social Welfare Facilities and the Inmates		7-9	
	10	Beneficiary Rate in Medical Insurance	$\frac{\text{No. of Beneficiary}}{\text{Total Population}}$	7-10	
	11	Volume of Public Library Collections	$\frac{\text{Total Volumes}}{\text{Total Population}} \times 100,000$	7-11	
	12	Rate of T.V. Ownership	$\frac{\text{T.V. Owned by Population}}{\text{Total Households}}$	7-11	
	13	Weekend Recreational Activities		7-12, 7-13	
	14	T.V. Watching Population Rate	$\frac{\text{Population Watching T.V.}}{\text{Population 14 Years Old and Over}}$	7-14, 7-15	
	15	Rate Weekly Hours of T.V. Watching	$\frac{\text{Total Weekly Hours of T.V. Watching}}{\text{T.V. Watching Population}}$	7-14, 7-15	
	(8) Public Safety	1	Serious Criminal Offenses		8-1
		2	Criminal Offenses by Type		8-2
		3	Ratio of Property Offenses and Violent Offenses	$\frac{\text{Property Offenses} + \text{Violent Offenses}}{\text{Offenses in Penal Law}}$	8-2
		4	Rate of First Offenders	$\frac{\text{First Offenders}}{\text{Total Offenders}}$	8-3
5		Rate of Recurrent Offenders	$\frac{\text{Recurrent Offenders}}{\text{Total Offenders}}$	8-3	
6		Juvenile Delinquency Rate	$\frac{\text{Juvenile Offenders}}{\text{Total Offenders}}$	8-4	
7		Average Age of Serious Criminal	$\frac{\text{Cumulative Ages of Offenders}}{\text{Total Offenders}}$	8-5	
8		Ratio of Reported Crimes	$\frac{\text{Reported Crimes}}{\text{Total Offenses}}$	8-6	

<國文要約>

한국 사회지표 보고체계의 확립을 위하여

權	泰	煥
石	賢	浩
洪	斗	承

이 연구는 한국에 있어서 사회보고체계를 확립하기 위하여, ① 이론적, 방법론적 고찰, ② 한국에 있어서 사회지표운동의 발달, ③ 사회지표 체계의 現狀, ④ 사회지표의 측정을 위하여 이용가능한 다양한 자료의 質과 적절성을 검토하고 있다.

본 논문에는 세가지 주된 논의가 제시되었다. 첫째, 사회보고체계는 사회복지를 반영하고 측정할 수 있도록 계획되어야 한다. 복지는 개인들의 심리적 성질의 합계로서 보다는 집합적인 사회조건으로서 간주된다. 따라서 대규모 사회체계의 복합적 문제와 사회의 집합적 활동을 평가할 수 있는 자료의 수집과 제시가 강조되어야 한다. 복지조건의 개선문제와 형평은 개인 수준의 만족과 행복으로 환원될 수 없기때문에 개인적 지각, 평가 및 태도로 이루어진 주관적 지표는 특별한 경우에만, 그것도 신중하게 사용되어야 한다.

둘째, 사회보고 체계의 제도화의 필요성이 강되조였다. 정부자료——대부분 “총계적” 형태——는 보다 실제적이고 정교한 정보의 요구를 충족시키지 못하기 때문에, 현행 자료수집의 방법은 비판적으로 검토되어야 하며 새로운 자료편집 방법이 추구되어야 한다. 끝으로, 사회보고체계 확립의 목적은 무엇인가 하는 문제를 제기하면서, 상호보완적인 대안 두가지를 제시하였다. 그것은 시민들에게 정보를 제공하는 것과 정책결정을 인도하는 것이다.