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**ECONOMIC ISSUES:  
KOREA HEALTH PLANNING  
AND POLICY FORMULATION**

*James R. Jeffers*

NATIONAL HEALTH SECRETARIAT  
**KOREA DEVELOPMENT INSTITUTE**

ECONOMIC ISSUES:  
KOREA HEALTH PLANNING AND  
POLICY FORMULATION

*By*

*James R. Jeffers*

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KOREA DEVELOPMENT INSTITUTE

Seoul, Korea

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The Korea Development Institute was established on March 11, 1971 by President Park Chung Hee. K.D.I. systematically conducts research on policy matters concerning the overall national economy, helps develop the nation's five-year plans, and assists in policy making.

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## FOREWORD

The quest for good health as a prerequisite for the attainment of the life goals of economic security, personal freedom, and enhanced general welfare has been a major concern of mankind throughout the ages. The past efforts on the part of the Korean government to improve the health status of the Korean people have largely resulted in health conditions that are, for the most part, superior to those of other Asian nations at a similar stage of development. Undoubtedly, the rate of economic development achieved by the Republic of Korea during the last decade has also contributed to the improved health status and conditions of her people.

This year, in formulating the Fourth Five-Year Development Plan, significant emphasis was given to social development with the intent of distributing the benefits of previously attained economic development more broadly throughout all segments of the society. For the first time, the health sector was included as a major component of a Five-Year Development Plan in Korea and is a major element of the newly emphasized social development strategy.

Korean policy-makers' concern with improving the health status and conditions of the Korean people is shared by the United States Agency for International Development (USAID). In response to this joint concern, the USAID provided a 475,000 dollar health planning contract to Westinghouse Health Systems to provide assistance in developing health planning capabilities through: (i) financing overseas training, (ii) research of the Korean health sector, (iii) visits of specialized consultants to Korea, and (iv) the residence from February 1975 to December 1976 of two health advisors.

In addition, USAID granted the Korean government a five million dollar Health Development Loan to finance the establishment of the Korea Health Development Institute for the purpose of conducting large-scale (Gun, or county level) health delivery pilot and demonstration projects in order to acquire additional information on better health delivery systems for Korea.

Two new policy, planning, and research coordination institutions have been created in Korea: the National Health Council and the National Health Secretariat. The latter institution is established at the Korea Development Institute (KDI) under the immediate direction of Dr. Park, Chong Kee, Secretary General, National Health Secretariat, and Chief, Third Research Department, KDI.

Because we recognize that the economic aspects of health care delivery need increasing study, KDI is introducing this new publication series devoted to discussion, debate and research in the area of health planning and policy formulation. It is our hope that this series will appeal to a large audience, including policy-makers and academics.

The first monograph included in this series is authored by Dr. James R. Jeffers, Health Economics Advisor, USAID/Westinghouse. Dr. Jeffers, a professor of Economics at the University of Iowa, is on leave from his position and, since May 1975, has been working in residence at KDI. In the interests of identifying major health policy issues and solutions in Korea, Dr. Jeffers was asked to comment on various aspects and problems of Korea's health sector from the perspective of his long experience as a health economist in the United States. The manuscript of this discussion is intended to be thought-provoking and will therefore serve admirably as a departure point for the future discussion of health planning and policy issues at KDI. The views expressed here represent the author's own and do not necessarily reflect the official position of the National Health Secretariat, KDI.

**Mahn Je Kim**  
President  
Korea Development Institute

November 1976

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It is difficult, if not impossible to mention specifically by name all the persons to whom I am indebted, both personally and professionally, during my very pleasurable and professionally rewarding stay in Korea while working on the Westinghouse Health Planning Project. I have been privileged to converse, travel, and write with a very large number of people throughout Korea, all of whom have been extremely generous with their time and ideas and thus in some way have contributed to this volume. Yet, it would be unforgivable if no mention were made of the names of those individuals with whom I have had the privilege of working most closely, and who thus have had the greatest influence on my thinking as it is reflected here.

I am extremely indebted to the congenial and intellectually stimulating working relationships provided by my economist counterparts, Drs. Choo, Hakchung and Park, Chong Kee, Senior Fellows, KDI. In addition to collaborative activities concerning health sector plan preparation, training, research, and health information system activities undertaken in connection with the Westinghouse Health Planning Project, I have been privileged to collaborate with Dr. Choo, Hakchung on the health sector portion of the KDI/Harvard University "Korea Modernization Study", and with Dr. Park, Chong Kee in connection with a manuscript devoted to analyzing national health insurance issues in Korea. Both of these other studies will be published at a later date.

I am also grateful for the pleasant working relationship developed with Dr. Ahn, Sung Kyu during the time he served as Planning Officer, Ministry of Health and Social Affairs (MPSA), and

continue to benefit from conversations that have occurred since he assumed the position of Chief, Health Projects Division, KHDI. I also have profited greatly from the wise counsel, guidance, and other assistance provided by Dr. Chang, Kyung Shik, Director of the Bureau of Medical Affairs, MISA.

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An enormous debt is owed to Dr. Kim, Maha Je, President, KDI, who took the time to read and comment on various of my manuscripts, including the present volume, and who generously provided an outstanding working environment on my behalf in KDI. Dr. Koo, Bon Ho, Vice-President, KDI, not only exercised considerable leadership and support for my various professional activities in Korea, but also was extremely accessible and generous with his ideas, and time, giving immediate attention to resolving numerous difficulties encountered during the course of my work. A debt of significant magnitude is owed to Mr. Min, Jae Sung, Acting Chief, Health Policy Division, National Health Secretariat, KDI, with whom I have had the pleasure of working closely on many activities, and who supervised the preparation of this volume, providing many valuable suggestions. Mr. Kwon, Soon Won prepared the Korean language versions included in this volume, for which I am extremely grateful.

I am deeply indebted to Mrs. Lee, Jong Sook, Mr. Park, Heon Young, and Miss Kim, Ock Kyong. Miss Kim and Mr. Park collected and tabulated most of the data presented in various tables. Mrs. Lee, Jong Sook typed various preliminary versions and the final draft of the present volume, and also assisted in its final preparation. I am also grateful to Mr. Sheldon Miller, Director, Health Planning and Project Manager, Westinghouse Health Systems, who, during a timely visit to Korea, read and commented on earlier

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Acknowledgment would not be complete without mentioning the enormous contribution, both personal and professional, made to the completion of project activities and to the writing of this manuscript by Dr. James R. Brady, General Development Officer, USAID K.

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**James R. Jeffers**

November 1976

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*PART I:* SOME ECONOMIC ISSUES INVOLVED IN  
KOREA HEALTH SECTOR PLANNING AND POLICY  
FORMULATION: MACRO CONSIDERATIONS\*

## I. Introduction

It has been suggested that Korea health planners and policy-makers could benefit from observations made by a foreign health economist who could offer comments based on the experiences of other countries, as well as on a limited experience in Korea. Such comments would be useful, even if they largely consisted of pointing out the mistakes made by health planners and policy-makers elsewhere in the world. "To be forewarned is to be forearmed", and thus Korea may be less likely to follow the path of error previously trod by other nations of the world.

In this spirit, I am responding by offering some observations on Korea's health sector based on experiences and observations pertaining to other countries' efforts in attempting to solve health care problems that are similar to those of Korea. Obviously, my observations suffer from certain biases, both cultural and intellectual. I hope that these will be recognized for what they are, and will not detract significantly from the substance of the issues discussed. In addition, I would like to mention that much of what I say represents what I have learned from many Korean counterparts in the course of various health planning activities. In this connection, my mentors are too numerous to mention individually. Moreover to do so, perhaps, would associate them unfairly with ideas, strictly speaking, when they do not hold.

The solution to Korea's health care delivery problems ultimately must be a product entirely of Korean thinking, stimulated by substantial dialogue and discussion. My observations are offered in the interests of stimulating such discussion and thinking, thereby contributing modestly to a better understanding of Korea health sector

<sup>1</sup> The paper was prepared in connection with the work program of the USAID-KOR Health Planning Project, Contract AID ca C 1667 awarded to Westinghouse Health Systems, Columbia, Maryland. The opinions expressed here represent the author's own and do not reflect the views of the Korea Development Institute, USAID Korea, The National Health Secretariat, or Westinghouse Health Systems.

problems and policy issues. In the interests of facilitating easy reading, my specific comments are presented as a series of "propositions," which I have attempted to briefly elaborate and support.

In Part I of this volume, these propositions relate to rather broad policy issues, particularly as these relate to economic policy and social development planning in connection with the health sector. Part II of this volume, deals more with micro problems, and specific problems involved in health sector planning and policy strategy. Part II also relates specifically to selective features of the current health sector plan, and discusses various alternatives that were developed during and after the period of the health sector plan preparation. Thus Parts I and II together, hopefully, address most of the problems pertinent to Korea health sector planning and policy formulation. A third paper, to be published subsequently coauthored with Dr. Park, Chong Kee, Secretary General, National Health Secretariat, KDI, will be devoted almost entirely to specific issues involved in national health insurance.

## **II. Macro Considerations**

### **PROPOSITION II-1      OUTLAYS ON HEALTH SERVICES CONTRIBUTE POSITIVELY TO ECONOMIC GROWTH.**

Development economists tend to suffer from an unfortunate bias, namely in thinking that outlays on health, while they improve the welfare of people, constitute a "drag" on the rate of economic growth. The line of thinking, stated in its simplest terms, goes something like this. Economic growth requires urbanization and industrialization. Urbanization and industrialization, among other things, require the development of a critical mass of physical capital, first to develop infrastructure, and later to develop industry and support services required of urban concentration. Outlays on health, consisting of services consumed by people in current periods, absorb scarce funds that could be used for purposes of capital deepening required to further the processes of urbanization and industrialization. Thus outlays on health are viewed as consumption outlays,

rather than as investment outlays, made solely on humanitarian grounds and constitute a "drag" on economic growth.

As most readers know well, for a long time development economists tended to overemphasize the importance of physical capital at the expense of neglecting human capital. There is no doubting the importance of the development of physical capital infrastructure and the necessity of physical capital "deepening", in order to promote industrialization. However, the manner in which physical capital investment brings about increases in output is largely through increasing the productivity of labor. Investment directly in human beings in the form of raising levels of education, training, and health status also increases labor productivity and thus promotes economic growth.

For many years, economic growth theorists were preoccupied with physical capital investment, particularly within the Keynesian multiplier, income-generation framework. However, when attempting to explain the long-run growth of the U.S. economy, Solow, Denison, Jorgenson, and others found that a large residual variation in GNP and per capita GNP could not be explained by variation in stocks of labor and capital alone as would be suggested according to theory.<sup>1</sup> Many theorists attributed this "unexplained residual" to the cumulative effects of "technology". Jorgenson, *et. al.* set out to obtain adjusted measures of both capital and labor that reflected changes in the "quality" of inputs over time, due to changes in technology and other factors.

Denison found in his study of long-term U.S. growth for the Brookings Institute, that most of the "unexplained residual" that remained after adjusting for increases in the quality of the stock of capital could be explained by increases in the quality of labor due to im-

<sup>1</sup>See, Solow, R.M. "Technical Change and the Aggregate Production Function," *Review of Economics and Statistics*, Vol. 49, Aug. 1957, 30-46; Jorgenson, D. "The Embodiment Hypothesis," *Journal of Political Economy* 74:1 (February 1966), 1-17; Griliches, Zvi, and Jorgenson, Dale, "Sources of Measured Productivity Change: Capital Input," *American Economic Review*, 75:2 (May 1966), 50-61; and Christenson, L.R., and Jorgenson, Dale W., "The Measurement of U.S. Real Capital Input, 1929-1967," *Review of Income and Wealth*, Series 15 (December 1969), 291-320. See also, Denison, E.F., *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 11, New York: Committee for Economic Development, 1962.

proved training, education, and health status. Roughly 60 per cent of the previously "unexplained residual" was "explained" by these factors.<sup>2</sup> Thus, "human investment" was recognized as an extremely important factor in explaining the long-term economic growth experience of the U.S.

**PROPOSITION II-2 PRIVATE OUTLAYS ON HEALTH SERVICES HAVE CONTRIBUTED POSITIVELY TO KOREA'S ECONOMIC GROWTH DURING THE PAST TWO DECADES.**

The above arguments have been heard before, particularly in the context of other countries. However, I would like to present some evidence pertaining to Korea that I have derived in the course of collaborating with Dr. Choo, Hakchung in connection with the KDI/Harvard University "Korea Modernization Study".

Consider the following equations estimating the impact of private health expenditures on GNP in the ROK over the period 1953-1974.

$$(1) \log Y = .7152 + .1602 \log X_1 + 1.1541 \log X_2 + .1175 \log X_3$$

$$(.8203) \quad (3.889) \quad (8.053) \quad (2.062)$$

$$R^2 = .99 \quad D.W. = 1.1599$$

where

- Y = GNP = Gross National Product
- X<sub>1</sub> = Gross Domestic Fixed Capital Formation
- X<sub>2</sub> = Number in Labor Force
- X<sub>3</sub> = Private Health Expenditures

$$(2) \log \frac{Y}{P} = 4.6689 + .2211 \log \frac{X_1}{P} + .8949 \log \frac{X_2}{P}$$

$$(25.3803) \quad (5.5041) \quad (7.1016)$$

$$+ .1859 \log \frac{X_3}{P}$$

$$(2.7036)$$

$$R^2 = .9869 \quad D.W. = 1.0872$$

<sup>2</sup>Denison, *Ibid.*

where  $P$  = Population and  
 $Y, X_1, X_2, X_3$  are as defined above.

$$(3) \log \frac{Y}{X_2} = 5.4549 + .2814 \log \frac{X_1}{Y} + .2860 \log \frac{X_3}{X_2}$$

(20.8613) (3.9198) (3.2654)

$$R^2 = .99 \quad D.W. = 1.1498$$

where:  $Y, X_1, X_2, X_3$  are as defined in (1) above.

Before discussing each equation, some general comments are in order.<sup>3</sup> First, note that all equations are estimated in logarithms; thus the coefficients are to be interpreted as elasticities. Second, all coefficients with the exception of the intercept coefficient in (1) are statistically significant, *at least*, at the .05 level, as reflected by the "t" values enclosed in parentheses under each corresponding coefficient. Third, the  $R^2$  (coefficients of multiple regression) are in all cases over .98. Fourth, the Durbin Watson Statistic (denoted as *D.W.* above) suggests the presence of modest positive autocorrelation, typical of many estimates using time series data.<sup>4</sup> Fifth, all monetary unit variables have been converted into 1970 constant prices.

The logic of these equations is readily apparent to economists, with the possible exception of equation (3). Equation (1) represents a production function relation, expressing output as a function of the rate of investment, labor, and private outlays on health services. Recall that recently it has been estimated that government outlays on health services constitute only slightly over ten per cent of total

<sup>3</sup>Sources of data for these estimations are reported in detail in the attached Data Appendix.

<sup>4</sup>Exact significance levels for the Durbin and Watson test of autocorrelation do not exist. These authors have calculated upper and lower bounds  $d_u$  and  $d_l$ , respectively. The values obtained above for equations (1)-(3) fall in the inconclusive range, implying that one can neither accept, nor reject the hypothesis that the error terms are positively autocorrelated with 95 level of confidence. However, the Durbin and Watson values for equations (1)-(3) exceed the upper bound  $d_u$ , thus warranting acceptance of the hypothesis that the disturbance terms are not positively autocorrelated. For reference, see J. Johnston, *Econometric Methods*. (New York: Mc Graw-Hill Company, Inc. 1963), p. 192.

outlays on health.<sup>5</sup> Also note that these data are difficult to obtain for years prior to 1960. A considerable portion of government outlays consist of capital construction expenditures, and thus a portion of these expenditures do not reflect a flow of services rendered during the year in which they are recorded. Therefore, private health expenditures constituting the bulk of outlays on health services were used instead of total (public plus private) outlays on health. Equation (2) is identical to equation (1), except that the variables are deflated by population in the interests of reducing possible heteroscedasticity thus yielding estimates of the impact on per capita GNP of per capita GNP devoted to gross investment, the proportion of the population employed in the labor force, and per capita private expenditures on health services. Equation (3) represents a test using Korean data of a model used to estimate the impact on average labor productivity ( $Y/X_2$ ) of changes in the proportion of GNP devoted to gross investment ( $X_1/Y$ ) and the rate of health expenditures per member of the labor force. The logic of this latter specification is that growth in average labor productivity depends on both the proportion of investment relative to GNP and the quality of the "stock of human capital" as reflected by health expenditures per member of the labor force. This relationship was previously tested using Ceylonese data over the period 1948-1958, and the results are even more satisfactory when applied to Korea than when previously applied to Ceylon.<sup>6</sup>

Many other equations similar to those reported above have been estimated using Gross Domestic Product in per capita terms, and other alternative specifications. In all cases the results are almost identical to those reported above.

The striking thing about these results is that, clearly, private health expenditures are a significant factor in explaining variation in Korea's GNP over the period 1953-1974. Also, note that the coefficient of the investment and health expenditures variables are very similar in equations (1) and (2). *Note that, in equation (3) the coefficients of the investment and health expenditures variables are*

<sup>5</sup>Chong Kee Park and In Chul Noh, *Estimated National Health Expenditure of Korea, 1970-1974*, Seoul: Korea Development Institute, 1976 (In Korean).

<sup>6</sup>D.H. Griffith, D.V. Rama, and H. Marshaal, "Contribution of Health to Development," *International Journal of Health Services* 1 (August 1971):253-270.

*virtually identical!* In general, these results, and other similar results not reported here, indicate that in current periods, the relative impact of outlays on health services is comparable to that of investment in physical capital. Clearly, these results do not "prove" that outlays on health services are just as important, or more important, than outlays on physical capital. However, the results equally suggest that it is just as difficult, if not impossible, to argue that outlays on health services are a "drag" on economic growth! Indeed, they suggest that such outlays are in fact consistent with national economic growth objectives.

I suggest that economic planners should alter their thinking somewhat and think positively in terms of health. *Not only should improved health status be viewed as an important element of social development, but also as an important instrument simultaneously promoting economic development.*

**PROPOSITION II-3** THERE IS GOOD REASON TO BELIEVE THAT THE IMPACT OF OUTLAYS ON HEALTH SERVICES IS GREATER AT MODERATE OR ADVANCED LEVELS OF DEVELOPMENT THAN AT LOW LEVELS OF DEVELOPMENT.

At low levels of development, nations lack capital, foreign exchange, industry, etc. The labor force tends to be untrained, unskilled, and uneducated. Its members tend to be unemployed, and those who are employed, are employed in low productivity tasks. Under these circumstances, increased outlays on health services will have little impact on economic growth, since employment opportunities are limited in number, and average labor productivity is low, due to lack of capital, skills, and training. However, in the process of development, employment opportunities increase, and average productivity of labor rises, due to increased capital, training, skills, and the transfer of labor from low productivity into high productivity activities. Under these circumstances, increased outlays on health services resulting in improved health status serve to enable more workers to enter the labor force, maintain the high level of productivity on the part of those employed, and to increase their productivity even further.

In short, what I am suggesting is a "labor take-off theory" of economic development, and the notion that outlays on health services are an accelerating element in the growth process. Such a proposition would be supported by the following empirical results:

- A. A diminution in the relative contribution of investment to growth in output as physical capital increases over time,
- B. An increase in the relative contribution of labor to growth in output over time, and
- C. An increase in the relative contribution of outlays on health services to growth in output over time.

Consider the results of estimating equations (1)-(3) above over the period 1962-1974.

$$(1') \log Y = .0871 + .1207 \log X_1 + 1.2247 \log X_2 + .1634 \log X_3$$

$$(.0675) \quad (2.4367) \quad (4.4564) \quad (1.58)$$

$$R^2 = .99 \quad D.W. = 1.5503$$

$$(2') \log \frac{Y}{P} = 4.9816 + .1809 \log \frac{X_1}{P} + 1.0834 \log \frac{X_2}{P} + .2202 \log \frac{X_3}{P}$$

$$(8.9174) \quad (3.6758) \quad (2.8773) \quad (1.7515)$$

$$R^2 = .986 \quad D.W. = 1.2894$$

$$(3') \log \frac{X}{X_2} = 5.0278 + .2592 \log \frac{X_1}{Y} + .5147 \log \frac{X_3}{X_2}$$

$$(16.3941) \quad (3.5323) \quad (4.2196)$$

$$R^2 = .9186 \quad D.W. = 1.3967$$

All variables in equations (1')-(3') are the same as defined above. Note that the period 1962-1974 is one of many arbitrary periods that could be chosen to test the notion proposed earlier. Other subperiods have been investigated and the results obtained are similar to those reported here. Moreover, in doing so, I was also able to estimate these equations over shorter periods using GDP as the measure of output as was possible for the period 1953-1974, and the results are almost identical with those presented and discussed here.

All coefficients are statistically significant at the .05 level, with the exception of the intercept coefficient in (1'), which was also the

case in (1) above, and the coefficients of the  $X_3$  and  $X_3/P$  variables in equations (1') and (2'), respectively. These coefficients exhibited rather low "t" values in the earlier estimates, and should be expected to be "weaker" due to the smaller number of observations available over the shorter interval of time. However, both of these latter coefficients easily pass a *t*-test at the .10 level of statistical significance and the coefficient of  $X_3/P$  fails, being statistically significant at the .05 level by only .08. Finally, it should be noted that this type of test is crude; however, more appropriate and more sophisticated tests will require more time and hence will be conducted later.

In order to facilitate comparison, the estimates obtained in the two time intervals are summarized in Table 1 below.

Table 1. Comparison of Estimated Coefficients,  
Equations (1)-(3) and (1')-(3')

Variables	(1)-(3) : 1953-1974	(1')-(3') : 1962-1974
log Y :		
$Y_1$	.1602	.1207
$X_2$	1.1541	1.2247
$X_3$	.1175	.1634
log $\frac{Y}{P}$ :		
$\frac{X_1}{P}$	.2211	.1809
$\frac{X_2}{P}$	.8949	1.0834
$\frac{X_3}{P}$	.1859	.2202
log $\frac{Y}{X_2}$ :		
$\frac{X_1}{Y_1}$	.2814	.2592
$\frac{X_3}{X_2}$	.2860	.5147

From a cursory inspection of the coefficients summarized in Table 1, it is clear the pattern of coefficients is consistent with the notions advanced earlier concerning the diminution of the relative importance of "investment," and the increasing relative importance of

both labor and outlays on health services in terms of their respective impact on "economic growth" over time.

Statistical tests of the significance of the difference between the coefficients obtained from the samples of the two time periods studied have been conducted. Pair-wise "*t*" tests of the difference between estimated coefficients obtained in equations (1)-(3) and (1')-(3') appear, for the most part, to be significantly different, especially those of equations (3) and (3').<sup>7</sup> In my opinion, equations (3) and (3') best and most compactly express the essentials of the "labor take-off theory" of all alternative specifications. The fact that the estimated elasticity of the  $X_3/X_2$  variable in the more recent period is almost twice the estimate obtained over the longer period, is I feel, extremely significant and should be taken seriously.

While the results obtained thus far must be taken as only tentative, Americans often say, "where there is smoke, there is fire." The ROK has experienced a rate of growth during recent decades that is truly phenomenal. Currently, the government is seeking ways to continue to grow and, at the same time, to distribute gains acquired thus far more broadly to the population in the interests of "social development". Paradoxically, instead of outlays on health being a "drag" on economic growth, they appear to exert a positive influence on both social and economic development. What is more, the limited evidence that is available suggests that the ROK may be on the threshold or already in a period when expenditures on health services, which were previously regarded as social development outlays only, will exert a greater impact on the process of economic growth than was both expected and realized in the past.

**PROPOSITION II-4 THE ROKG WILL DEVOTE INCREASING VOLUMES OF RESOURCES TO THE HEALTH SECTOR**

<sup>7</sup>Four pairs of the eight pairs of estimated coefficients are statistically different at the  $t_{.05}$  level, and one pair is statistically different at the  $t_{.10}$  level. Thus, the only pairs of coefficients that are *not* statistically different at the  $t_{.05}$  level of statistical significance are coefficients of the  $X_2$  variable in equations (1) and (1'), of the  $X_3/P$  variable in equations (2) and (2') and of the  $X_3/Y$  variable in equations (3) and (3'), respectively.

OVER TIME, BUT CARE SHOULD EXERCISED CONCERNING  
THE AGGREGATE MIX OF HEALTH SERVICES.

Health is a very political subject. People regard health as something sacred and as "a right, not a privilege". As Dr. Park, Chong Kee, observed recently, there is very little connection around the world between national per capita outlays on health and national health needs as reflected by health indices.<sup>8</sup> The volume of resources each country devotes to health is determined by cultural beliefs, attitudes, and self aspirations that are articulated through the political processes and institutions characteristic of each country.

However, two relationships are fairly clear. Beyond a certain level, the higher the level of per capita GNP, the higher the percentage of central government outlays devoted to health services and the higher the level of expenditures on health services relative to GNP. There are some exceptions, but as general tendencies, these relationships seem to hold true. And, the ROK is approaching or has achieved the status of an industrialized nation.

There are several reasons why these relationships hold. As people become engaged in high productivity activities, expenditures on health services that maintain health status and thus maintain high productivity are justified. The life style of affluent people changes, and they tend to become overtense, overworked, and overweight, and to adopt consumption and work habits that make them anxious, tired, and worried. People would rather pay increasing sums to feel better, than to bear pain, anxiety, and uncertainty about their health status and consequent ability to survive and work satisfactorily. Given that enormous pressures will mount to devote an increasing volume of resources to the provision of health services, it is important that at an early stage investment be extremely selective in the interests of directing the development of the health services system into its most productive channels. The following subpropositions, perhaps, are of interest:

**Subproposition A.** Man is mortal and life is finite. Medical

<sup>8</sup>Chong Kee Park, "The Economics of Health Care Financing with Particular Reference to Korea," paper presented at the Korea-Japan Medical Economics Symposium, Tokyo, Japan, June 8-10, 1976.

intervention does not save lives, it saves life-years, by altering the circumstances, timing, and, often, the cause of death.

**Subproposition B.** Outlays that prevent illness have a greater benefit/cost ratio than those which involve treatment of illness that has already occurred. So many studies have demonstrated this, that it needs no documentation. Yet, few countries devote more than 10 per cent of total outlays to preventive services.

**Subproposition C.** Concerning aggregates and not speaking with respect to specific individuals, disability involves a greater economic loss to society than mortality. Noneconomic considerations aside, mortality results in a net loss to society of an individual's remaining life productivity, less maintenance costs. Total disability results in the loss of remaining life productivity, plus maintenance costs.

**Subproposition D.** Disease control has certain advantages of consumption and production externalities, but has a nonselective impact on economic growth.

**Subproposition E.** The timing of health services availability is important. For example, it may be wise to increase the availability of health services before and during harvest and planting seasons.

**Subproposition F.** Reduction of mortality tends to result in a higher incidence of chronic illnesses. If a particular illness is "cured", such that no one will (need) die from this cause in the future, death from other causes must surely increase. This is because man is mortal and thus the probability of death for each individual is 1 (unity). The significance of this for planning and resource allocation is that as a population experiences an improved health status over time, the population "ages". Thus, increasing numbers of people become at risk to chronic illness which is much more expensive to treat. This partially explains why the proportion of resources devoted to health care increases with rising GNP, which is generally accompanied by an increase in the average age of the population. In health matters, success is expensive!

**PROPOSITION II-5** THE CURRENT PLAN FAILS TO RE-

FLECT CURRENT DEMOGRAPHIC TRENDS.

The ROK is in a rapid phase of social and demographic transition. The population of Seoul and other large cities is increasing rapidly every year. The population of medium size towns and cities is also increasing rapidly. While there is considerable current interest in reducing the rate of population increase, and maybe even the absolute population of Seoul, it is doubtful that any action will be taken to inhibit the growth of other large cities, medium size cities, and towns.

**Subproposition A.** The rapid shifts in population that are occurring in the ROK are an essential part of the transition of the ROK from an agricultural society into one that is increasingly urban and industrialized.

Such demographic transition is pervasive, and is a necessary consequence of social and economic development. In the version of the "health plan" that I have read, while there is an effort to project rural and urban population in the aggregate, there is no effort expended to make demographic projections by region or province. It is extremely important, particularly when considering capital outlays, to project probable utilization over the life of the investment, in order to determine whether or not capital will be sufficiently utilized. Concerning utilization, substantial evidence is abundant which indicates that existing hospitals, and to a lesser extent, health centers and sub-centers are currently underutilized. Rural hospital occupancy rates are less than 50 per cent.<sup>9</sup>

**Subproposition B.** Under such circumstances it is extremely unwise to contemplate committing additional resources to health services capital investment.

As a minimum, I would suggest a moratorium on hospital construction, except on a case by case basis and only after careful study demonstrating both sufficient need *and* probable efficient utilization. This is especially true in light of rapid population movements from

<sup>9</sup> Kong Kyun Ro, "Analysis of Health Resources in Korea," Seoul: Report to USAID/K on Grant No. 498-11-590-708-1, Health Planning Project, 1976.

rural to urban areas. Utilization may be even lower in the future, due to diminished population in certain areas. Greater attention should be given to extending primary health care services and to developing referral channels, supported by an adequate transportation and communication network in areas of current and future low population density.

**PROPOSITION II-6** THE CURRENT PLAN TENDS TO OVER-EMPHASIZE SPACIAL ALLOCATION OF HEALTH RESOURCES ACCORDING TO EXISTING GOVERNMENTAL ADMINISTRATIVE UNITS. HEALTH SERVICES SHOULD BE ORGANIZED AT THE REGIONAL AND LOCAL LEVEL, I.E., FROM THE BOTTOM UP.

I think that perhaps, too much emphasis has been placed on trying to allocate health resources by Gun, by Myeon, i.e., to "fill-up" the cells. Government officials tend to be preoccupied with government administrative unit delineations. Such delineations tend to be outdated, and may or may not serve administrative needs well. Health care systems should be built from the bottom up. *People* consume health services not governments. Where people will be in the future, as well as where they are located presently, should be anticipated and this should be the basis for establishing health service availability. People cross governmental administrative lines at will, in order to live in locations where they can pursue economic, social, and other interests.

While it is difficult to project future populations, the forces of demographic transition are pervasive and fairly regular and thus are predictable.

**Subproposition A.** From an economics perspective, rather than attempting to establish centers of medical service capability in each Myeon, Gun, etc., one should look to those small towns, medium size towns, and small cities that are growing in population and thus becoming regional trade and commercial centers, regardless of the administrative unit in which they are located. These population sites will continue to grow in the future, and thus will remain viable.

Physicians could be induced to locate in these towns and cities, organized as group clinics with established referral links to larger

health service concentration centers, and with established *outreach links* with farmers and persons living in smaller villages and isolated areas. Thus as population tends to shrink in the smaller villages and remote areas, the population of medium size towns and small cities in which physicians are located will grow and remain viable.

Many of the community health programs have demonstrated the importance of local resources in providing *outreach* to people residing in the villages. Mothers' clubs, village health workers, etc. are vital, establishing and maintaining links between suppliers of medical services and the people who are to be served.

**Subproposition B.** *The first step in the referral process, and I think the most important step, is initial entry into the health services system. This requires "outreach."*

Outreach is extremely important, particularly, in view of rapid and pervasive population changes. Under such circumstances, it is not efficient to scatter health facilities widely, thus over-extending costly human and physical capital in areas in which utilization will decline in the future. For efficiency in the long-run, outreach should be flexible and free to follow the concentration of population as it shifts in response to trends toward urbanization and industrialization. Efficient concentration of medical service capability can be established in medium size cities and, at the same time, outreach can be accomplished in a number of ways. For example, consider the following:

- 1) Physicians riding circuit to small towns, village, and remote areas using bicycles, motor scooters, or by walking when necessary,
- 2) Mobile clinical trailers or vans could be regularly or continuously rotated among alternative sites in villages, small towns and remote areas, and
- 3) Health workers, village aids, etc. could be posted at various sites equipped with adequate communication devices linked to mobile medical teams and service units.

**PROPOSITION II-7** GOVERNMENT SHOULD CONSIDER WAYS IN WHICH TO *REGULATE* THE PRIVATE SECTOR TO

INDUCE IT TO PERFORM MORE RESPONSIBLY AS AN ALTERNATIVE TO ATTEMPTING TO SUPPLY NEEDED SERVICES DIRECTLY.

It is naive to think that the private health sector will perform in a manner consistent with the attainment of national health objectives. It is also naive to think that the government can comfortably directly supply all services in types and quantities that are needed as the result of the private sector's failure to do so.

There is no need for government to intervene in the private sector by providing financial support, increasing regulation, or by supplying products or services directly, unless the private sector cannot or will not perform in a manner that is consistent with the attainment of national objectives.

**Subproposition A.** The history of health services delivery all over the world clearly teaches us one lesson, namely that *private medicine fails* to provide the right mix of health services, to produce services in the most efficient manner, and to distribute them properly to all segments of the population.

Health commodities are vastly different from other economic commodities possessing elements of public goods, tend to be viewed with extreme consumer ignorance, are nonstorable and nontransmittable requiring production and consumption to coincide in time and space, and often are produced under nonprofit maximizing circumstances. Therefore, conventional market forces of supply and demand cannot be relied upon to allocate resources optimally in type, quantity, or space to all segments of the population. The most critical difference between health commodities and other goods and services is consumer ignorance of service output—what health services are needed, respective qualities, what alternatives are available and where, and knowledge of costs. The result is that resource allocation decisions are made less by consumers and more by suppliers. *In short, in the private health sector, supplier, not consumer, sovereignty reigns!*

**Subproposition B.** When suppliers who are basically technicians make decisions, technological imperatives and others consistent with professional development and personal aspirations tend to pre-

vail over economic ones. Thus real resource allocation decisions, particularly those dealing with types and quality of services that will be delivered, tend to serve priorities perceived by physicians and other health professionals which usually are not those that would be served by "informed" consumers and/or by objective analysts.

Health professional-technological imperatives tend to focus around intensive acute care of esoteric illnesses. Such illnesses require sophisticated treatment, utilizing highly skilled and specialized manpower and facilities. The trend in most countries is toward the western-style highly capital intensive (both human and physical) type of health care delivery system focusing around the physician-hospital nexus as a largely static vehicle for providing medical services. Illness prevention tends to be ignored, and primary acute care services tend to be under-provided at inflated costs required to amortize the high overhead associated with the expensive capital requirements of western-style health care delivery systems. Maldistribution of resources results from the tendency of practitioners to concentrate themselves in urban areas to serve their own personal convenience. By the same token, considerable numbers of scarce physicians are allowed (or even encouraged) to emigrate to other countries, while large segments of the domestic population remain underserved.

**Subproposition C.** To fill the gap between supply and need, governments are called upon to either finance (bribe) additional private delivery of health services, or to supply health services directly. *Increased regulation of the private sector is a reasonable alternative to these options.*

Historically, governments have been reluctant to respond to fill the growing gap between the legitimate needs of the urban poor and rural community dwellers for health services, and the quantity of health services available to them. Philanthropy has been only a partial solution, and as private sector trends continue, government is increasingly called upon to provide assistance, in the form of subsidies to education, facilities construction, health insurance, or by directly providing services. Unfortunately, in these efforts governments tend to be hard pressed for funds. Governments attempt to assume responsibility for prevention of illness through public

health programs and to augment health care network delivery systems in a fashion patterned after the hospital-physician based western-style type of delivery system.<sup>10</sup> Under-funding results in a ragged system that erratically renders fragmented services to communities in quantities and qualities that are regarded as vastly inferior by private medical standards. Government health services tend to be under-consumed by people who, by virtue of ignorance, do not know what they need, and lacking income, can not avail themselves of privately supplied health services as an alternative. This brief description is more or less true of the experience of developed countries and appears to be the trend in those developing nations that I have visited.

**Subproposition D.** Government is not big enough to supply all needed services directly.

It should be very obvious that the private health sector is vastly larger than the government health sector in Korea. For example, currently, approximately 11 per cent of total outlays on health are expended by governments, while the private sector contributes 89 per cent of total health expenditures. Thus even if government outlays grew thirty-fold over the next 10 years, and private sector outlays grew by only 15 per cent per annum (only four-fold), government outlays on health would remain less than the total expenditures made on behalf of the private sector. *But there is no reason why government should have to do it all!* By virtue of its authority and responsibility, government can and should regulate the private health sector so as to direct it toward the attainment of national goals of effectiveness, efficiency, and equity.

What regulations would be desirable? Consider the following:

- 1) Declare a moratorium on new hospital construction until administrative guidelines are established for "certificate of need" legislation that, when in effect, would permit hospitals and clinics to be constructed only after sufficient need and probable efficient utilization were established.
- 2) Declare a moratorium on new physicians setting up practices

<sup>10</sup>The proposition that governments tend to emulate private health care delivery systems is mentioned again later in this section, but is elaborated in greater detail in the section which follows.

in Seoul and Pusan until "right to practice" administrative guidelines are established that would permit physicians to practice in these cities only after sufficient need and probable utilization were established.

- 3) Establish a moratorium on Korean physicians emigrating abroad, and consider calling back those who are not in the process of completing internships and residency programs.

Of course, such regulation does not constitute reform of the system.<sup>11</sup> At the same time, the government should begin reforming its own health care delivery system, seeking ways to increase the utilization of current facilities and physicians, and only gradually expanding health care into areas of high unmet need. Once having placed its own system on a rational footing, government can set out to reform the private sector through revision of medical education curriculum, additional law, and selected financial means.

**PROPOSITION II-8** THE GOVERNMENT SHOULD REFORM THE INDUSTRY (INCREASE EFFICIENCY) BEFORE IMPLEMENTING A LARGE-SCALE HEALTH INSURANCE PROGRAM (INCREASE DEMAND).

**Subproposition A.** The first step in reforming the health care system, beyond the interim regulation proposed above, is to reform the government health care delivery network scheme by increasing the efficiency with which government resources are used.

*Probably the greatest area of deficiency in the current Health Sector Plan, is that entirely too much emphasis is given to expanding services, and thus increasing the commitment of resources to the production of health services, with little regard for the effective utilization of the resources already committed to the health sector.*

The key problem that currently exists with respect to the present government health care delivery system is lack of utilization of provincial hospitals, health centers, and health sub-centers. While

<sup>11</sup>The government should also consider regulating maximum fees and prices, particularly in Seoul where a moratorium of new physician practices would constitute a tendency toward monopoly and thus soon would invite future price and fee increases.

data are sketchy, as stated above, it is well known that rural government hospital occupancy rates are below 50 per cent. And health centers and, particularly, health sub-centers also are operating far below capacity. Under these circumstances it is difficult, if not impossible, to justify construction of new hospitals and health centers, even in areas where they do not exist, since prospects for potential utilization and resulting improved health status benefits would appear to be too small to justify the outlays of funds required.

The major question to be raised in this connection is, "why do rural area health facilities remain under-utilized"? Various answers to this question have been posed ranging from the view that services and facilities are of such poor quality in government facilities that people do not wish to use them, to arguments that rural incomes are so low that people cannot afford to use them. I agree that these factors are likely to be important. Unfortunately there is no conclusive research concerning these issues that would support these views. However, I believe that there are more fundamental factors that also contribute to different health service utilization patterns between rural and urban dwellers in Korea.

**Subproposition B.** While governments tend to feel that they are very innovative in providing health services directly, they tend to do so in a fashion that emulates a private health care delivery system that is designed to serve well only an urban based, rather affluent, and highly educated population which has largely adopted western values governing its consumption patterns, including those governing their utilization of medical services.

Since the necessity of governments directly supplying health services in almost all countries is due to the failure of private health care delivery systems to perform satisfactorily, it should not be surprising that government systems that essentially (and badly) emulate the private sector style of health care delivery should also perform badly. In brief, governments, like the private sector, tend to offer a mix of services that people do not perceive as needed, tend to produce services at costs that are too high, and fail to distribute services properly.

The reform of a system or industry, or elements thereof, is essentially a micro problem. The issues involved are too extensive to

be discussed in detail here. However, a number of macro observations may be offered at this time. First, with substantial under-utilized capacity, one would think that price increases accompanying increases in demand fostered by national health insurance would be modest. This was not the experience of the U.S. in connection with the introduction of "Medicare and Medicaid".

Prior to 1965, U.S. hospitals were also underutilized, largely due to over construction of beds in rural areas due to the Hill-Burton program which provided federal matching funds to the construction of rural hospitals, in order to attract physicians to rural areas. This program was a failure in the sense that rural areas ended up with excess hospital beds and few physicians. For example, in Iowa in 1965, there existed 142 general hospitals, serving a population of only 2.8 million persons. Almost one-half of Iowa hospitals experienced occupancy rates of less than 50 per cent! With the introduction of "Medicare and Medicaid", while utilization of hospitals in Iowa, and throughout the United States generally increased as predicted, hospital costs and physician fees increased two and three times more rapidly than expected. Increased revenues forthcoming from greater demand were absorbed in the form of increased equipment and facilities, on the part of hospitals, and in the form of higher incomes and increased leisure, on the part of physicians (hours per week worked for physicians began to decline shortly after 1966).

Again the divergence between personal aspirations and motives on the part of health professionals and national health goals warrants emphasis. It also warrants special emphasis, that *selective regulation* is essential to the "reform" of the health care system so as to attain national health care objectives.



## DATA APPENDIX

### 1. The Description of Time Series Data and Sources

- (1) The Bank of Korea produces GNP data from the year 1953. The time series used in this study cover the period from 1953 to 1974 ( $t=22$ ).
- (2) Gross National Product, Gross Domestic Product, Gross Domestic Fixed Capital Formation ( $\Delta K-I$ ).  
Unit: 1 Billion Won at 1970 constant market prices  
Sources: *National Income in Korea*, 1975, by Bank of Korea  
Fixed capital formation is used as a proxy variable for capital which in some cases is converted into  $\Delta K/\text{GNP}$  or  $\Delta K/\text{GDP}$ .
- (3) Number of Employed persons.
  - a. The data for the census years (1960, 1966, 1970) are used as a bench mark to adjust the date for other years.
  - b. Sources: 1953-*Korea Statistical Yearbook, 1953* by Bureau of Statistics, Ministry of Home affairs  
1954-Blank  
1955-*1955 Population Census of Korea Vol. 1*, by Bureau of Statistics, Ministry of Home Affairs  
1956-*Korea Statistical Yearbook of the Republic of Korea 1957*, by Bureau of Statistics, Ministry of Home Affairs  
1957-*Korea Statistical Yearbook 1961* by the Economic Planning Board  
1960  
1961-*Korea Statistical Yearbook 1962* by the Economic Planning Board  
1962-*Korea Statistical Yearbook 1963* by the Economic Planning Board  
1963-*Annual Report on the Economically Active to Population 1974* by Bureau of Statistics, Eco-  
1974

## Economic Planning Board

## Census Years:

1960-1960 *Population and Housing Census Report*  
*Vol. 1. Complete Tabulation Report 11-1*  
 Whole Country by the Economic Planning  
 Board

1966-1966 *Population and Housing Census Report*  
*Vol. 1. 10% sample survey 12-1 Economic*  
*Activity* by the Economic Planning Board

1970-1970 *Population and Housing Census Report*  
*Vol. 2. 10% sample survey 4-1 Economic*  
*Activity* by the Economic Planning Board

## c. The Process of Adjustment

The bench marks (unit: %) are made by the use of census and statistical yearbook data in census years, excluding 1955. 1953-1962: the raw data are adjusted by the use of the bench mark of the census year 1960.

1963-1968: the raw data are adjusted by the use of the bench mark of the census year 1966.

1969-1974: the raw data are adjusted by the use of the bench mark of the census year 1970.

Data for year 1954 are omitted. The data for 1955, 1961, and 1962 seemed to be highly over-estimated. These are readjusted by the use of the growth rate of non-agricultural sectors of Industrial Origin of GNP, thus estimating data for these years.

## (4) Private Health Expenditures

Unit: 1 Billion won at 1970 constant market prices.

Sources: Bank of Korea

Private health expenditures (PHE) had been combined with personal care from 1953 to 1959.

To estimate PHE for that period, an estimation equation was constructed on the basis of data from 1960 to 1974.

The estimation equation used is as follows:

$$H_t = -5.3 + 0.77T_t$$

$$\begin{matrix} (-3.1) & (33.7) \\ R^2 = 0.99 & D.W. = 0.9751, \end{matrix}$$

where numbers in parentheses are estimated *t*-statistics

$H_t$  = Private Health Expenditures  
(unit: Billion Won at 1970 constant market prices)

$T_t$  = PHE + personal care

Using the equation above, private health expenditures from 1953 to 1959 were calculated.

(5) Population per Physician, population per Pharmacist

Unit: Person

Sources: Ministry of Health and Social Affairs

***PART II:* SOME MICRO ECONOMIC CONSIDERATIONS  
PERTAINING TO KOREA HEALTH  
SECTOR PLANNING AND POLICY FORMULATION**

## I. Introduction

The previous section addressed certain macroeconomic considerations involved in health sector planning and policy formulation. The present section deals more specifically with selective issues involved in Korea's health sector in relation to policies proposed in the health sector plan. It also discusses, generally, alternatives that were developed during and after the period of plan preparation.

As stated in the introduction to the previous section, much of what is discussed here reflects what has been learned from various Korean counterparts with whom I have had the privilege of working nearly two years in Korea. As in the case of the previous section, my comments are presented as a series of "propositions", which are briefly elaborated and supported. In many cases the elaborations are supported by statistical data and tables obtained from references available here in Korea. In other cases, however, it was necessary to rely on memory, particularly as these relate to the circumstances prevailing in Iowa over a decade ago.

## II. Micro Considerations

### *A. Introduction*

All economists know that given a set or mix of desired outputs, there exists a small range (or even a unique) set of production alternatives that will produce output at minimum costs or maximum economic efficiency. Thus the appropriate production technology to be adopted, including the types of inputs to be used, their efficient combinations in use, and their organization, depends on the specification of the desired mix of services to be produced. Once having determined the appropriate mix of services to produce and the method of their production, it is possible to determine the most efficient means of distributing produced services to intended consum-

ers.

In many other sectors of the economy, these tasks are *performed*, for the most part, by market forces. However, as discussed in the previous section, many characteristics of health services as economic commodities (public good, consumer ignorance, nonprofit production, etc.) render it impossible for market forces to do this. The situation was characterized, in the previous section, as a case in which *supplier sovereignty* reigns, and where there exists a considerable *divergence* between the professional and *personal goals* of suppliers and those comprising *society* as consumers of health services. Thus attainment of fundamental tasks requires *planning* and *direction* by *nonhealth* as well as by *health* professionals.

In the remarks that follow, I offer recommendations for the reform of the government health care delivery system, medical education and health care distribution. These remarks are organized under headings reflecting the three fundamental tasks an industry must perform, namely, that of determining:

- 1) What services are to be produced,
- 2) How services are going to be produced, and
- 3) How output is going to be distributed for consumption.

#### B. What Services Are To Be Produced?

**PROPOSITION II-1** DIFFERENCES IN VARIOUS CHARACTERISTICS OF URBAN AFFLUENT AND RURAL AND URBAN POOR POPULATIONS SUGGEST THAT A DIFFERENT SET OR MIX OF HEALTH SERVICES SHOULD BE SUPPLIED TO THESE POPULATION GROUPS.

**Subproposition A.** The mix of services supplied by western-style private and government health care delivery systems is more appropriate for an urban-based, westernized, highly educated population, than for rural and urban poor populations.

Private and government western style types of health care delivery systems are based around the physician-hospital nexus of medical services production. Such systems supply services consisting largely of acute-care secondary and tertiary medical services to patients pre-

senting symptomatic illness. Only a small volume of preventive, educative, and promotive health services are supplied by such a system. And these services are needed less by an urban-affluent population whose primary health care needs are largely already satisfied.

**Subproposition B.** The rural and urban-poor need proportionately more primary care services, and preventive, educative, and promotive health services than urban affluent populations.

The age structure of rural areas is "top-heavy" with people over 60 years of age and children under the age of 15 years. As of 1970, Korea's population was divided roughly equally between urban and rural areas, 48.4% and 51.6%, respectively. Yet urban populations included only 1.48% of males and females 60 years of age and over, while the rural population was comprised of 6.7% of people over 60 years of age. In terms of children, only 38.3% of the youngsters under 15 years of age comprised the urban population, while nearly 45% of the rural population was comprised by the children under 15 years of age.<sup>1</sup> Also, in terms of education, cities reveal only 4.9% illiterate, but villages and towns show 17.8% and 6.9% illiteracy, respectively. The populations of cities are composed of 22% college educated, while the percentages in towns and villages are only 4.2% and 1.9%, respectively.<sup>2</sup> The young, the old, and the uneducated are the least westernized and the least modern in terms of knowledge of basic sanitation, environmental control, and personal health hazards including the perception of disease and illness.

Differences in health service utilization patterns on the part of given populations are not simply due to differences in economic status. In addition, it is a matter of education, learned values, nutrition, sanitation, and life style as well as age structure. In short, the difference between the urban affluent and that of the rural and urban poor population segments represents a difference in actual and perceived medical needs that reflects a fundamental difference in their respective stages of *social* as well as *economic development*.

<sup>1</sup>The population characteristics were calculated by Miss Kim, Oek Kyong in connection with the KDI-Harvard "Korea Modernization Study".

<sup>2</sup>Jong Huh and Park, Yong Soo, "A Study on Medical Care Expenditure", School of Public Health, Seoul National University, August, 1972.

Thus, every serious effort should be made to specify the types of services that the "reformed" government health care delivery system is going to supply.

**Subproposition C.** The mix of services provided by Korea's pilot and demonstration community health programs, particularly those in Kang-Hwa-Do and Koje-Do, should be reviewed and incorporated in specifying the types of services to be supplied by the government health care delivery network.

I have been privileged to visit most of the community health projects in Korea. Those operating in Kang Hwa Do and Koje Do are particularly impressive in that they reflect a careful effort to define a set of services that is most appropriate to serve the needs of rural poor populations both in terms of primary medical services and supportive health services.

Once having determined the appropriate set of services to be supplied, it is possible to consider alternative production technologies that will produce them at minimum cost or maximum production efficiency.

#### *C. How Are Services Going To Be Produced?*

**PROPOSITION II-2** HEALTH SERVICE PRODUCTION PROCESSES THAT RELY HEAVILY ON PHYSICIANS AS THE MAJOR INPUT ARE INFEASIBLE IN RURAL AREAS, AND ARE NOT NECESSARY

**Subproposition A.** Physicians are not as necessary as a *primary input* in the production of those health services needed most by rural poor people, as compared to services needed by the urban affluent.

The statement above should not be interpreted as meaning that physicians are not needed in rural areas. It should be interpreted to mean that the role of physicians in supplying *primary* medical services, health education, personal hygiene, sanitation, and promotive health services, which are the health services that the rural poor need most is not nearly so great as it is in providing services to urban populations. In rural areas, the role of a physician should

be that of "team leader" in which more time is spent directing, supervising, administering, and supporting the activities of ancillary personnel, reserving only a fraction of time for the provision of those medical services requiring a physician's skill.

Many analytical studies in the United States have revealed that only a small fraction of the medical services rendered by physicians require the skills and training imparted by the many years of study that are involved in physician education. Also, these studies have shown that in practice, when physicians find it convenient to do so, many such procedures are delegated to ancillary personnel who operate under "standing orders" and physician supervision. Thus the issue is *not* whether or not nonphysicians can competently perform such procedures. Rather the issue concerns whether or not ancillary personnel should have the *right* to perform them without specific physician delegation in each case.

**Subproposition B.** Physicians argue that to permit ancillary personnel to perform procedures traditionally performed by physicians results in a diminution of the quality of care. Physicians as a group are trained to focus on the individual patient and not patients collectively. As a consequence, with rare exception, they have very little collective social conscience or perspective. To the cries of low quality care, I answer thusly. *If one adds zero for every patient who receives no care when needed as a consequence of the absence of a physician to supply services, the average quality of care supplied is grossly unacceptable.*

This is true in both developed and developing nations of the world. The issue concerning "quality of care" must be considered service by service in the perspective of the consequences of each decision in relation to the collective health needs of the relevant population under consideration. Currently, as is the case with much of Korea's rural population where few or no medical services exist, the quality of care is nearly equal to zero. The physician's answer is to produce more doctors and induce them to locate in rural areas. This is not feasible and would not be economical.

**Subproposition C.** It is infeasible to induce enough physicians to locate in rural areas to provide a rural health care delivery network

that is equivalent or near to that already existing in urban areas.

It is probably impossible to accomplish this, under current circumstances, without strongly coercive measures. The United States has been attempting to induce physicians to locate in rural areas for twenty-five years. Billions of dollars have been spent on the construction of rural hospitals, medical education subsidies, forgiveness loans to medical students, and other programs in an effort to attract physicians to rural areas. Even in the United States, communities of significant size have constructed clinics, and advertised their willingness to guarantee an annual income of \$50,000 or more to physicians who will locate there. Yet, year after year, such facilities remain vacant, as physicians prefer to locate in more urban areas. The supply of physicians to rural areas is very *inelastic*, all over the world.

Part of the problem in the United States is that the number of places in medical schools is extremely limited relative to the demand for physicians. Thus supply is restricted. Medical educators and the AMA argue that the restriction of the number of admissions to medical schools is necessary to maintain the quality of licensed physicians. Yet, it has been admitted that, in recent years, three people are turned away for every one admitted into U.S. medical schools, and of those refused entry, two are adequately qualified. The consequence of enhanced quality through restricted medical school admission is to restrict the supply of doctors, resulting in higher fees and incomes, and an inflated rate of return on medical education. Concerning the latter point, even conservative estimates are that the rate of return on medical education in the U.S. exceeds that of investment in education for comparable professions—lawyers, college professors, etc.—by at least 20 to 30 per cent. I have calculated the aggregate discounted (present value) cost to consumers of the restricted supply policy to be in excess of \$600,000,000 in the U.S. for the year 1966.<sup>3</sup>

Korea has a similar situation in that the supply of physicians available to serve the domestic population is restricted through the systematic emigration of physicians abroad. This phenomenon has certain advantages to Korea physicians, since the consequence of

<sup>3</sup> James R. Jeffers and Mario F. Bognanno, "AMA Physician Supply Policy: The Cost of High Quality Medicine", submitted to *Journal of Human Resources*.

emigration is higher fees and incomes for those physicians remaining in Korea.

In terms of the social cost burden imposed by such emigration policies on Korea, relatively, they are likely to exceed those I have calculated for the United States. In the case of the United States, I estimated that if quality restrictions were relaxed, without additional medical school construction, the number of physicians practicing in the U.S. in the year 1965 would have been larger by approximately 15-20 per cent. Recent information suggests that approximately 30 per cent of Korean graduate physicians have emigrated to other countries.

Physicians justify emigration on the grounds that it is necessary for physicians to receive advanced training at foreign medical schools and hospitals. This argument would have merit, *only if* physicians returned to Korea after receiving "advanced training", and *if* it were not true that Korea, like many other countries, is over-balanced with too many specialists already. Specialists have even greater incentives than general practitioners to locate in large urban areas near secondary and tertiary care centers which provide the sophisticated equipment, trained technicians and back-up consultants required in the practice of their speciality. Large populations are also thought to be necessary in order to generate enough cases of esoteric illnesses requiring their special skills in measure sufficient to generate the income that they desire.

Korea, like many or even most countries, needs fewer specialists and more primary care physicians who, in combination with ancillary personnel, are needed to provide more medical services to the rural and urban poor who currently are medically underserved. The observations above have some rather obvious implications for revision of medical education policies, to be discussed in a later section.

**Subproposition D.** Even though it is difficult, increasing efforts should be made to encourage greater numbers of physicians to locate in rural areas.

The reasons physicians are reluctant to locate in rural areas are several. While increased income inducements will attract some physicians to locate in rural areas, such a policy will not be very effective, since the supply of physicians to rural areas is very

inelastic. Caution must be exercised to avoid spending too much money in this effort. Of course, there exist a few "footloose" physicians who can be induced to locate in rural areas by the promise of higher income. In addition, there are a few physicians possessed of missionary zeal, who also can be induced to locate in rural areas. However, medical schools do not select physicians on the basis of their missionary tendencies. Thus the supply of physicians to locate in rural areas is very inelastic. Why?

The main reasons physicians are reluctant to locate in rural areas are the same as those we who are not physicians would offer as reasons not to practice our respective skills in rural areas, even if offered higher incomes. We all must think of our wives, our children's primary education and prospects for college admission, our relatives, and our many friends and professional relationships. We have already adopted urban patterns of living and urban life-styles. And we believe that we are more "effective" professionally, if we practice our skills in urban areas rather than in rural areas. The same is true of physicians, and levels of income in urban areas are sufficient, in view of all the other perceived benefits of urban living, to convince them to stay there. The point is, it is very difficult to induce people who have been educated and who have established urban life-styles, patterns of living, and expectations to give up urban living and move to a rural area. However, this would not be true of many young people who may become physicians in the future, if they were selected from rural environments and were educated under different circumstances than is currently the case. Mean-while, for the short-run, I believe that policy-makers should proceed under the following assumptions:

- 1) It will be impossible to induce many more physicians to locate in rural areas in the short-run.
- 2) It is easier to induce physicians to locate in medium sized towns and cities that show certain prospects of growth in the future, than to successfully recruit physicians to locate in small towns.
- 3) Greater reliance must be placed on nonphysicians providing medical services in areas outside of medium sized towns and cities located in rural areas, who would be directed, supervised,

coordinated, and assisted by physicians.

- 4) Medium sized cities and towns would serve as "physician referral centers", with outreach to areas outside these cities being provided by nonphysicians. Physicians could be transported to outlying areas by car, motor scooter, etc., when necessary.

These approaches will improve the situation in the short-run. However, the forces of population transition will cause an even greater gap between the needs for medical services on the part of the rural poor and the services available to them. These problems can be alleviated through changes in the medical education system.

**PROPOSITION II-3 THE ULTIMATE LONG RUN REFORM OF THE HEALTH DELIVERY SYSTEM REQUIRES SIGNIFICANT REFORM IN MEDICAL EDUCATION POLICIES**

**Subproposition A.** The government should consider placing a quota on the percentage of medical students permitted to specialize.

In my previous paper, I stressed that health professionals tend to stress considerations of effectiveness over those of economy. Predominant concern for effectiveness is a trait common to all persons practicing a profession, particularly those in which output consists of personal services: educators, government employees, and lawyers, to name a few. Professionals are instilled with the desire to produce the highest quality of services possible, and tend not to think of cost. Because the subject matter of professions tends to be technical in nature, professionals tend to be unconcerned with judgments made by laymen concerning their performance. Professionals tend to be influenced only by the judgement of their peers.

The performance of tasks, procedures, and activities that require the utmost skill command maximum admiration, applause, and commendation from peers. Thus prestige, self-satisfaction, and sense of self-esteem are acquired through being able to teach and to perform the most difficult and complicated tasks. This results in increasing emphasis in medical school education on esoteric illness detection, treatment, and management, and also in increasing specialization on the part of medical students. However, Korea, like

most countries, needs more primary care physicians and needs fewer specialists. Unless specialization is checked, professional aspirations are likely to result in almost all physicians specializing. In 1967, a U.S. survey revealed that 98 per cent of all medical students intended to specialize. The consequences of over-specialization are that fewer physicians will be willing to locate in rural areas of Korea, or even in Korea as a country, due to diminishing opportunities to effectively practice acquired specialty skills.

**Subproposition B.** Medical schools should consider shortening the duration of medical education and selecting students who are willing to locate in rural areas.

Many medical educators in the U.S. have argued that the time it takes to train a physician is too long. The actual practice of medicine requires little of the basic science pre-medical school preparation required of medical students. It is argued, persuasively, that the current over-emphasis in terms of basic science requirements represents an over-reaction to a situation that existed around the turn of the century in the U.S. when *few* medical schools included *any* basic science in medical college curricula (as revealed by the famous "Flexner Report" published in 1910).

It is also argued that many young people, possessed with strong motives to serve the needs of people, are discouraged from becoming physicians, because of the high expense, length of time required, and the "dull and difficult" curriculum with its emphasis on basic science, characteristic of modern medical education. It has been suggested that those entering specialty areas benefit most from the "pre-med" emphasis on basic science, since these areas are closer to the "frontier" of medical science.

Please do not make the mistake of the United States, however, in establishing a new specialty such as "Family Practice". During the late 60's and early 70's, in response to the need for more primary care physicians, the AMA and related medical specialty associations established the family practice residency program which requires three years of specialty training beyond undergraduate medical education.

To many it is not clear that additional training is required to train doctors to be "primary care specialists" and the time required

for such training delays its social benefits considerably. Most medical schools in the U.S. have initiated family practice programs, and most of the graduates of those that started early have been recruited as faculty for those just starting. The result of initiating this program has been the extension of primary care physician training periods, and the expansion of medical school faculty and specialty programs. When and if graduates of these programs begin practicing in significant numbers, it is doubtful that they will locate in under-served areas. Also it is likely, that in view of their advanced training, they will charge fees that are higher than those charged by general practitioners. The result will be that those who need the services of primary care specialists most will not have more access to them.

**Subproposition C.** Medical college curriculum should be revised to include training physicians how to function as "team leaders" in nonhospital practice settings.

Currently, physicians are taught how to render complicated services in equally complicated and sophisticated settings including hospitals. In the course of their instruction, physicians are taught how to use specially trained technicians and ancillary personnel to assist them in performing complicated diagnostic and treatment (e.g., surgery) procedures. However, physicians receive very little instruction as to how many and what kind of services can be delegated to physician assistants, nurse associates, and nurse clinicians, *in nonspecialized settings*. In addition, physicians are not taught how to supervise, manage, and evaluate the performance of ancillary personnel with delegated responsibility.

One way to increase physician knowledge as to how many services and what types can be delegated to ancillary personnel is to arrange to have physicians and ancillary personnel to experience, simultaneously, the same *core* of basic instruction in primary care. Only in this way will physicians become fully aware of the competency of ancillary personnel to render specific services.

**Subproposition D.** Medical schools should consider developing new curricula in physician assistant, nurse clinician, and other mid-level training programs. *Government sponsorship is essential.*

Physicians tend to view themselves as the primary or only agents rendering *medical services*. Ancillaries are viewed as either assisting the physician in the production of medical services or as rendering additional health services consisting of health promotion, health education, etc. Only if there is genuine delegation of tasks to ancillary personnel of tasks previously rendered by physicians, will physician productivity rise as a consequence of using greater numbers of ancillary personnel.

In a study of a sample of 2,000 medical practices in the U.S. using data pertaining to the years 1965 and 1967, Dr. U.E. Reinhardt (health economist) found that the average U.S. physician could *profitably* employ approximately twice the number of aids currently employed and increase hourly output of services by 25 per cent.<sup>4</sup> In another study of 12 physician practices in three states in the U.S., medical students were used as observers, using a task list consisting of 283 tasks. Tasks were organized into eight major categories of activity ranging from history taking to office surgical procedures. It was found that those practices using physician assistants could realize productivity gains ranging from 49 to 74 per cent.<sup>5</sup>

Since, physician assistants, nurse clinicians, etc., can be trained in a fraction of the time required to train physicians, the cost-effective implications of the results reported above are enormous.

**Subproposition E.** The possibility of decentralizing the Seoul National University, Medical College should be considered.

For various reasons, in Korea all roads lead to Seoul. Traditionally, it is very important where one goes to school and who one's classmates are in Korea. Although some would challenge this, it is apparant to this outsider that one has considerable advantages in Korean society and in one's professional career if one graduates from Seoul National University (S.N.U.).

Studies in the United States have shown that medical students, with a high probability, tend to locate in the state in which they

<sup>4</sup>U.E. Reinhardt, "A Physician Production Function of Physician Services," *Review of Economics and Statistics* LIV:1 (Feb., 1972) 55-66.

<sup>5</sup>Kenneth K. Smith, Marianne Miller, Fredrick E. Golladay, "An Analysis of the Optimal Use of Inputs in the Production of Medical Services," *Journal of Human Resources* Vol. VII (Summer, 1973).

### *Micro Economic Considerations*

were born, received undergraduate medical education, served internship, and received residency training. In response to these findings, several states including my native State of Iowa, have attempted to expand enrollments in State Medical Schools, internships, and residency programs in an effort to retain greater numbers of physicians within their borders. In particular, Iowa went somewhat beyond that.

While being a small rural state with a population of only 2.8 million people, in connection with the University of Iowa, Iowa City, Iowa has one of the largest and most advanced medical complexes in the United States. The medical school graduates 180 students annually. The University system of clinics and hospitals consists of some five institutions the largest of which is the University teaching hospital of some 1,700 beds. The medical faculty and house staff exceed 700 persons, and residency training programs exceed 30 in number. The medical school and teaching hospital consistently ranks in the top ten of institutions preferred by students as places to undertake undergraduate, internship, and residency training among all medical schools in the United States. And, 15 years ago, Iowa was losing approximately 40-50 per cent of its medical school graduates to other states.

To counteract this annual loss of physicians and consequent investment, Iowa discriminated against medical college applicants to extent that 85 per cent of those admitted were born in Iowa. The medical school also instituted forgiveness loans to students who promised to remain in Iowa to practice, rural area preceptorship programs, and other programs as well, to little avail. Iowa continued to lose approximately 40 percent of medical graduates to other states.

However, beginning in the late 60's, Iowa began simultaneously to decentralize and expand its internship and residency programs to community hospitals located in medium sized towns and cities throughout the state. The University, initially, rotated a core of medical college faculty through various community hospitals to develop and establish teaching programs in these institutions. Local physicians were given refresher courses, after which they were appointed as *clinical professors* to the medical college faculty with full-fledged faculty status. These clinical professors together with a core

of regular medical college faculty served as the teaching faculty in a selected number of community hospitals located throughout the state. In recent years the proportion of medical students migrating to other states after completing their training has dropped to between 20-25 per cent!

I think Korea could do something similar. There is enormous prestige involved in being associated with S.N.U. However, if the medical college would establish branches in outlying provinces, in connection with other universities and major hospitals, students could be more readily attracted from these areas and would be more likely to remain there after receiving training, particularly, if "right to practice" restrictions were placed on Seoul and Pusan.

Another, related innovation would be to lengthen internship requirements by one year, while shortening the period of basic medical education, and requiring the extra year of internship to be spent outside of Seoul in a rural community, unless a student has been admitted to a particular specialty that requires study in Seoul. This policy, in connection with quotas imposed on the number of students admitted to residency programs, would encourage the expansion of physician services to rural areas.

#### *D. How Are Services Going To Be Distributed?*

**PROPOSITION II-4** THE WESTERN STYLE TYPE OF HEALTH CARE DELIVERY IS A "SIT AND WAIT" APPROACH TO HEALTH CARE SUPPLY.

The western style type of health care delivery is a demand and supply approach to improvement in health status. Physicians and hospitals represent centers of medical service capability or supply ready to serve the demands of patients who present themselves as wanting to utilize their services. Patients are expected to perceive that they are ill, and to seek out physicians and hospitals in order to receive the health services that they need. Utilization of health services is manifest only under the following conditions:

- 1) *Symptoms* of ill health are manifest.
- 2) Patients *perceive* themselves as being ill.

- 3) Patients are *confident* that receipt of medical services will improve their health states.
- 4) Patients *know* where to go to receive appropriate care.
- 5) Patients can *afford* travel costs, waiting time, time-off from daily tasks, and the costs of treatment, and
- 6) Medical services are *available*.

Traditionally, economists restrict themselves to considerations of finance, or more accurately to the distribution of income and wealth, when discussing distribution of output. This is because in a free enterprise demand and supply market context, distribution of output primarily depends upon the distribution of individual income and wealth. However, a strong theme running throughout this, and my previous paper, is that health services as commodities and health care delivery institutions render it impossible for market forces to be relied upon to allocate resources optimally. Thus when discussing distribution of output, one must consider the matter in a broader context than merely financial considerations, although financing of health care delivery is one of the most important issues to consider.

Considerable attention has been paid in the health plan to the inequitable distribution of health resources to the urban and rural poor. Everyone is aware of the disproportionate share of physicians, hospitals, etc. located in urban cities relative to rural areas. However, scant attention has been paid to the first five items listed above:

**Subproposition A<sub>2</sub>** The low utilization of rural health facilities can in part, be blamed on a lack of perception of the need for medical services, knowledge of appropriate services, and confidence that treatment will improve health status.

Part of the problem of low utilization of rural health facilities concerns high prices of medical services relative to rural incomes. But also, much of this problem can be attributed to the difference in how the rural and urban poor perceive illness, believe that modern medical services will improve their health status, and know where to obtain services as compared to most urban dwellers.

Most previous studies of the "need" for health care on the part of rural dwellers have relied on interviews conducted with patients,

While not consistent and thus not strictly comparable, the results suggest a similar prevalence and incidence of disease and illness among rural dwellers as among those living in urban areas. However, other studies, which have relied on professional evaluation of health status, reveal a much higher level of ill-health among rural dwellers than is true of the general population. Thus one must conclude that *the perception of illness among rural dwellers is less acute than among those living in cities*. Such a conclusion is consistent with the differences in age and educational attainment existing between those living in cities as compared to rural dwellers, as cited above. The young, the old, and the uneducated are the least knowledgeable concerning modern standards of good health, what modern medicine can do to improve health status, and how and where to seek out medical services that they need. In addition, they are least confident that the receipt of western style medical services is appropriate for relieving conditions of illness, and are most reluctant to seek out western style health services. These circumstances can change rapidly only if western style health services are promoted through *outreach* activities.

**Subproposition B.** The government health care delivery network should involve ancillary personnel who will continuously maintain a referral link between village dwellers and health subcenters.

Outreach activities involve "going to the people", rather than waiting for the people to seek out health services. Outreach activities are an essential part of the pilot and demonstration community health projects being conducted in Korea. Community health projects typically involve village aids, village health workers, or members of mothers' clubs who make and maintain contact with village dwellers, individually and collectively. These health ancillaries are vital to case finding, health promotion, health education, and referral and follow-up activities which serve to break down barriers of lack of confidence in, and knowledge of, western style health services, and assist greatly in the perception of illness among members of rural populations.

**Subproposition C.** The government should consider the estab-

lishment of a National Corp of Health Services Workers to serve as ancillary health workers in rural and urban medically underserved areas.

It perhaps would be well for the government to consider a formal training experience for ancillary health personnel serving in certain urban and rural areas, leading to the award of certificates upon completion of training. Such workers could be designated as Health Service Corp Workers, and could be awarded additional certificates of merit by the Minister of Health, and other government officials for outstanding community health service activities.

The point is that, outreach workers should be *formally* incorporated into the rural health care delivery network, trained, and recognized as part of the health care delivery system at all levels of government, as well as by the general public. The services that these workers would perform should include the following:

- 1) Case finding, history taking, and referral activities.
- 2) Basic health education, personal hygiene, sanitation and illness prevention.
- 3) MCH including family planning instruction and dispensation of contraceptive devices and abortion referral, and
- 4) Basic first-aid including suturing, dressing wounds, and treatment of contusions, skin maladies, and simple fractures.

**Subproposition D.** The government should promote health and the utilization of government supplied health services through mass-media channels.

The ethics of the medical professions precludes advertising the availability of health services, lists of prices, or promoting the potential benefits that might be obtained from utilizing services supplied by individual practitioners or health facilities. These ethical prohibitions are designed to protect the innocent public from being deceived by medical quacks, charlatans, and frauds. However, the consequence of these restrictions is to maintain the public in a state of gross ignorance concerning the availability of health services, where they can be received, and the terms (prices) on which they can be obtained.

It is not appropriate for individual practitioners who stand to

gain personally from taking advantage of the ignorance of the public through increased income and profit to promote the benefits of their own individual services. However, it is appropriate for a government which is nonprofit and which has been entrusted, legally through due political processes, with the responsibility of the health and welfare of the population, collectively, to promote the benefits of various of its activities. Thus it is reasonable for governments to advertise the location and other aspects concerning the availability of health services, the benefits that are likely to be realized from utilizing them, and the terms on which they are available. In addition, this promotion activity, since it is provided for the benefit of large population groups, can be most effectively accomplished *via* mass media channels. Thus, I suggest the following:

- 1) Advertisements concerning the location, operating hours, staff, and services offered by health sub-centers be placed periodically, but regularly, in local newspapers.
- 2) Feature stories concerning activities of selected health sub-centers be carried in national media including television, newspapers and periodicals.
- 3) Human interest stories concerning the lives and activities of local community health workers be presented on television and in major periodicals from time to time, and
- 4) Presentations of certificates of merit to outstanding individual health professionals and ancillary personnel be carried in the evening news as occasions warrant.

Not only would such promotional activities serve to educate, inform, and raise the health consciousness of people living in medically underserved areas, it would also bring the general public's attention to the conditions of need and the government's efforts to meet those needs in medically underserved areas. Thus, these activities would serve to legitimize government efforts in these areas. This is extremely important in connection with health services financial schemes which would involve an element of subsidy or wealth transfer from the "rich" to the "poor" inevitably to be developed in the near future. The general public should be informed as to why additional funds are needed, the purposes to which funds are devoted, and the benefits that result from their expenditure.

**PROPOSITION II.5** THE CONSEQUENCES OF INSURANCE SCHEMES INCLUDE INCREASED OUTLAYS ON HEALTH, RISING PRICES, INCREASED QUALITY OF CARE AS WELL AS INCREASED UTILIZATION.

Politicians in the U.S. and elsewhere have tended to view the effects of health insurance as solely an increased utilization of services on the part of people covered under insurance programs. However, there are broader effects involved in insurance schemes than an increased volume of services utilized by consumers of health services.

In addition to removing financial barriers to accessibility to health services, for certain segments, or all of the population in the case of nonselective financial schemes, an added consequence of such schemes is to increase aggregate expenditures on health services. In most countries, this is generally a desired outcome, since health insurance or other financial schemes are usually introduced for the purpose of increasing the utilization of health services on the part of certain target populations, thus requiring increased outlays.

Public or private health insurance or similar financial schemes (prepayment, nationalized health care offered to the public at zero or near prices, etc.) tend to result in increased outlays on health services in two ways. First, upon coverage or entitlement, insureds experience an increase in purchasing power over medical services up to the limits provided by coverage within any given period of time. That is, once an individual is covered by a financial scheme, the individual may consume health services in total quantity up to the limits of benefits provided by the scheme, regardless of the level of income and wealth available during the period. Thus one consequence of health insurance, or similar financial schemes, is to increase potential demand (or to shift individual demand curves to the right) for health services during a given period. In the event of illness, this increase in potential demand, of course, is translated into increased effective demand and a consequent increase in outlays on health services. In economic terms, the source of this increased outlay on health services and effective demand for health services involves a shift in the demand curve that would be similar to that which would result from increasing individual incomes. Thus this

phenomenon can be viewed as an "income-effect" like increases in effective demand. *Through increased insurance subscription rates or taxes, this effect can be "neutralized."* However, in reality, most health insurance schemes involve certain subsidy elements whereby purchasing power over health services is disproportionately increased for certain "high risk" groups whose marginal propensity to consume health services is greater than that of the general population with little or no corresponding reduction in real income. Thus on balance, effective demand tends to increase through a right-ward shift in aggregate demand.

Health insurance or similar financial schemes that do not effectively screen out "high risk populations", or which fail to charge them sufficiently high subscription rates, tend to increase the effective demand for health services on the part of the aggregate population covered. Thus, national health insurance schemes, like Medicare and Medicaid in the U.S. are designed to increase the effective demand and consequent utilization of health services on the part of certain "high risk" medically underserved groups which tend to have a higher marginal propensity to consume health services than the general population, and thus tend to cause demand to increase. Indeed, the result of most national health insurance programs is an increase in the aggregate effective demand for health services.

A second way in which health insurance schemes tend to increase the effective demand for health services is through distorting relative prices. Most health insurance schemes involve only a modest co-payment factor. In indemnity insurance schemes, the consumer is forced to pay part of the cost of health services (co-pay) when the amount paid to the consumer for treatment is less than the cost of the procedure. Thus for example, if an appendectomy costs \$100.00, but the consumer is indemnified (paid) \$80.00, the consumer is forced to cooperate in paying \$20.00 of the cost of consuming \$100.00 worth of health services. Clearly, co-payment is an explicit feature of those insurance plans that reimburse consumers less than 100 per cent of the cost of treatment. Thus a plan that will pay 90 per cent of the cost of treating a particular illness involves a 10 per cent co-payment factor. The lower the co-payment factor, the greater the reduction in the effective price of health services relative to other commodities. Given the reduction in the effective

price of health services relative to the prices of other commodities, the consumption of health services will be greater; the greater the elasticity of demand for health services. Deductibles also involve an element of co-payment.

This second source of increased effective demand which Pauly and Arrow call "moral hazard" involves consumers moving along their existing demand curves in response to lower effective prices of health services.<sup>1</sup> However, this is not a phenomenon that supposes irresponsibility on the part of consumers, but rather is reasonable economic behavior in light of changes in the effective price of medical services relative to other commodities. Thus, when confronted with lower effective relative prices for health services, consumers rationally elect to consume more physician visits, drugs, and hospital bed days during each episode of illness than they would, if they had to pay the full market cost of these services. To the extent that increased utilization of health services is possible and is one of the social objectives of an health insurance scheme, the consequent increased health services utilization and expanded outlays on health would appear eminently desirable. However, it is not clear that increased effective demand results in as great a volume of increased utilization as is desirable.

**Subproposition A.** The effect of health insurance and other financial schemes on health services utilization depends on the nature of supply.

Usually, an increase in demand, supply remaining constant, will result in an increase in the prices of medical services. The consequences of this case are readily predictable, namely prices of medical services will rise more and utilization of health services will increase less, the less elastic is supply. Given that the increase in demand results in an increase in total outlays on health services, the less elastic is supply, the greater is a resulting transfer of income and wealth from the nonmedical sector of society to the medical sector. That is, the more inelastic the supply of health services, the

<sup>1</sup> Kenneth Arrow, "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review* (March, 1963), 91-107 and Mark Pauly, "The Economics of Moral Hazard: Comment," *American Economic Review* (June, 1966), 561-70.

higher the incomes of physicians, the larger the revenues of hospitals, etc., and the less the increase in the expansion of the utilization of health services on the part of consumers.

**Subproposition B.** Unless government insurance schemes are restricted to selected targeted population subgroups served by the government health care delivery network, prices throughout the health services industry will be affected adversely.

Prices are determined at the margin, therefore prices throughout the entire industry tend to be affected by the government's action. Thus while the government's aim may be only to affect utilization of government directly supplied services, government finance programs that are not restricted to the government system will impact on the private elements of the system. *Thus a government cannot pursue its policies and ignore what is happening in the private sector.* Just as importantly, if the government financial program is not restricted or limited to target populations served by the government health care delivery network, the increased revenue received by the private sector will serve to finance the latter's expansion in directions inconsistent with national health policy objectives. Thus increased revenues flowing to the private health sector generally, would serve to underwrite the concentration of physicians and clinics in urban areas, encourage the expansion of private hospitals and clinics in cities, etc.

**Subproposition C.** Government health insurance schemes that are not limited to target populations served exclusively by government health care delivery elements may serve to increase the *quality* of private health services supplied much more than to increase the *quantity* of health services utilized.

During the period from September 1973 to April, 1974, I had the privilege of serving as chief health economist advisor to the United States Price Commission and to the United States Cost of Living Council. During this period, I assisted in drafting the "Phase III" and "Phase IV" price regulations applied to the health services industry, and attended many of the rate increase hearings held on behalf of hospital, physicians, and other health agencies requesting exemptions to price regulations imposed on the health services in-

dustry.

As a result of these responsibilities and activities, I had an opportunity to study the sources of inflation in health services costs and prices in the U.S. over the period of the last 25 years. The following observations pertinent to America's experience may be of interest in the present context:

- 1) Up until about 1955, health services prices were increasing at about the same rate as the consumer price index.
- 2) After 1955, first hospital charges and then professional fees took off at a rate much higher than the general rise in consumer prices.
- 3) Over the entire period beginning in 1950 and ending in January 1970, the consumer price index of medical care rose by 111.1 per cent (from 231.4 to 455.0), and the consumer price index for all items increased by only 52.7 per cent (from 83.8 to 127.7). The takeoff in medical care prices occurred long before Medicaid and Medicare (1965)!.
- 4) The evidence suggests that the relative increase in medical prices was paralleled by a significant change in the sources of finance for medical services. Consider Table 1 below:

Table 1. Sources of Finance for Medical Services in the U.S. 1950-1971 (Selected Years)

Sources of Payment	1950	1960	1971
A. Direct Pay-Consumers	68.5%	55%	37.5%
B. Private Health Insurance	8.5%	21%	25.5%
C. Government, States, Local, and Federal	20.5%	22%	36.5%
D. Philanthropy	3.5%	2%	1.5%

Source: Social Security Bulletin, selected years.

Table 1 shows a steady decline in the percentage of health service costs paid directly by consumers and a consequent steady increase in costs paid by third-parties (primarily government and private health insurance, since philanthropy as a source of funds has been steadily declining). Note the enormous increase in the percentage of health costs paid by private health insurance in 1960 paralleling the takeoff in the rate of increase in medical care prices relative to prices generally, as cited above. This is

particularly striking in view of the virtual constancy of the percentage of costs paid by government during the interval of years 1950-1960.<sup>7</sup>

- 5) Prior to 1955, health outlays as a percent of GNP were relatively constant at between 4 and 4.5 per cent. However, in 1960 health outlays as a per cent of GNP jumped to 5.4, and currently constitute 8 per cent of GNP in the U.S.. On the basis of total outlays, the health services industry is America's third largest, ranking only behind construction and agriculture. The Social Security Administration estimates that over the interval 1950-1971, 47.2 per cent of the increased outlays may be attributed to increases in prices, 16 per cent to growth in population, while only 36 per cent is accountable by increased utilization.<sup>8</sup>
- 6) An enormous volume of the increased expenditures on health services were absorbed by elements in the health services industry in a manner resulting in the production of what health professionals call an increased *quality* of services rather than an increased *quantity* of services utilized. This is particularly true of hospitals in the U.S.. Currently in the U.S., outlays on hospital services constitute over 40 per cent of total health services outlays. Even though hospitals in vast areas of the U.S. are under-utilized in terms of occupancy rates, hospital costs have risen faster than any other component of the medical care price index. The rise in hospital charges in the U.S. since 1955 has been phenomenal. According to the American Hospital Association, the average expense per patient day was \$15.62 in 1950, had increased \$62.00 by 1968, and exceeds \$100.00 currently.<sup>9</sup> This increase in price has been accompanied by a modest increase in hospital utilization, but has been accompanied by enormous increases in assets (equipment and space) per bed day, personnel per bed day, and supplies utilized per bed day. Thus hospitals have become increasingly sophisticated as well

<sup>7</sup> Howard R. Bowen and James R. Jeffers, *The Economics of Health Services*, General Learning Press: New York, 1971.

<sup>8</sup> Dorothy Rice and Barbra S. Cooper, "National Health Expenditures, 1929-1968" and various supplements of the *Social Security Bulletin* for 1970 and various subsequent years.

<sup>9</sup> Bowen and Jeffers, *op. cit.*

as expensive. However, utilization continues to remain less than optimum. In the U.S., health economists have estimated that the cost of an unoccupied bed is somewhere between 60-80 per cent of the cost of one occupied by a patient. In the U.S., hospitals are high overhead facilities.

The process by which the quality of services is increased at the expense of the volume of utilization is conveniently depicted by Figure 1 below.

Figure 1. Quality Enhancement Versus Increased Output of Health Services

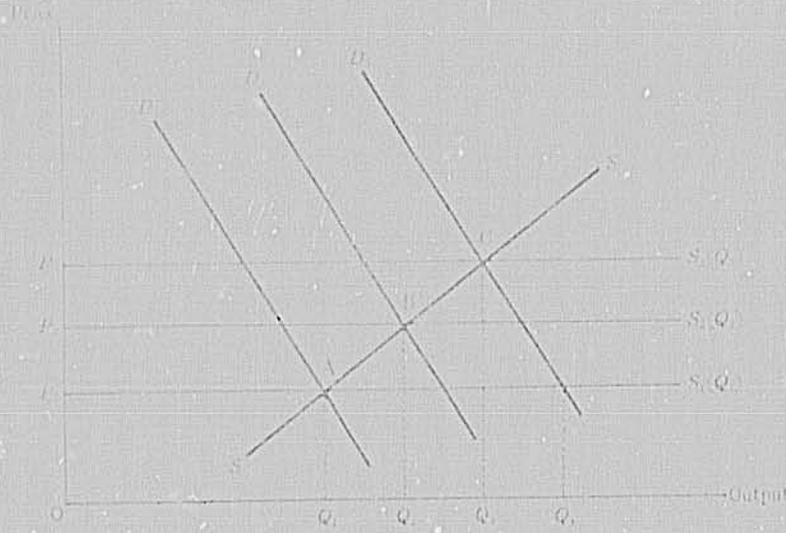


Figure 1 shows three different wholly elastic supply curves reflecting excess capacity, each corresponding to a different quality of services offered with quality increasing progressively from  $S_1$  to  $S_2$  to  $S_3$ . Higher quality is reflected by ascending prices  $P_1$ ,  $P_2$ , and  $P_3$ , respectively. Three ascending levels of demand are reflected by  $D_1$ ,  $D_2$ , and  $D_3$ .

Given initial levels of demand and supply  $D_1$  and  $S_1$ , respectively, price and output are  $P_1$  and  $Q_1$ . As demand increases to  $D_2$ , the

supplier can choose to expand output with no change in quality and price, or choose to increase both quality and quantity of care. The figure illustrates a case in which the supplier chooses to increase the quality of care offered by moving to  $S_2$  thus raising the price to  $P_2$  and increasing output to only  $Q_2$ . Note that this output is less than the amount by which output could have been increased had there been no up-grading of quality. Similarly, given an increase in demand to  $D_3$ , the supplier moves to  $S_3$  and raises price to  $P_3$ , and expands output to only  $Q_3$ . Points A, B, and C, represent intersections of relevant supply and demands which when connected reveal SS, the effective supply curve reflecting discrete increases in quality of services at increasing prices. These increases in quality are obtained at the expense of increased utilization which would have been  $Q_4$  instead of  $Q_3$ . Note that the final supply curve  $S_3$  is also wholly elastic reflecting excess capacity and suboptimal utilization, even though demand increased considerably. Even under conditions of excess capacity, increases in demand will bring about maximum increases in utilization, only if the quality of services is held constant, say through regulation.

**Subproposition D.** If health insurance programs are not restricted to targeted population groups utilizing government health facilities, it is desirable to regulate the capital expenditure, pricing, and output policies of the private health sector.

The Korean context is even more complicated than that of the U.S.. In Korea, obviously, private hospitals compete with public hospitals for patients, as is the case in the U.S.. However, in the U.S. physicians and hospitals are complementary production agents, whereas in Korea this is not the case. In the U.S. patients can be admitted to hospitals only with physician approval, but patients are rarely bedded over night in private physician clinics. However, my understanding is that in Korea, patients are often kept overnight in physician clinics during episodes of illness. Thus physicians do not rely on hospitals as an essential complementary production agent in Korea to the extent that they do in the U.S. This, in part, explains the low occupancy rates of certain rural hospitals which are located in areas where private clinic beds are more available than elsewhere. This is even more true in cases where local health

subcenters are staffed by part-time physicians who operate private clinics nearby. These observations also point up the necessity of judging the need for government health facilities in light of the private medical resources that are available in the area of concern. They also suggest investigation of the extent to which private resources can be utilized better, when they are available, to provide greater volumes of services more efficiently.

The important thing to recognize is that in Korea the private health sector directly competes with the public health care delivery system. Thus to the extent that the private sector expands in size and increases the apparent quality of services offered, the government health system will remain underutilized and be regarded as supplying services that are inferior in quality. The consequence of the latter, of course, is to reduce utilization even further, or at least to maintain utilization at low levels.

The government should consider regulating the private health sector in terms of restricting supply in areas where potential utilization is too small to permit the efficient utilization of both the private and public supply of health services. Otherwise the private sector will "skim the cream" in the sense of serving a small number of affluent consumers leaving the remainder of the population to be served by the government system which will, as a consequence, be forced to operate at inefficient suboptimal levels. Thus in cases where the "breadth of the market" is small, "competition" tends to result in inefficient operation for competing suppliers. But such cases tend to favor private suppliers who can operate profitably serving the high income segment of the market. In such cases, public monopolies are in the social interest, e.g., local phone companies, bus companies, water and power companies, etc.

**PROPOSITION II 6 - GOVERNMENT HEALTH INSURANCE SHOULD BE INTRODUCED IN A FASHION THAT WILL PROMOTE THE EXPANSION OF THE REFORMED PORTION OF KOREA'S HEALTH CARE DELIVERY SYSTEM.**

Korea has two health systems. The private system is largely operated for the personal benefit of private practitioners and serves, for

the most part, the urban affluent population. The government system is nonprofit, and largely serves the rural and urban poor.

Currently, the two systems are both patterned after western style health care delivery systems in offering similar services, involving essentially a hospital-physician intensive production technology. It is not profitable or personally convenient for the private sector to deliver services in rural areas or to the urban and rural poor. The major differences in the two systems are as follows:

- 1) Since the private system cannot or will not do so, it is left to government to attempt to provide services to "high risk" low income populations, particularly those living in rural areas, and
- 2) The government system is grossly underfunded, particularly in view of the high costs that are necessarily incurred to provide western style health services in scarcely populated areas.

In order to increase the utilization of health services on the part of the rural and urban poor population groups, it is necessary to reform the government health care delivery system in the ways suggested above (adopting less physician-hospital production technology, providing outreach, etc.). It is also necessary to direct the private sector toward serving the public better through regulating the private sector, including the medical education system, as outlined above.

The ROKG is already in the health care delivery business. Currently, plans are being laid to embark on major financial programs which have the potential of causing many problems as also outlined above. Any newly introduced financial program tends to cause certain elements of the health care delivery system to grow, expand, and develop. A significantly large infusion of funds into the system will enable those supply elements receiving increased revenues, directly, or indirectly from consumers, to finance the expansion and growth of those supply elements. Thus if as a result of government insurance programs, the private health care delivery sector of the health care delivery system receives increased revenues, this will serve to finance the expansion of the health care delivery system along lines already established by the private sector. This would result in an expansion of esoteric services, the use of expensive production technologies, and poor methods of distributing health ser-

vices that experience has shown in all countries are too expensive, inefficiently produced, and inequitably distributed. Thus if the government financial scheme results in increasing the flow of revenues to the private medical sector, this will cause the health care delivery system to expand and grow to become even more unbalanced, irrelevant to needs, inefficient, and inequitable with respect to the health needs of those who are medically underserved, now and in the future. In addition, health care price and cost increases that are sure to occur in the private sector will be transmitted to the public sector as well, thus increasing the costs of publicly supplied health services. This is already occurring, even in the absence of a government insurance scheme, probably due in part to rapidly increasing demand generated by rising income. In Seoul, hospital and physician costs have been reported as having increased 318 per cent between 1965 and 1969 as compared to a general inflation in prices of 277 per cent during those years.<sup>10</sup>

**Subproposition A.** Unless the ROKG is willing and able to regulate the private health sector in a thorough-going fashion, it should restrict the flow of increased revenue that will be generated by the introduction of a significantly large health insurance finance scheme to the government health care delivery system.

This can be done even if there is no wish to exclude the entire population from being covered by government sponsored health insurance. *It simply requires that reimbursement be restricted to only government suppliers of health services.* There may be an advantage in entitling the entire population to receive health services from government facilities and health professionals. This would enable the government to tax the general public or to require the entire population to subscribe to government health insurance, thus providing a greater volume of funds with which to expand services than would be possible if coverage were restricted to selected population subgroups. It may be assumed that in the short-run, the urban affluent would not be anxious to consume government supplied services.

Politically, however, there would be considerable opposition to a

<sup>10</sup> An, Young-Sup, *Korea Times*, March 4, 1976.

general assessment in the form of added taxes or subscription fees, unless they were very small. The urban affluent would probably quickly promote the establishment of private health insurance cooperatives, companies, etc. and legislation to permit those covered by such private schemes to be exempt from any general assessment. Thus a general assessment of this sort, coupled with restriction of reimbursement to only government suppliers, would ultimately result in the rapid development of private health insurance programs in Korea. This may be good or bad. However, it seems clear that if this were to occur, health care prices and costs would increase more rapidly in the private sector than would be the case in the absence of private health insurance, as was the experience of the United States after 1955. This would cause the costs of government supplied health services to rise in the face of dwindling revenue, assuming that subscribers to private insurance plans eventually were exempted from a general assessment. To counter this, the government would have to resort to heavy regulation of the private sector.

To the extent that the urban affluent did utilize government supplied health services, the operating costs of the government system would rise. Also the urban affluent would be competing with those who are medically underserved, thus possibly reducing the potential benefits of government supply and financing of health services to the latter. Thus a general assessment through added taxes or subscription rates coupled with universal entitlement to government supplied health services, while attractive from a shortrun fiscal point of view, would appear to pose many significant problems. Therefore, I conclude that at the present time, the government should restrict entitlement to those selected population groups that are medically underserved and *not* extend it to the general public, and *not* impose an added assessment on the latter specifically to finance the expansion of government supplied health services.

**Subproposition B.** The ROKG should restrict reimbursement, under a government health insurance program, to elements of the public health care delivery network and should finance this program, prospectively through assessments of those served, supplemented by general revenue funds.

Restricting reimbursement to government suppliers of health services will provide a financial basis on which the reformed government health care delivery system can grow, thus providing more balance to Korea's total health care delivery system. Naturally the private sector will continue to grow also, but not by as much as would be the case if private suppliers were entitled to be reimbursed for services rendered to those covered by insurance. However, allowances should be made to permit private suppliers to be reimbursed in special cases such as in the absence of government services. As a result of the general restriction of reimbursement to only government suppliers, the relative share of health services provided by government would likely increase in the future. Restricting entitlement of government supplied health care services to current medically underserved population subgroups and those that would be underserved in the future in the absence of an expanded public health care delivery system will, in part, serve Korea's social development objectives.

However, financing the system solely by prospective and or retrospective assessments of those medically underserved covered by the government program, is not feasible and is inconsistent with social development objectives designed to reduce inequities in the Korean society.

It is unrealistic to expect to finance an increased utilization of health services for the medically underserved portions of the population through prospective assessment (prepayment). While it is important for those served to pay part of the cost of the health services that they receive, it is infeasible to expect them to pay the full cost, since they are *poor*. It is also too much to expect the poor to be able to retrospectively repay the costs of health services after their utilization and subsequent recovery from illness, even via installment payments over the remainder of their lives. If people are poor prior to illness, they are likely to be even poorer after recovery.

*It is not consistent with the goal of achieving social equity in the quality of life to expect those who are disadvantaged to pay the full costs of consuming services which only the advantaged can fully afford.* The achievement of social development goals is only consistent with a health insurance financial scheme that implicitly or explicitly involves subsidizing the consumption of health services

on the part of the poor. Thus while it is appropriate for the poor to pay a co-insurance premium (using a payroll tax in cases where feasible) or subscription fees and/or certain deductibles upon receipt of services, in order to maintain personal dignity and to insure responsible consumption behavior, in the final analysis, health services must be supplied at less than full-cost to low income population subgroups. The deficits incurred by the government health care delivery system should be made up from general tax funds rather than from payroll tax funds, thus *transferring* income from the rich to the poor as is consistent with increasing social equity.

Part of the cost of health services could be both prospective and retrospective, but I seriously question the logic of a heavy reliance on the latter. Why burden poor people after recovery from illness? Surely installment repayment rates must necessarily be very low, and must be established individually in each case. Provision for forgiveness of the entire debt would have to be made in most instances. One should weigh the small potential flow of revenues that retrospective payment offers against the costs of administering cases, some of which would remain open for many years, plus the personal trauma and agony that large unpaid debts would cause for the individuals and families involved. I doubt that retrospective payment would be worth the administrative costs that would be involved.

#### *E. Organization and Financial Mechanisms*

At the present time, reform of Korea's health care delivery system involves two major conflicting problems of an organizational nature. The effective delivery of health services requires substantial decentralization in terms of actual implementation of service programs and activities. However, the major advantages of health insurance implementation are realized only upon substantial consolidation and pooling of funds.

**PROPOSITION II 7** HEALTH INSURANCE FUNDS SHOULD BE CENTRALLY ADMINISTERED AND MANAGED, IN ORDER TO OBTAIN MAXIMUM BENEFIT.

Broadly speaking, the virtue of health insurance, in terms of its utility to individuals, is the reduction of uncertainty as to accessibility to health services it provides in the event of the need for them imposed by illness. Strictly speaking, health insurance provides financial payment to individuals in the event of illness, thus providing assistance in the purchase of needed services. Prepayment plans are relatively new. They provide access directly to services in the event of illness. The difference is that health insurance provides *money* in the event of illness, while prepayment plans provide access to *medical services* directly. However, generally speaking, many use the term "health insurance" broadly to refer to financial schemes that have as their object increasing accessibility to health services in the event of illness. Yet the distinction between health insurance and prepayment is extremely important.

All individuals can self-insure through individual savings. Note that money does not guarantee access to services. However, most individuals cannot self-prepay, since they cannot render to themselves the medical services required in the event of illness. In my experience, most physicians fail to see the difference between prepayment and health insurance.

Both health insurance and prepayment tend to reduce uncertainty in terms of access to medical services in the event of illness. If limited income or high prices of medical services relative to income is a major barrier to accessibility to health services, health insurance may serve individual or collective needs well. However, if health services are physically unavailable, health insurance does little good. What good is there in having the means to buy something that is unavailable?

It is unfortunate that so many people tend to think that government health insurance is the solution to health care delivery and accessibility problems. The introduction of government health insurance schemes, without provision for an adequate supply of health services, simply frustrates consumers and gives rise to a lack of credibility in the government's concern, for and ability to respond to, human needs.

If an adequate supply of health services is available at satisfactory prices, both health insurance and prepayment plans will assist in providing access to needed medical services. Collective health insur-

ance schemes offer considerable advantages over individual self insurance. Events of illness are very unpredictable in the case of individuals. However, events of illness are readily predictable for large aggregates of population, due to the overall reduction in the variance of predictions of illness which is explained by the "law of large numbers". Thus an individual may save too little or too much. However, collective health insurance schemes "pool risks." The premium rates appropriate for large populations, that will cover administrative costs, profit margins, provision for reserves, as well as payments to insureds can be determined with actuarial precision. Thus insureds can pay a specified premium and be certain of entitlement to financial assistance within known limits, in the event of illness. Unusually large needs for funds on the part of certain members covered are off-set by comparatively low needs for funds on the part of other individuals during the given period. Thus risks are pooled over the aggregate population covered, and uncertainty to individuals is reduced accordingly.

Prepayment works in a similar fashion, except that in return for the prepayment of a specified subscription rate, insureds are entitled to receive specified medical services in the event of illness. Unusually large needs for *services* on the part of certain individuals are off-set by low needs for *services* on the part of other individuals who are covered during the period. Thus risks also are pooled, or spread, over all individuals who are subscribers to a prepayment scheme as is the case in health insurance.

**Subproposition A.** The larger the population covered by health insurance or prepayment schemes, the lower the costs of operation, due to financial economies.

First, the larger the population covered, assuming that members are similar in terms of risk characteristics, the lower the variance of predictions of illness. This result is a consequence of the law of large numbers. Second, generally the larger the number of individuals, the lower the per-unit costs of administration, claims filing, and reimbursement which require a great volume of paper work. Such activity lends itself to mass data processing techniques. In the case of such work processes, per-unit costs tend to be inversely related to the volume of activities. It is important to recognize that

### *Micro Economic Considerations*

start-up costs are usually high, since they involve the purchase of expensive data processing equipment. Appreciable per-unit cost reductions require a very large volume of activity.

Third, insurance operations, and less so prepayment plans, involve the accumulation of large volumes of funds, due to the regular collection of premiums prior to expenditure of funds. In addition, reserves must be maintained to insure the availability of funds in the event of illness affecting large portions of the insured population, e.g., epidemics, floods, etc. These funds typically are invested, thus providing a stream of earnings that serve to reduce premium or subscription costs. However, the management of these funds requires brokers fees, paper work, and other administrative costs, and these per-unit administrative costs tend to decline, the larger the volume of funds involved. The more people covered, the larger the volume of funds involved in a given program, the lower the per-unit costs of financial management.

**Subproposition B.** Whatever type of health finance scheme the ROKG adopts, it should provide for the central administration of claims, reserves, and operating funds.

Any finance scheme that results in the establishment of several small administrative units, loses the advantage of risk pooling and financial economies that central management and administration offers. Thus the cost of a decentralized scheme will be much higher, and the overall administration and coordination of even a federated system will be much more difficult than if the scheme were centralized.

**Subproposition C.** The ROKG should consider pooling and/or combining the administration of insurance finance funds with those of existing similar finance programs.

Theoretically, financial economies are limitless. Thus, pooling the funds and administrative efforts and costs of health finance programs may result in substantial cost savings. However, note that as a result, risk may not be reduced, since the events covered may not be independent or negatively correlated. Diminution in the aggregate variance of events as a result of aggregation fails to occur, if risk events are positively correlated.

A number of programs have been suggested as suitable candidates for joint administration and fund pooling with those to be involved in a health finance program. These include the already existing Industrial Accident and legally enacted Welfare and Pension Schemes. However in general, I oppose the use of the payroll tax in view of its regressive nature. It would be better to finance health insurance from general revenues.

First, the need for health finance assistance is not restricted to industrial workers or their families. The primary thrust of the social development strategy is toward increasing social equity on behalf of the medically disadvantaged *rural* as well as urban poor.

Second, it would be easier to incorporate an income transfer from the rich to the poor, if the health finance program were tied to a welfare and pension scheme that is broadly based. An income transfer is required to increase social equity as is consistent with social development goals. While it may be easier in the short-run to administer and expand a health finance program if it were tied to the Industrial Accident Scheme, the opportunities for doing this in the long-run are rather limited. I wonder how much more payroll tax Korean industry can tolerate. Is it not true that the existing labor law requires that approximately 8 per cent or one month's salary be set aside annually? Would the welfare and pension scheme, if implemented, require added payroll taxes? Could Korean industry tolerate additional payroll taxes in order to finance health insurance schemes, and not raise prices or reduce the rate of increase in worker's wages? Surely, the consequence of reducing the rate of increase in wages is inconsistent with social development. Thus I would prefer not to risk these consequences, and would suggest the adoption of a prepayment subscription rate set at low levels that the poor can afford, while supplementing the government health care delivery system from general revenue funds. Surely this could easily be incorporated into the value-added tax system soon to be adopted.

韓國의 保健計劃 및  
政策樹立에 관한 經濟的 考察

## 序 文

東西古今을 막론하고 健康의 維持 및 增進은 經濟的 安定, 個人的 自由 및 福祉向上이란 人간의 基本目標을 達成함에 있어 중대한 關心事가 되어 왔다.

國民들의 健康狀態를 改善시키고자 지금까지 우리 政府가 기울여온 努力으로 韓國은 비슷한 所得水準에 있는 아시아 諸國에 비해 國民健康水準面에서 優位를 占하게 되었고, 지난 10年間 韓國經濟의 급속한 成長은 의심할 여지도 없이 國民健康增進에 貢獻해 왔다고 判斷된다. 또한 1977년부터 시작된 4次經濟開發 5箇年 計劃期間에 걸쳐 政府는 지금까지의 成長의 果實을 社會開發을 통하여 全國民들에게 폭넓게 配分할 意圖로 있는데 따라서 保健部門은 4次計劃의 主要分野의 하나로 看做되고 있으며, 또한 새로이 強調된 社會開發의 戰略部門이 되고 있다.

이와 같은 計劃方向에 대해 美國國際開發處(USAID)는 상당한 關心을 表明하고 保健關係者の 海外派遣訓練, 保健部門에 관한 研究 및 調查, 그리고 外國專門家의 招請 등을 통하여 韓國의 保健企劃能力을 培養시키는데 도움을 주고자 「웨스팅하우스」社 保健制度 用役團(Westinghouse Health Systems)과 475,000弗 상당의 保健企劃契約을 締結한 바 있다. 이와 더불어 USAID는 韓國政府에 5百萬弗의 借款을 供與하였는데, 이 資金은 주로 保健醫療傳達體系의 擴充 및 發展을 위해 保健開發研究院을 設立하여 郡單位로 示範事業을 展開하는 데 投入된 것이다.

이와 關聯하여 새로운 政策, 企劃 및 研究調整機構인 保健政策協議會 및

保健企劃團이 設立되었는데, 保健企劃團은 本研究院內에 設置되었고 團長에는 研究第3部長인 朴宗洪 博士가 任命되었다.

특히 經濟學的 觀點에서 保健醫療傳達에 關係 보다 많은 研究의 必要性이 立證되고 있음에 비추어 本研究院은 保健計劃立案者 및 保健關係學者들에게 도움을 주고자 保健企劃 및 政策樹立에 對한 研究叢書를 順次的으로 出刊할 計劃으로 있는데, 그 첫번째로 USAID/「웨스팅하우스」의 保健經濟顧問인 「제임스 케퍼스」博士가 著述한 本書를 刊行케 되었다. 著者는 美國「아이오아」大學의 經濟學科 教授로 1975年 5月~1976年 12月の 休職期間中 本研究院에서 研究作業을 계속해 왔다. 本書에서 「케퍼스」教授는 保健經濟學者로서 美國에서의 오랜 經驗을 살려 韓國의 主要保健政策課題와 그 解決方案을 중심으로 保健部門의 諸側面과 問題點을 考察하고 있다. 本書의 出刊으로 이 分野에 對한 一般 및 專門家들의 理解增進에 裨益이 될 것을 期待하며, 또한 本書는 앞으로 保健企劃 및 政策樹立에 對한 研究에 基礎를 提供할 것으로 믿는다.

本書에 收錄된 모든 內容은 어디까지나 著者의 意見이며 本研究院 및 保健企劃團의 公式意見이 아님을 밝혀 둔다.

1976年 11月 日

韓國開發研究院

院長 金 滿 堤

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第 1 部

韓國에 있어서 保健計劃 및 政策樹立에  
관한 巨視經濟的 考察

## 第1章 序 言

本書는 他國의 經驗을 藉하여 保健政策과 關聯, 諸外國의 政策立案과 그 施行過程에서 드러날 問題點이나 失策을 기술함이 韓國은 그와 같은 前例를 設치지 않도우 保健計劃樹立者와 政策立案者들을 助울 目的으로 執筆된 것이다.

韓國에 關한 著者의 知識不足과 東西間의 文化的 差異로 因해 未備點이나 短處도 있겠지만, 各界各層에 甚히 많은 專門家들의 助言을 얻어 作成된 本報告書가 韓國에 있어는 保健分野의 問題點과 政策課題의 理解 增進에 功績이 有하기를 바란다.

3部로 構成되어 있는 本論文은 讀者들의 理解를 助코자 命題中心으로 執筆되었으며, 여기서는 總論 第1部 巨視的 考察과 第2部 微視的 考察을 總하여 一한 報告書로 出刊하게 되었다. 第1部에서는 包括的인 政策課題, 특히 保健部門을 中心으로 經濟政策과 社會開發의 計劃樹立에 關한 課題를 다루고 있으며, 第2部에서는 保健計劃 및 政策樹立戰略과 關聯하여 微視的 또는 特殊問題를 考察함과 동시에 現保健計劃案의 몇가지 特長을 說明하고 이에 對한 諸代案을 檢討해 보기로 한다.

따라서 第1部 및 第2部에 있어서는 韓國의 保健計劃 및 政策樹立을 둘러싼 問題點分析의 中心이 될 것이되, 앞으로 出刊될 第3部는 醫療保險과 關聯한 特殊課題를 考察 對象으로 하여 保健企劃團長인 KDI의 朴宗洪 研究3部長과 共同으로 執筆할 것이다.

## 第2章 巨視的 考察

命題 1: 保健「서비스」에 대한 支出은 經濟成長에 貢獻한다.

開發經濟學者들은 保健關聯支出이 國民들의 福祉를 어느 程度 增進시킨 수 있을 것이나 經濟成長에는 障礙가 된다고 보고 있다. 經濟成長은 都市化 및 工業化를 必要로 하고 있으므로 經濟의 下部構造를 開發하고, 都市化 促進에 必要한 工業發展과 「서비스」支援 등을 위해서는 大量의 實物資本의 蓄積이 要求된다고 그들은 主張하면서, 經常支出의 一部인 保健費支出은 都市化 및 工業化推進에 所要되는 稀少資金의 一部를 割愛하여 使用되는 것이라고 보고 있다. 따라서 開發論者들은 保健費支出을 全的으로 人道主義的 觀點에서, 投資支出이 아닌 消費支出로 看做하여 經濟成長에 障礙가 된다고 믿고 있는 것이다.

그러나 開發經濟學者들은 人間資本을 輕視하는 한편, 實物資本의 重要性을 지나치게 強調함으로써 그릇된 結論을 내리고 있는 것이다. 물론 工業化促進에 있어서 經濟의 下部構造開發이나 實物資本深化가 지니는 重要性에 대해서는 疑心할 餘地가 없으나, 實物資本投資는 勞動生産性增大를 통하여 生産을 增加시키게 되므로 教育, 訓練 및 健康增進을 위한 人的投資는 勞動生産性を 增大시키 經濟成長을 促進시킨다는 事實을 알아야 할 것이다.

오랫 동안 經濟成長論者들은 實物資本投資 특히 「케인즈」乘數를 통한 所得創出過程에 執着해 있었다. 그러나 美國經濟의 長期成長要因을 分析하면서 「솔로우」(Solow), 「데니슨」(Denison), 「조르겐슨」(Jorgenson)은

GNP 및 1인당 GNP상의 未說明殘餘(a large residual variation)은 理論이 示唆하는 것처럼 勞働 및 資本 2요소 상의 變動밖으로는 說明한 수 없다는 結論에 到達하였고, 많은 經濟理論家들은 未說明殘餘(unexplained residual)를 技術의 累積的 効果에 歸하고 있다. 또한 「조르겐슨」教授 등은 技術과 其他 要因상의 變化로 인한 長期에 걸친 投入物의 質的變化를 反映하는 資本 및 勞働의 調整值을 언프려고 試圖하기도 하였다.

「데이슨」教授는 「프린스턴」研究所를 위한 美國經濟의 長期成長이란 研究에서 資本「스톡」상의 質的變化를 調整하고 남은 未說明殘餘의 大部分의 調整, 教育 및 保健狀態增進에 따른 勞働의 質的 向上으로 說明할 수 있을 指圖하고 있다. 따라서 人力投資는 美國經濟의 長期成長經驗을 說明함에 있어 實의 重要한 要因으로 認識되고 있는 것이다.

命題 2: 지난 20年間 保健「서비스」에 대한 民間支出은 韓國의 經濟成長에 貢獻해 왔다.

民間의 保健費支出의 GNP에 미치는 影響을 나타내는 다음의 3個 方程式(期間: 1953~1974)을 통하여 몇 가지 證據를 提示해 보자 한다.

$$1) \log \text{GNP} = 0.7152 + 0.1662 \log \text{國內總固定投資} \\ (0.8203) \quad (3.889) \\ + 1.1541 \log \text{勞働人口} + 0.1175 \log \text{民間의 保健費支出} \\ (8.053) \quad (2.062) \\ R^2 = 0.99 \quad D.W. = 1.1599$$

$$2) \log (\text{GNP}/\text{人口}) = 4.6689 + 0.2211 \log (\text{國內總固定投資}/\text{人口}) \\ (25.3803) \quad (5.5041) \\ + 0.8949 \log (\text{勞働人口}/\text{人口}) \\ (7.1016) \\ - 0.1859 \log (\text{民間의 保健費支出}/\text{人口}) \\ (2.7036) \\ R^2 = 0.9869 \quad D.W. = 1.0872$$

$$3) \log (\text{GNP}/\text{勞働人口}) = 5.4549 + 0.2814 \log (\text{國內總固定投資}/\text{GNP}) \\ (20.8613) \quad (3.9198)$$

$$+0.2860 \log(\text{民間의 保健費支出/勞動人口})$$

(3.2654)

$$R^2=0.99 \quad D.W.=1.1498$$

上記한 세 方程式들은 對數로 推定되었으므로 各係數는 彈性值를 나타내고 있다. 그리고 方程式 (1)의 係數를 除外하면 모든 係數는 0.05水準에서 統計적으로 有意性이 있으며(관호안의  $t$ 값 參照),  $R^2$ (重回歸係數)는 모두 0.98以上으로 나타나고 있다. 「더빈 와트슨」統計值(D.W.로 略稱)는 時系列分析에서 흔히 보이는 바와 같이 약간의 正의 自相關이 있으며, 모든 貨幣單位變數는 1970年 不變市場價格基準으로 表記되고 있다.

이들 方程式의 論理는 方程式 (3)을 例外로 한다면 經濟學者들에게 즉시 分明해진다. 方程式 (1)은 生産을 投資率, 勞動 및 民間의 保健費支出의 函數로 表示한 生産函數關係를 나타내고 있다. 그런데 最近의 資料에 의하면 國內 總保健費支出中 政府保健費가 차지하는 比率은 약 10%水準이고(1960年以前은 資料入手不能) 또한 政府支出의 相當部分이 資本建設支出이어서 實際로 提供된 年年의 「서비스」는 無視할 程度이므로 政府部門을 除外하여 國內 總保健費支出 代身 民間의 保健費支出을 變數로 使用하였다. 方程式 (2)는 (1)과 同一하나 諸變數를 人口로 나눈 1人當 概念으로 나타낸 差異가 있는데 이는 方程式 (1)보다 統計的 誤差(專門用語로는 heteroscedasticity)를 줄이기 위한 한 方便으로 修正되었다. 方程式 (3)에서는 勞動의 平均生産性(GNP/勞動人口)에 대한 (固定投資/GNP) 및 勞動人口 1人當 保健費支出의 影響이 推定되고 있다. 이는 平均勞動生産性이 投資率 및 勞動人口 1人當 保健費支出이 反映하는 人間資本「스톡」의 質에 依存한다는 論理에 立脚하고 있다. 이 結果는 1948~58년에 걸쳐 推定된 「실론」(Ceylon)國의 方程式보다 훨씬 滿足스럽게 나타나고 있다.

方程式推定結果를 살펴보면, 두드러진 特徵으로 民間의 保健費支出이 1953~74年期間中 GNP變動을 說明함에 있어 相當한 役割을 擔當하고 있음을 알 수 있다. 더불어 方程式 (1) 및 (2)에서 볼 때 投資係數와 保健費支出係數가 비슷하게 나타나고 있으며, 특히 方程式 (3)에서는 兩係數가 거의

同一하게 나타나고 있다는 점이 주목할 만하다. 결국 保健費支出의 相對的 効果는 實物投資效果에 比肩된다고 이야기 할 수 있겠다. 그런데 이 結果가 保健「서비스」에 대한 支出이 實物資本에 대한 支出과 똑같은 重要하다거나 나아가서 더욱 重要하다고 主張해 수는 것은 아니다. 그러나 이 結果는 保健「서비스」에 대한 支出이 經濟成長에 障礙가 된다고 하는 主張이 不可能하다고 볼 수는 없었지만 매우 어렵다는 것을 示唆해 주고 있다. 結論으로 保健費支出은 國家經濟成長 目的과 事實上 相應한다고 볼 수 있을 것이다.

따라서 經濟計劃樹立者는 保健開發과 相關, 從前의 思考方式을 多少 修正하여 積極的 思考를 하도록 勸告하고 있다. 健康狀態의 改善은 社會開發의 한 重要한 要因일 뿐만 아니라 社會 및 經濟開發을 同時에 促進시키는 重要한 手段으로 看做되어야 할 것이다.

命題 3: 保健「서비스」에 대한 支出이 주는 效果는 低開發段階에서보다 中내지 高度開發段階에서 더욱 크다고 主張할 만한 妥當한 理由가 있다.

低開發段階에서는 資本, 勞力, 工業等 諸面에서 不足한 點이 많고 未熟 技術 또는 教育받지 못한 勞動人口가 大部分이므로 失業者가 많으며, 就業 者라 하더라도 주로 生産性이 낮은 職種에 從事하는 것이 一般的이다. 이와 같은 狀況下에서는 保健「서비스」에 대한 支出增大가 經濟成長에 거의 도움을 주지 못하는데, 게다가 尙한 雇傭機會가 數的으로 制限되어 있고, 資本, 熟練技術 및 訓練不足으로 平均勞動生産性이 낮기 때문이다. 그러나 開發이 進行되는 過程에서는 雇傭機會가 增大되고, 資本量增加, 訓練增大 및 熟練技術普及等만 아니라 低生産性部門에서 高生産性部門으로 勞動力이 移動되어 勞動의 平均生産性이 上昇하게 된다. 이 段階에서는 保健「서비스」에 대한 支出增大가 國民들의 健康狀態를 改善시킨 것이므로 더 많은 勞動者에게 就業機會를 줄 수 있을 것이고, 雇傭人口의 生産性은 높은 水準을 維持하게 될 뿐만 아니라 나아가서 同生産性을 더

속 伸張되는 趨勢을 堅持하게 될 것이다.

여기에서 著者는 保健「서비스」에 대한 支出이 成長過程을 加速시키는 要因의 하나라고 하는 觀點에서 經濟發展의 勞動跳躍說(labor take-off theory)을 提唱하고자 하는바, 이같은 提議는

1. 實物資本이 長期的으로 增大됨에 따라서 投資의 生産增加에 대한 相對的 寄與度 減少,
2. 長期的으로 生産增加에 대한 勞動의 相對的 寄與度 增加,
3. 長期的으로 生産增加에 대한 保健「서비스」支出의 相對的 寄與度 增加 등 經驗的 分析結果에 의해서 支持될 수 있다고 생각한다.

前記한 세 方程式의 推定結果를 任意로 1962~74년에 局限시켜 보면(다른 時期를 택하여도 그 結果는 비슷함) 다음과 같이 된다.

$$\begin{aligned}
 (1') \log \text{GNP} &= 0.0871 + 0.1207 \log(\text{國內總固定投資}) \\
 &\quad (0.0675) \quad (2.4367) \\
 &+ 1.2247 \log(\text{勞動人口}) + 0.1634 \log(\text{民間의 保健費支出}) \\
 &\quad (4.4564) \quad (1.58) \\
 R^2 &= 0.99 \quad D.W. = 1.5503
 \end{aligned}$$

$$\begin{aligned}
 (2') \log(\text{GNP/人口}) &= 4.9816 + 0.1809 \log(\text{固定投資/人口}) \\
 &\quad (8.9174) \quad (3.6758) \\
 &+ 1.0834 \log(\text{勞動人口/人口}) + 0.2202 \log(\text{民間의 保健費支出/人口}) \\
 &\quad (2.8773) \quad (1.7515) \\
 R^2 &= 0.986 \quad D.W. = 1.2894
 \end{aligned}$$

$$\begin{aligned}
 (3') \log(\text{GNP/勞動人口}) &= 5.0278 + 0.2592 \log(\text{固定投資/GNP}) \\
 &\quad (16.3941) \quad (3.5323) \\
 &+ 0.5147 \log(\text{民間의 保健費支出/勞動人口}) \\
 &\quad (4.2196) \\
 R^2 &= 0.9186 \quad D.W. = 1.3967
 \end{aligned}$$

이들 方程式에서 使用된 諸變數는 앞의 (1)~(3) 方程式에서 使用된 諸變數와 同一하며, 方程式 (1')의 절편係數와 民間의 保健費支出係數 및 方程式 (2')의 (民間의 保健費支出/人口) 係數를 除外하면 모든 係數가 0.05 水準에서 統計的으로 有意性이 있으며, 0.10 水準에서는 全係數가 有意性

이 있는 것으로 검증되었다. 다만 觀察時期가 前3년 短縮되어 2년의 資料的으로 變어지고 있어 係數의 證明力이 低下되고 있다. 總言之로 上述의 結果를 得은 以上의 檢證方法은 大略的인 것일때 더욱 適切하고 精巧한 檢證方法의 探擧에는 더 많은 時間이 必要하다.

차로 다른 두 時期를 對象으로 計測한 各 方程式組을 比較하기 爲하 各 係數의 係數를 平均에 依기로 算出(表 1-1 참조).

여기서 各係數의 標本은 上述한 資料의 長期的으로 經濟成長에 對한 效果面에서 投資의 相對的 重要性을 減少하고 있는데 反해 勞力 및 保健(사어비스)에 對한 支出의 相對的 重要性을 增加하고 있다는 見解와 一致하고 있음을 알 수 있다.

表 1-1 係數의 比較

項 目	(1) < (3) : 1953~71	(1)' < (3)' : 1962~71
log GNP:		
(國內總定投資)	0.1602	0.1207
(勞動人口)	1.1541	1.2247
(民間의 保健費支出)	0.1175	0.1634
log(GNP) 人口:		
(國內總定投資/人口)	0.2211	0.1509
(勞動人口/人口)	0.8949	1.0834
(民間의 保健費支出/人口)	0.1859	0.2202
log(GNP/勞動人口):		
(國內總定投資/GNP)	0.2814	0.2592
(民間의 保健費支出/勞動人口)	0.2860	0.5147

著者の 見解으로는 方程式 (3) 및 (3)'의 勞動配置說을 가장 自然하고도 合理的에 表現하고 있다고 보아지며, (3)'의 民間의 保健費支出/勞動人口 係數가 (3)의 同係數보다 約히 2배나 높게 나타나고 있어 有意性이 극히 높으며, 따라서 이 點은 尙히 注意가 考應되어야 할 것이다.

지금까지의 試述은 尙舊 試驗的 分析의 結果에 不遜한 것이나 重要한 意 義를 內包하고 있다고 생각된다. 韓國은 現今 經濟發展 高度成長을 經驗

하고 있고, 따라서 韓國政府는 앞으로 持續的인 高率成長을 追求하면서, 同時에 지금까지의 成長의 果實을 社會開發로서 國民들에게 폭넓게 配分하려고 試圖하고 있다. 應說的인 것 같지만 保健費支出은 經濟成長에 阻礙이 되기보다는 오히려 社會 및 經濟發展에 尙正적인 效果를 가져온다고 言 수 있다. 制限된 證據를 통해 적이지만, 韓國은 從前 社會開發을 위한 支出만으로 看做이었던 保健「케어비즈」 支出의 過去에 期待되고 實現된 程度보다 더욱 큰 效果를 經濟成長에 미칠 수 있는 時期에 到達했다고 言 수 있다.

命題 4. 韓國政府는 長期的으로 점점 더 많은 量의 資源을 保健部門에 投入하게 될 것이나 醫療는 總體的 保健「케어비즈」 組合 (the aggregate mix of health services) 과 關聯하여 施惠되어야 할 것이다.

保健이란 매우 政治的인 分野이다. 사람들은 保健을 神聖한 것으로, 그리고 特權이 아니라 權利의 하나로 看做하고 있다. 最近 朴宗模博士의 研究 調査에서 밝혀진 것처럼 世界的으로 모아 1人當 保健費支出과 保健指標上 에서 反映되고 있는 國家的 保健必要度와는 甚 關聯性이 없는 것 같다. 그 런데 各國이 保健分野에 投入하는 資源規模는 各國의 特徵的인 政治的 過程과 制度를 통하여 밝혀지는 文化的 信條, 態度 및 自我熱望에 의해서 決定되는 것이다.

그러나 두 가지의 分明한 關聯性을 볼 수 있는데 어떤 經濟水準을 지리 면 1人當 GNP水準이 높으면 높을수록 中央政府가 保健「케어비즈」에 投入하는 支出水準의 比重은 올라간다는 傾向의 GNP에 대한 保健「케어비즈」 關聯支出 水準이 提高된다는 點이다.

물론 例外的인 경우도 있을 수 있겠지만 이들 關聯性은 一般的으로 수 充分이고 있는데 커기에는 몇가지 理由가 있다. 一, 高 生産性이 높은 經濟活動 에 從事하게 됨에 따라서 사람들은 健康狀態와 높은 生産性의 維持를 願할 것이므로 保健「케어비즈」 關聯支出은 其 正當性이 認定될 수 있을 것이다. 또한 富裕層은 그들의 生活樣態 및 類型이 바뀌어 지면서 緊張, 過勞 및 肥

滿의 可能性이 높아지며, 結果, 病氣 및 疲勞해악기 費用 消費와 作業價를 함께 부담하는 傾向이 있게 된다. 結局 人들은 스스로의 健康狀態에 대한 苦痛, 苦勞와 不確定性을 보다 더 더 氣分轉換을 위한 것이 結果 的으로 健康을 回復하기 爲한 작업을 하려고 할 때 더 많은 돈을 쓰 려고 할 것이다.

그러하여 健康의 利用으로 건립 된 많은 量의 資源을 保健[케어]서비스 提供에 投資하게 된다면 初期段階에서의 投資는 保健[케어]서비스 體系의 開發을 차단 生學的인 方向으로 誘導하기 爲한 극히 選別的인 정책에서 할 것이다.

**補助命題 1:** 人間은 죽음을 피하지 못하여 生命을 有限하다. 醫藥은 生命을 延長시키려는 限域, 時期, 그리고 종종 죽음의 原因을 바꿈으로써 生 存期間을 延長한다.

**補助命題 2:** 疾病豫防을 위한 支出은 건강 發生과 疾病의 治療費보다 輕微(費)에 되어 있다. 많은 研究가 이 點을 明瞭히 指摘하였으나 保健費 支出中에 豫防[케어]서비스에 10%以上을 支出하는 國家는 극히 드물다.

**補助命題 3:** 全國民의 立場에서 볼 때 死亡의 경우가 死亡의 경우보다 是 社會적으로 더 큰 損失을 招來한다. 假使하면 非經濟的 考慮을 排除한 場合 不具는 當事者의 後餘生存期間 동안의 生産性과 生活維持費用을 喪失 全額만큼 社會的 損失을 인식하는 反面, 死亡은 當事者의 後餘生存期間 동안의 生産性에서 生活維持費用을 差減한 金額만큼 社會的 損失을 招來 하지 않는다.

**補助命題 4:** 疾病의 豫防 및 治療는 消費와 生産面에서 外部經濟補用이 라는 價值的 利點이 있으나 經濟成長에 對한 選別的인 效果는 준다.

**補助命題 5:** 保健[케어]서비스는 그 利用可能 時間가 重要하다. 이 點이 明 瞭하다면 括弧( )中에서 20 以前에 保健[케어]서비스 利用可能性을 喪失한 것이 證明된 것이다.

**補助命題 6:** 死亡率의 減少는 慢性疾病을 頻發케 한다. 만약 어떤 疾病이 退治되어 앞으로는 아무도 이 疾病으로 死亡하지 않을 것이라면 다른 疾病으로 인한 死亡者가 分明히 늘어난 것이다. 왜냐하면 사람은 죽음을 免할 수 없으며 따라서 한 個人의 죽음 確率은 1이기 때문이다. 計劃樹立과 資源配分과 關聯, 이 命題는 國民들의 健康狀態가 長期的으로 增進됨에 따라서 國民들이 老齡化한다는 點에서 重要性을 띠고 있다. 그리하여 더 많은 사람들이 治療費가 甚廉 甚廉 慢性疾病의 危險에 處하게 될 것이다. 이와 같은 傾向은 GNP 增大 및 이에 수반하는 國民들의 平均年齡增加와 더불어 왜 더 많은 比率의 資源을 保健醫療事業에 投入해야 하는가 하는 課題를 部分的으로 說明해 주고 있는바 요컨대 保健分野에서의 成功은 값비싼 것이라고 할 수 있겠다.

**命題 5:** 現計劃案은 現在의 人口推移를 反映하지 못하고 있다.

韓國은 지금 社會 및 人口面에서 急速한 變化를 同律하고 있다. 특히 서울을 비롯한 大都市人口는 每年 빠른 速度로 增加되고 있으며 中規模의 市·邑의 人口 또한 急激히 늘어나는 趨勢에 있는데, 人口增加率의 抑制 특히 首都서울의 人口集中防止에는 相當한 關心을 기울이면서도 餘他の 大都市나 中規模의 市·邑의 人口成長을 阻止하기 위해서 어떤 措置가 취해질지는 疑問이다.

**補助命題 1:** 韓國에 있어서 現在 일어나고 있는 人口의 急速한 移動은 韓國이 農業社會로부터 점차 都市 및 工業化된 社會로 轉換하는 緊要한 要因이 되고 있다.

이와 같은 人口의 移動現象은 全面的이며 社會, 經濟發展의 必然的인 結果라고 보여진다. 現保健計劃案에서는 全體的인 都市 및 農村人口에 대한 豫測作業을 包含하고 있으나 地域別 人口推計作業은 包含되어 있지 않은 것 같다. 그런데 특히 資本支出과 關聯, 投入資本이 充分히 活用되고 있는지 與否를 말하기 위해서는 投資期間에 걸쳐 利用度를 推算하는 것은

매우 중요한 일이라 생각된다. 利用度와 關聯하여 既存病院 및 그 程度는 中 間的 規模의 保健所 및 保健支所들이 現在 過少利用되고 있다는 現象 또한 證據가 多數 提示되고 있는데, 一例로 農村의 病院利用率 hospital occupancy rate 은 50% 未滿으로 推定되고 있다.

補助命題 2 : 이 같은 狀況下에서 追加的 資源을 保健 서비스 資本投資에 投入하려고 意圖하는 것을 지역의 實情과 맞은 處非이다.

지역과 各 情狀을 充分히 살펴보고 또한 慎重한 研究·檢討의 結果, 그 重要性 need 이 充分히 認定되고 또한 効率的으로 利用될 수 있다고 判斷되는 경우를 除外하고는 病院 新築을 一時的으로 中斷시키지 않는 것이다. 이는 人口가 農村에서 都市地域으로 急速히 移轉되고 있는 環境에 對하여 充分히 対応할 事가 あり라고 생각된다. 지역 地域에 對한 人口減少로 인한 人口의 利用度가 더욱 낮아지게 될 것이므로 現在 및 將來에 있을 人口密度가 높은 地域을 對象으로 適切한 交通 및 通信網의 設置와 함께 保健醫療 서비스 의 普及의 推進 및 後進 道路의 開發에 보다 큰 關心을 기울여야 할 것이다.

命題 6 : 現計劃案에서는 既存 行政單位에 따른 保健資源의 地域別 割當을 지나치게 強調하고 있는 것 같다. 保健 서비스 는 地域別 水準에서 즉 下層으로부터 組織化되어야 할 것이다.

曾國政은 아마도 未滿組織을 實現시키 하기 위한 是 途 中에 各 郡·而 郡位로 保健資源의 割當을 지나치게 強調하고 있다고 생각된다. 政府關係者들은 行政單位 設計에 沒頭하는 任務이 있는 行政單位 方式은 行政必要 量 充足面에 對하여 短點이 있을 수 있는 것이므로 또한 方式이 러기 쉽다. 保健醫療體系는 下層으로부터 組織되어야 하는데, 假나하면 國民들의 保健 서비스를 消費하는 것이 政府가 消費하는 것은 아니다 爲 此이다. 따라서 現在 居民들이 居住하고 있는 地域뿐만 아니라 將來 居民들이 居住 하게 될 것으로 豫想되는 地域 또한 考慮되어야 할 것이며, 行政單位보다

는 居住地單位가 保健「서비스」利用可能性을 決定하는 基礎가 되어야 할 것이다. 왜냐하면 住民들은 그들의 經濟的 社會的 및 其他의 關心事를 가장 충족할 수 있는 地域에서 居住하기 위하여 政府의 行政境界線을 마음대로 넘나들기 때문이다.

將來 人口를 推定한다는 것은 至難한 일임에 틀림없으나 人口의 移動이 全面的이고 꽤 正規的으로 행해지고 있어 어느 程度 豫測이 可能하다고 보여진다.

**補助命題 1:** 各面, 郡 등 行政單位別로 醫療「서비스 센터」의 設置可能性을 決定하려고 努力하기보다는 經濟的인 觀點에서 보아, 行政單位의 相關없이 住民들이 多數 居住하고 있고 人口가 增加하는 趨勢에 있어 그 地方의 交易 및 商業中心地가 되고 있는 中小規模의 邑 및 小都市들을 考慮對象으로 삼아야 할 것이다.

이들 邑 및 市의 醫療「센터」가 더 큰 規模의 綜合保健「서비스 센터」와 連結되는 後送網과 小規模마을과 隔離된 地域에 居住하고 있는 農民들과 住民들에게도 「서비스」를 提供할 수 있도록 遠隔醫療網(outreach links)을 具備하여 集團診療所(group clinics) 形態로 組織된다면 醫師들을 이 地域으로 誘致할 수 있을 것이다. 그러므로 小規模마을과 隔離地域의 人口는 減少하고 醫師가 常住하는 中規模邑 및 小都市의 人口는 增加하여 自立할 수 있게 될 것이다.

多數의 地域保健「프로그램」을 통해 小마을 住民들에게 遠隔醫療를 提供함에 있어 地域資源의 重要性이 確然이 드러나고 있는데, 어머니會, 마을保健委員 등이 醫療「서비스」의 供給者와 利用者間의 紐帶를 맺어 주고 維持에 나감에 있어 決定的인 役割을 擔當하게 될 것이다.

**補助命題 2:** 後送過程과 關聯, 가장 重要하다고 생각되며 또한 첫번째 段階는 처음부터 이를 保健「서비스」體系에 包含시키는 일이며, 이 段階는 「遠隔醫療」를 必要로 한다.

遠隔醫療는 특히 急速하고 全面的인 人口移動 現象에 비추어 極히 重要

인 인공위생 시설이다. 이러한 배경 속에서 保健施設의 分散, 普及에 關하여 利用度가 減少된 地域의 一般市民의 生活負擔을 均等하게 分散시키는 것은 効率的인 方法이 되게 考할지, 長期的으로 生活條件을 提高시키는 目的에서 遠隔區域間을 간헐한 交通 設備의 充實, 交通의 便利化와 交通의 進展推移가 발달하여 交通 設備의 充實이 容易한 大都會區域에 集中시켜 普及하도록 해야 할 것이다. 効率的인 綜合醫院 設置에 對해서는 中規模 都市에 設置할 수 있으며, 同様に 遠隔區域間을 여러 개의 機關으로 設置할 수 있는데 이같이하면 妥善과 같은 方法을 選擇할 수 있다.

- (1) 醫院은 小規模의 마을 및 遠隔區域으로 分散中, 一處부터 交通 利用 容易하게 또는 容易하면 捷徑으로 交通設備한다.
- (2) 移動醫院車가 定期的으로 必要적으로 僻地地域을 巡行한다.
- (3) 保健委員, 마을補助員 등이 移動醫院에 對하여 서비스 單位의 生活을 維持할 수 있는 充分한 信任設備을 갖추어 各區域에 配置된다.

命題 7: 政府는 醫療의 直接供給方案에 對한 代案의 하나로 民間部門이 더욱 責任있게 맡은바 役을 擔當할 수 있도록 誘導하는 民間部門 規制方案을 講究해야 할 것이다.

民間保健部門이 國家의 保健目的의 達成과 相應하는 力荷重을 背負하여 負擔하면서 國民에게 서비스 供給에 貢獻할 경우, 政府가 直接 또는 간접 서비스를 供給하지 提供할 수 있다는 생각은 合理的인 생각이라고 되어 있다.

이와 關係해서 民間部門의 國家目的의 達成과 相應하는 力荷重을 背負할 수 있다는 것 外에 其他 負擔 負擔을 擔當한다면 政府가 資金 支援, 規制 補佐 또는 必要生計的인 서비스의 直接供給 등으로 民間部門에 介入할 必要는 없는 것이다.

補助命題 1: 各국의 保健 政策의 發展을 歷史的으로 考察해 보면 各국이 分明한 教訓을 學을 수 있는데 이는 民間保健과 各種 保健 서비스

를 올바르게 提供하고, 가장 効率的 方法으로 「서비스」를 生産하며 人口의 全階層에 걸쳐 「서비스」를 適切하게 配分하는 問題를 제대로 履行하지 못하고 있다는 點이다.

保健이란 商品은 公共財의 性格을 지니고 있어 다른 經濟財와는 크게 다른데, 그밖에도 消費者의 無知程度가 극히 높으며, 生産 및 消費가 同一時點 및 同一場所에서 이루어지도록 要求되는 特性이 있어 貯藏할 수도 移轉할 수도 없으며, 흔히 非利潤極大化條件에서 生産된다는 點을 特徵的인 差異로 들 수 있다. 그러므로 保健의 경우 모든 社會階層을 對象으로 形態, 數目 또는 場所面에서 資源의 適正配分이란 課題를 傳統的인 市場에서의 需要(demand) 및 供給機能에 맡길 수는 없는 것이다. 여기서 保健財와 餘他の 財貨 및 用役間의 가장 두드러진 差異點은 어떤 保健「서비스」가 어떤 質의 水準으로 必要한지, 그 代案이 무엇이며 어디서 구할 수 있는지, 그리고 費用은 얼마인지 등 消費者가 「서비스」生産에 대해 無知하다는 點이다. 그 結果 資源配分은 消費者보다는 供給者에 의해 주로 決定되게 된다. 요컨대 民間保健部門에서는 消費者 主權이 아닌 供給者 主權이 支配하는 것이다.

**補助命題 2:** 根本적으로 專門技術者인 供給者가 意思決定을 내릴 경우 專門技術的 命令 그리고 專門職種の 開發과 個人的 熱望과 相應하는 其他의 命令이 經濟的인 側面을 壓倒하게 된다. 따라서 특히 提供된 「서비스」類型과 質에 관한 決定을 包含하는 實際의 資源配分決定은 情報을 갖고 있는 消費者나 客觀的 分析者보다는 醫師와 其他의 保健專門家들이 느끼는 優先順位와 相應하게 된다.

保健關聯 專門的 技術的 命令은 內因性疾病(esoteric illness)의 集中的 急性醫療에 焦點이 놓여지는 것 같다. 그런데 그와 같은 疾病은 高度의 熟練技術과 專門的인 人力 및 施設을 活用하는 精巧한 治療를 要한다. 大部分의 國家는 醫療「서비스」提供을 위한 주로 靜態的인 手段으로서 醫師—病院關係를 強調하는 西歐型의 高度로 資本集約的인 人的 및 物的 兩面에서인 保健醫療傳達體系로 移行하는 傾向이 있는데 따라서 疾病豫防은 無



어 11%에 不過한 政府의 保健支出比重보다 훨씬 크다. 비록 앞으로 政府의 保健費支出增加率이 民間部門의 그것보다 훨씬 빠른 速度로 增大된다 하더라도 여전히 크게 劣勢에 놓이게 된 것이므로 政府가 모든 保健事業을 도맡아 해야 할 아무런 理由가 없는 것이다. 그 權限과 責任에 비추어 政府는 成長, 能率, 衡平이라는 國家目的을 達成하기 위해서 民間保健部門을 規制할 수 있고 또 해야만 할 것인바 다음과 같은 規制措置를 생각할 수 있겠다. 즉,

(1) 다만 充分한 必要性和 効率的 利用이 可能하다는 確證이 있는 경우에 대해서 病院 및 醫院新築을 許容하는 必要性認定에 관한 立法("certificate of need" legislation)을 위한 行政指針이 마련될 때까지 새로운 病院建築에 대한 一時的 中止令을 宣布하고,

(2) 다만 充分한 必要性和 効率的 利用이 可能하다는 確證이 있는 경우에 대해서 서울과 釜山에서의 醫院開業을 許容하는 開業權(right to practice)에 관한 行政指針이 마련될 때까지 이들 地域에서의 새로운 醫院開業에 대한 一時的 中止令을 宣布하며,

(3) 韓國醫師의 海外流出에 대한 一時的 中止令制定 및 「인턴」과 「레지던트」過程에 있지 않은 醫師들에 대해 召換策을 講究하는 措置 등을 할 수 있다.

물론 이들 規制方案은 制度改革이 아니므로, 이와 同時에 政府는 現存施設 및 醫師들의 利用度提高方案과 醫療供給이 극히 不振한 地域에 대한 漸進的 保健醫療擴大方案을 마련하여 自體의 保健醫療傳達體系의 改革에 着手해야 할 것이다. 一端 自體制度의 合理的 基礎를 마련한다면 政府는 醫學教育의 教科過程, 追加立法 및 選別的 支援手段 등의 改定措置를 통하여 民間部門의 改革에 着手할 수 있을 것이다.

命題 8: 政府는 大規模 健康保險 프로그램 (需要增大)을 實施하기 以前에 保健產業 (供給增大)을 改革해야 할 것이다.

補助命題 1: 앞에서 提議한 暫定規制以上の 保健醫療制度改革을 위한 第 11次所措置는 政府의 資源活用과 關係, 能率提高로 政府의 保健醫療傳達的 費用을 改革하는 것이다.

現計劃案에서 보여지는 가장 큰 缺陷은 지역 保健部門에 投入된 資源의 果的인 利用에 關係하는 關心을 充分 養育하지 實情 未 滿은 資源을 保健「서비스」生産에 投入하되 「서비스」擴張을 追及하지 實情 未 滿인 點이 있다.

政府의 現行 保健醫療傳達體系의 核心問題는 病院, 保健所 및 保健支所의 利用率이 낮은 것이다. 大體前年 한 地方의 病院利用率은 50% 未滿이며 保健所 또는 保健支所의 경우도 施設規模에 對해 相當 減少利用 되고 있다. 但라기 이와 같은 條件下에서 더욱 醫院施設이 많은 地域에서 조차 새로운 病院의 建築과 保健所의 新設을 正當化한다는 點은 不可能하 지는 點이 하나라도 餘餘인 點이다. 此外하면 豫想되는 潛在的 利用度의 點에 相當 健康狀態增進惠得의 必要한 資金支出을 正當化하기에는 더욱도 難을 것이기 때문이다.

農村地域에 있어서 保健施設이 減少利用되는 理由는 우선 政府施設에 의 供給되는 「서비스」의 質이 낮고, 施設도 本率以下에서 住民들이 利用 하 지 않기 因爲라고 考되나, 農村住民들의 所得水準이 낮아 該 施設을 利用 할 수 있는 經濟的 餘裕가 없기 爲인이라는 見解가 있는데, 이 點을 重要 한 理由라고 考되나 이 見解를 뒷받침할 爲한 關係研究가 實情 未 滿인 點이 있다. 著者의 見解으로는 農村과 都市地域間의 保健「서비스」 利用 類型의 다른 點에는 보다 根本的인 問題가 있을 것으로 考된다.

補助命題 2: 政府가 國의 革新的이 라고 考는 保健「서비스」의 直接提供 方案을 採擇할 場合 政府制度는 國의 西設的 價值觀에 立脚하여 消費行爲

를 하고 醫療「서비스」를 利用하는 富裕하고 高等教育을 받은 都市住民들  
을 主對象으로 設立된 民間保健醫療體系와 適合하는 樣相을 띠게 된다.

거의 모든 國家의 경우, 政府가 直接 保健「서비스」를 供給하는 理由는  
民間保健醫療傳達體系가 滿足할 만한 機能을 發揮하지 못하기 때문인데, 만  
약 政府가 民間部門과 適合하게 되면 마찬가지로 所期의 成果를 거둘 수  
없게 될 것이다.

요컨대 이 경우 政府는 民間部門과 마찬가지로 國民들이 必要하다고 생  
각지 않는 各種「서비스」를 提供한다든가 지나치게 비싼 費用으로 「서어  
비스」를 生産하거나 또는 「서어비스」의 適正配分에 失敗하게 될 것이다.

本質적으로 保健體系나 産業 또는 그 一部分의 改革이란 微視的인 問題의 性  
격을 지니고 있으므로 여기서 詳說하기에는 너무 廣範圍하나 巨視的 側面  
에서 몇가지 檢討해 보고자 한다. 우선 保健施設이 相當히 過少利用되고  
있는 點에 비추어 全國的인 規模의 健康保險制度 推進으로 促進된 需要增  
加를 隨伴하는 價格上昇의 幅은 그다지 크지 않을 것으로 생각된다. 美國  
의 경우 「메디케어」와 「메디케이드」(Medicare and Medicaid)의 導入으로  
需要增加와 함께 醫療價格이 急上昇하여 施設投資增大과 醫師所得增大을  
가지왔다.

保健專門家와 國家保健目的의 立場에서 個人的 熱望과 動機 사이의 乖離  
는 다시 한번 強調되어야 할 것이며, 選別的 規制야말로 國家保健醫療目  
的을 達成기 위한 保健醫療體系의 改革에 必須的이라는 點 또한 強調되어  
야 할 것이다.

第 2 部

韓國에 있어서 保健計劃 및 政策樹立에  
관한 微視經濟的 考察

## 第1章 序 言

第1部에서는 保健計劃 및 政策樹立에 관한 巨視經濟的 考察을 한 바 있다. 第2部에서는 保健計劃에서 提示되고 있는 政策과 關聯하여 韓國에 있어서 保健部門의 諸問題點을 選別하여 보다 具體的으로 다루고자 한다. 이와 더불어 計劃準備期間中이나 끝난 다음 提起된 諸代案에 대해서도 一般的인 檢討를 행하고자 한다.

## 第2章 微視的 考察

### 第1節 序 論

一組의 生産目標가 주어진다면 거기에는 最小費用 또는 最大經濟效率로 目標生産物을 生産하는 작은 範圍에 限(또는 獨特한) 一組의 生産方法이 存在한다. 使用投入物種類, 投入物結合方法 및 그 結合體制 등 適正生産技術은 어떤 「서비스」組合을 生産할 것인가에 달려 있다. 一旦 適正 「서비스」組合 및 生産方法이 決定된다면 生産된 「서비스」를 購買하려는 消費者에게 配分하는 가장 效率的인 方法을 決定할 수 있게 된다.

大部分의 경우 이들 機能은 市場의 힘에 의해서 수행된다. 그러나 第1部에서 說明한 바와 같이 經濟財로서의 保健「서비스」가 갖는 諸特性(公共財, 消費者無知, 非利潤生産 등)으로 保健部門의 경우 이들 機能을 市場에 맡길 수가 없는 것이다. 말하자면 供給者主權이 지배하는 狀況이며, 供給者의 職業的, 個人的 目標과 保健「서비스」의 消費者로 構成된 사회의 目標 사이에는 相當한 乖離가 있기 때문에 基本課業의 成就에는 保健 專門家뿐만 아니라 非保健 專門家들이 共同으로 參與하는 계획수립 및 방향설정이 要求되는 것이다.

앞으로는 政府保健醫療傳達體系, 醫學敎育 및 保健醫療의 配分面에서 改革을 위한 提案과 關聯, 保健産業이 遂行해야 할 세 가지 基本課題 즉,

- (1) 어떤 「서비스」를 生産할 것인가
- (2) 어떻게 「서비스」를 生産할 것인가

(3) 生産된 「서어비스」는 어떻게 消費者에게 配分된 것인가 하는 各主  
題別로 說明을 展開할 것이다.

## 第2節 「서어비스」의 生産

**命題 1:** 都市富裕層과 農村 및 都市貧民層간의 여러가지 差異에 비추어 各人口  
集團別로 각기 다른 一組의 保健「서어비스」가 供給되어야 할 것이다.

**補助命題 1:** 西歐型의 民間 및 政府保健醫療傳達體系가 提供하는 各種  
「서어비스」는 農村 및 都市貧民層보다는 西歐化되었고 高等教育을 받은  
都市住民들에게 더욱 適當하다.

西歐型의 民間 및 政府保健醫療傳達體系는 醫師—病院關係 中心의 醫療  
「서어비스」生産에 基礎를 두고 있다. 이들 體系는 症狀있는 疾病에 걸린  
患者들에게 主로 急性醫療인 2次 및 3次醫療「서어비스」를 提供하며, 단지  
少量의 豫防, 教育 및 健康增進「서어비스」를 供給할 뿐이다. 그런데 後者  
의 「서어비스」는 이미 그들의 一次的 保健醫療必要를 거의 充足시킨 都市  
富裕層에겐 별로 必要치 않다.

**補助命題 2:** 農村 및 都市貧民層은 都市富裕層에 비해 더 많은 一次醫  
療「서어비스」 및 豫防, 教育 그리고 健康增進「서어비스」를 必要로 한다.

農村地域의 年齡構造를 살펴보면 60歲以上の 高齡者와 15歲未滿의 어린  
이가 많은 人口分布를 보이고 있다. 1970年 現在 韓國의 人口는 農村人口  
對 都市人口의 比率이 51.6% : 48.4%로서 거의 半半씩이다. 都市 및 農村  
의 人口構成을 보면 먼저 都市의 경우 60歲以上 人口가 全人口의 1.48%  
에 不過한 反面, 農村의 경우 同比率은 6.7%나 되고 있으며, 15歲未滿의  
어린이 人口比率을 보더라도 都市는 38.3%, 農村은 45%로 나타나 農村  
人口의 特性을 드러내 주고 있다. 教育程度를 보면 都市의 文盲率은 4.9%  
에 不過한 데 비해 面과 邑의 경우는 各各 17.8%와 6.9%로 높게 나타

나고 있다. 한편 都市人口의 22%가 大學教育을 받았는데 반해 邑과 面의 경우 同比率은 各各 4.2%와 1.5%로 극히 낮다. 어린이와 老人層 및 未教育者는 가장 西歐化가 되어 있지 않고, 基本衛生, 環境統制 그리고 疾病의 感知를 包含하여 個人的 健康危險에 대한 知識面에서는 現代化와 가장 距離가 멀다.

어떤 人口集團들의 保健「서비스」利用類型上的 差異는 單純히 經濟狀態의 差異에 基因하는 것만은 아니고 그밖에도 教育, 價値觀, 營養, 衛生 그리고 年齡構造 및 生活樣式 등이 關聯된다. 요컨대 都市富裕層과 農村 및 都市貧民層의 差異는 各各의 社會, 經濟的 發展段階가 根本的으로 다름으로 해서 實際의 醫療必要와 느낌에서 오는 醫療必要의 差異를 나타내준다. 따라서 政府保健醫療傳達體系의 改革을 위해서는 供給하고자 하는 「서비스」類型的 內容 決定에 매우 진저한 努力이 傾注되어야 할 것이다.

**補助命題 3:** 韓國에 있어서 試驗的, 示範的 地域保健「프로그램」특히 江華島 및 巨濟島 地域의 事業이 提供하는 各種 「서비스」類型的을 檢討하여 政府保健醫療傳達體系가 供給할 「서비스」類型的과 結合시켜야 할 것이다.

現在 進行되고 있는 여러 地域保健事業中에서도 특히 江華島 및 巨濟島의 경우가 一次醫療「서비스」와 補助保健「서비스」面에서 農村貧民層의 必要를 가장 適切하게 充足시켜 주는 各種 「서비스」를 供給하기 위해 各별한 努力을 기울이고 있다는 印象을 받았다.

일단 提供될 一組의 適正「서비스」가 決定된다면 最小費用 또는 最大의 生産效率로 「서비스」를 生産하는 몇가지 生産技術을 생각할 수 있을 것이다.

### 第3節 「서어비스」의 生産方法

**命題 2:** 醫師를 主投入要因으로 하는 健康「서어비스」生産過程은 農村地域에서는 妥當치 않으며 必要치도 않다.

**補助命題 1:** 農村貧民層의 경우는 都市富裕層의 경우와는 달리 保健「서어비스」生産에 있어 醫師가 本源的 投入要因으로서 그렇게 必要한 것은 아니다.

이는 農村地域에는 醫師가 必要치 않다는 意味가 아니라 農村貧民層이 가장 必要로 하는 保健「서어비스」인 1次醫療「서어비스」, 保健教育, 個人的 攝生, 衛生 및 健康增進「서어비스」 등의 供給에 있어서 醫師의 役割은 都市住民들에게 各種「서어비스」를 提供할 경우에 비해 그만큼 크지 않다는 意味이다. 農村地域에서의 醫師의 役割은 醫療「팀」의 主役을 擔當하는 일인데 이 경우 醫師는 熟練技術을 要하는 醫療「서어비스」의 提供을 위해 一部 時間을 留保해 두고 大部分의 時間을 補助人力의 活動을 指導, 監督 및 運用하고 支援하는 데 使用할 것이다.

美國에서의 많은 研究結果에 의하면 現在 醫師가 提供하는 醫療「서어비스」의 극히 一部分이 專門의 技術을 要한 뿐이며, 實際에 있어서도 醫師들이 원하는 경우 醫師의 監督下에 補助人力이 醫師代役을 擔當했음을 밝혀 주고 있다. 따라서 問題는 醫師 아닌 者가 自信있게 醫療行爲를 遂行할 수 있는가 하는 것이 아니라 補助人力이 각 경우마다 醫師의 特別한 委任없이 醫療行爲를 遂行할 권리를 가져야 하느냐 하는 것이다.

**補助命題 2:** 醫師들은 傳統的으로 자기들이 遂行해온 醫療過程을 補助人力에게 許容하게 되면 診療의 質이 떨어지게 된다고 主張하나 集團으로서의 醫師들은 患者集團이 아닌 個人患者에 專念하도록 訓練되고 있다. 그

結果 極小數의 例外를 除外하면 醫師들은 集團的인 社會的 意識이나 見解를 거의 갖고 있지 않은 것 같다. 醫療質低下 主張에 대한 著者의 答辯은 만약 「서어비스」를 供給할 醫師가 없기 때문에 必要한 醫療를 받지 못하는 모든 患者에게 零을 더한다 해도 提供된 醫療의 平均水準은 總體的으로 받아들여질 수 없는 程度이다 라는 것이다.

이와 같은 反論은 先·後進國을 莫論하고 眞實이며, 醫療의 質의水準 問題는 考慮對象으로 삼고 있는 各人口集團의 總體的 保健必要와 關聯하여 各「서어비스」別로 考慮되어야 할 것이다. 現在 거의 醫療「서어비스」가 普及되지 않고 있는 大部分의 韓國農村人口의 경우, 醫療의 質은 거의 零에 가까운데 이에 대한 醫師의 答辯은 더 많은 醫師를 輩出하여 이들을 農村地域에 誘致하자는 것이다.

**補助命題 3:** 充分한 數의 醫師를 農村에 誘致하여 現在 都市地域에서 行해지고 있는 것과 같거나 비슷한 類型의 農村保健醫療傳達體系를 만드는 것은 妥當하지 못하다.

現與件下에서는 強力한 強制措置가 取해지지 않는 한 이러한 方法의 成功은 거의 不可能하다고 보여진다. 美國의 경우 오랫동안 醫師의 農村誘致를 위해 巨額의 資金を 投入하여 病院建設, 補助金支給 등 여러가지 方法을 活用해 보았고, 제법 規模가 큰 마을에다 醫院을 짓고 5萬弗以上の 年俸을 保障하는 등 各種誘引策을 써 보았으나 醫師들은 都市居住를 希冀했기 때문에 그 施設들은 점차 쓸모없게 되었다. 요컨대, 全世界的으로 農村地域에 대한 醫師의 供給은 매우 非彈力的인 것이다.

美國에서의 問題는 資質있는 學生들에게조차 醫師의 質을 높인다는 名分下에 醫科大學 入學을 拒否함으로써 醫師의 供給이 制限되고 있다는 點과 醫學敎育의 收益率(the rate of return)이 他專門職種 즉 辯護士, 大學敎授 등의 敎育投資收益率을 적어도 20~30% 程度上 廻한다는 點 등이다.

韓國의 경우에도 醫師의 海外流出로 國內에서 奉仕하는 醫師의 供給이 制限되고 있는데 이러한 流出은 海外에 나간 醫師들의 收入이 國內醫師보

다 많기 때문에 海外流出醫師들에게는 確實히 利得이 있다고 보겠다.

韓國에 있어서 이와 같은 醫師의 海外流出政策이 가져다준 社會的 費用負擔은 美國의 경우보다 더 클 것 같은데, 美國의 경우 醫科大學을 新設하지 않고도 醫科大學 定員制限措置가 緩和된다면 1966年度에 있어서 醫師數는 實際보다 약 15~20% 많아졌을 것으로 推計되고 있는 데 비해 韓國의 경우, 最近 資料에 의하면 約 30%의 國內 醫大卒業醫師가 外國으로 流出되고 있음이 밝혀지고 있다.

醫師들의 辯을 들어보면 外國의 醫科大學이나 病院에 나가 進歩된 訓練을 받을 必要가 있다는 見地에서 醫師의 海外流出을 正當化하고 있으나 이와 같은 主張은 그 醫師들이 進歩된 訓練을 받고 난 다음 歸國할 경우, 그리고 많은 다른 나라와 마찬가지로 韓國이 이미 너무 많은 專門醫로 均衡을 이루지 못하는 實情에 있는 狀況이 아닐 경우라면 받아들여질 수 있을 것이다. 專門醫는 一般醫와는 달리 그들의 專門的 醫療施術을 위해 必要한 精巧한 設備, 訓練된 技術要員 및 後見相談者가 配置된 2次 및 3次 醫療「센터」附近의 大規模 農村地域에 配置될 것인데 그들이 원하는 程度의 充分한 所得을 올리자면 그들의 特殊熟練技術을 要하는 內因性疾病을 많이 다룰 수 있도록 居住人口가 많아야 될 것이다.

韓國은 大部分의 國家나 마찬가지로 보다 적은 數의 專門醫와 보다 많은 數의 1次醫療醫가 必要한데 1次醫療醫로 하여금 補助人力과 合力하여 現在 醫療惠澤을 제대로 받지 못하고 있는 農村 및 都市貧民層에 더 많은 醫療「서비스」를 提供할 수 있도록 配慮해야 할 것이다. 이와 關聯해서 後述하게 될 醫學教育政策의 修正이 必要하게 될 것이다.

**補助命題 4:** 어려운 일이지만 더 많은 數의 醫師를 農村地域에 誘致할 수 있도록 더 많은 努力이 傾注되어야 할 것이다.

醫師들이 農村地域에서 勤務하기를 꺼리는데는 몇 가지 理由가 있다. 우선 高所得保障策이 어떤 醫師들에게는 農村勤務을 위한 誘因이 될 수 있겠지만 農村地域에서의 醫師의 供給彈力性은 극히 非彈力的이므로 그러

한 施策은 效果的이 되지 못할 것이다. 따라서 이 施策을 위해 너무 많은 資金을 쓰지 않도록 慎重을 期해야 할 것이다. 물론 高所得保障策으로 一部 醫師나 또한 一部 宣教師의 熱意가 있는 醫師들을 農村地域으로 誘致할 수 있겠지만, 그러나 특히 後者の 경우, 醫科大學 入學時 그러한 性向을 基準으로 하여 學生을 選拔하는 것이 아닌 만큼 農村地域에서의 醫師의 供給은 매우 非彈力的인 수밖에 없는 것이다.

醫師들이 農村地域에 配置되기를 꺼리는 主原因은 醫師 아닌 專門職從事者들이 설혹 高所得이 保障된다 하더라도 農村에서는 그들의 熟練技術을 活用하지 않으려고 하는 것과 같은 理由에서 찾아볼 수 있고, 그밖에도 家庭問題, 子女教育, 親戚 및 親知나 專門家的 紐帶 등으로 인한 農村忌避現象을 생각할 수 있으며, 또한 이미 그들은 都市生活에 익숙해 있으며 專門職種의 경우 農村보다는 都市에서 보다 效果的으로 活動할 수 있다는 點 등을 들 수 있다. 醫師의 立場에서도 마찬가지로 이야기를 할 수 있겠는데, 都市地域에서의 所得水準은 充分한 程度이고, 都市生活의 諸利點 등이 그들을 都市에 머물게 하는 要因이 되고 있다. 要컨대 高等教育을 받았고 이미 都市生活에 익숙하며 將來에 대한 期待가 큰 專門家들로 하여금 都市生活을 清算하고 農村으로 移住시킨다는 것은 至難한 일일 것이다. 그러나 農村에서 태어나 거기서 자랐고 農村에서 教育받은 젊은이 중에서 醫師가 되려는 者를 選拔한다면 이야기는 달라질 것이다. 따라서 短期的으로는 다음과 같은 諸假定下에서 政策樹立이 推進되어야 할 것이다.

- (1) 短期間에는 많은 醫師들을 農村地域으로 誘致할 수 없을 것이다.
- (2) 醫師들을 小邑보다는 앞으로 成長展望이 確實한 中規模 邑이나 都市로 誘致하는 것이 더욱 容易한 것이다.
- (3) 中規模 邑이나 市 以外の 地域에 있어서 醫療「서비스」提供은 補助人力에 크게 依存하여야 할 것인바, 이들은 醫師의 指導, 監督, 協力 및 支援을 받게 될 것이다.
- (4) 中規模 都市와 邑은 農村地域과 連結되는 補助人力이 擔當할 遠隔 醫療網을 가진 醫師 後送「센터」로서의 役割을 擔當할 것인데, 必要할 경우

醫師들은 自動車, 「스쿠터」 등으로 遠隔地域을 巡廻할 수 있다.

이들 方案들은 短期的으로 現與件을 改善시킬 것이나 人口의 移動趨勢로 말미암아 農村貧民層의 경우 醫療「서비스」에 대한 必要와 供給間에는 더욱 큰 乖離가 發生할 것으로 생각되는데 이 問題는 醫學教育制度上의 改善를 通하여 緩和될 수 있을 것이다.

**命題 3: 保健傳達體系의 窮極的인 長期改革을 위해서는 醫學教育政策의 相當한 改善이 要求된다.**

**補助命題 1: 政府는 醫大學生中 專門醫 志望者에 대한 許容比率에 「쿼터」를 設定해야 할 것이다.**

保健專門家들은 經濟라는 面보다는 效果(effectiveness)를 重視하는 傾向이 있는데 이는 특히 個人「서비스」職 従事者, 이들에면 教育者, 政府 官吏 및 辯護士 등의 경우, 效果面에 執着하는 特性에 있으며, 一般的으로 專門家들은 費用面은 생각지 않고 可能한 한 最高級 「서비스」를 生産하려는 欲求에 사로잡혀 있다. 專門家들의 活動 內容이 그 性質上 점점 技術的인 傾向을 띠게 됨에 따라서 그들은 그들의 成果에 대해서 一般人들의 判斷에는 아랑곳 없이 그 方面 權威者들의 評價에만 귀를 기울이게 되는 것이다.

따라서 그들은 가장 어렵고 가장 復雜한 課業을 遂行하고 그것을 가르칠 수 있어야 威信이 서고, 滿足感 내지 自負心을 느낄 수 있을 것이므로 醫科大學 教育의 경우에게도 內因性疾病 發見 및 治療, 處置 등이 強調되고 있으며, 따라서 醫大學生들의 專門化傾向이 두드러지고 있다. 그러나 大部分의 國家와 마찬가지로 韓國은 1次醫療醫가 더 많이 必要하고 專門醫數는 줄이는 方向으로 努力해야 할 것인바, 이와 같은 專門化 物결에 制動을 걸지 않는다면 거의 모든 醫師가 專門醫를 志望할 것이다 (1967年 美國에서 實施된 한 調査에 의하면 醫大生의 98%가 專門醫를 志望했음). 이와 관련하여 專門醫들은 習得한 專門的 熟練技術을 效果的으로 實行할 機會가

적을 것이므로 農村地域으로의 醫師誘致가 더욱 어렵게 될 것이다.

**補助命題 2:** 醫科大學들은 醫學教育 年限의 短縮과 農村地域에서 일하려는 學生 選拔을 위한 方案을 講究해야 할 것이다.

美國의 많은 醫大教授들은 醫大教育의 期間이 너무 길 뿐만 아니라 實際의 醫療傳達에 별 必要가 없는 基礎自然科學 科目들을 豫科에서 많이 가르치고 있다고 主張하면서, 이는 今世紀로 넘어오면서 그 當時 醫大 教科課程에 基礎科學이 별로 包含되지 않았던 데서 오는 過剩反作用 때문이라고 밝히고 있다.

이와 더불어 醫師가 되어 社會에 奉仕하겠다는 강한 動機가 있는 많은 젊은이들이 學費負擔이 무겁고 教育期間이 길며, 基礎科學에 置重한 教科課程이 지루하고 어렵기 때문에 醫師가 되려는 뜻을 拋棄하는 경우가 많은 것이다.

美國의 경우 60年代末 및 70年代初에 더 많은 數의 一次醫療醫를 要請 받고 이에 對處하기 위해 家族醫(Family Practice)같은 새로운 專門科目을 開設한 바 있는데 이는 失敗作으로서 結果적으로 1次醫療醫 訓練期間 延長, 醫大教授陣 및 專門科目 擴充을 가져왔을 뿐, 얼마나 많은 數의 家族醫들이 農村地域에 配置될 것인가에 대해서는 疑問이며, 또한 이들은 높은 酬價를 要求할 것이므로 1次醫療專門醫의 「서어비스」를 가장 必要로 하는 사람들이 오히려 그들과 遊離되는 現象을 낳게 될 것이다.

**補助命題 3:** 醫大의 教科課程은 病院 아닌 醫療施術所에서 醫師들이 醫療「팀」의 主役을 擔當할 수 있도록 關係訓練過程을 包含시키는 方向으로 補完되어야 할 것이다.

現在 醫師들은 附屬病院을 包含하여 複雜하고 精巧한 機材가 設置된 醫療施設에서 複雜한 「서어비스」를 提供할 수 있도록 教育받고 있으며, 그 過程에서 特殊訓練을 받은 技術者와 補助人力으로 하여금 複雜한 診斷이나 治療(例하면 手術) 節次의 進行을 돕도록 活用하는 方法을 배우고 있는 反面, 非專門의 醫療施術所에서 醫師補助員, 看護員 및 臨床看護員 등에

얼마나 많은 그리고 어떤 種類의 「서어비스」를 委任할 수 있는가에 대해서는 별로 教育을 받지 못하고 있으며, 또한 責任을 委任받은 이들 補助人力의 成果에 대한 指導, 管理 및 評價를 어떻게 할 것인가에 대해서도 배우지 않고 있는 實情이다.

醫師들의 補助人力 活用度를 높이기 위한 한 가지 方途는 醫師와 補助人力들로 하여금 1次醫療의 基本核心 內容에 대해 함께 教育을 받게 하는 것인데 이 方法을 통해서만이 特定「서어비스」를 提供할 補助人力의 能力을 充分히 熟知할 수 있을 것이다.

**補助命題 4:** 醫科大學은 醫師補助員, 臨床看護員 및 其他의 中級水準의 訓練「프로그램」등 새로운 教科課程을 開發해야 할 것이며, 이를 위해 政府의 後援이 切實하게 要請된다.

醫師들은 그들 스스로 療醫「서어비스」를 提供하는 本源的이며 唯一한 人的要因이라고 看做하고 있으며, 補助人力은 醫療「서어비스」를 生産하는 醫師를 돕거나 健康增進 및 保健教育 등 追加的인 保健「서어비스」를 提供하는 者로 說明하고 있다. 그러나 醫師들이 行하고 있는 作業의 一部를 補助人力에게 委任할 때 비로소 더 많은 補助人力을 活用한 結果로 醫師의 生産性이 增大될 것이다.

美國에서의 標本調査에 의하면 醫師 1名當 지금보다 2倍 程度의 補助人力을 雇傭하는 편이 유익하며 이 경우 時間當 「서어비스」生産은 25% 增加할 것이라는 結論을 내리고 있다. 또 다른 調査研究에서는 醫大生 등을 觀測者로 세워 補助人力 活用に 따른 生産性效果를 推定하였던 바 補助人力을 活用할 경우 實際보다 49~74% 程度까지 生産性이 增加할 수 있을 것이라고 밝히고 있다.

덧붙여 醫師補助員, 臨床看護員 등은 醫師訓練에 必要한 時間의 一部만으로도 養成될 수 있으므로 費用—效果란 點에서 볼 때, 補助人力 活用 方案은 그 意義가 엄청난 것이라고 할 수 있겠다.

**補助命題 5:** 서울大學校 醫科大學의 地方分散 可能性이 檢討되어야 할

것이다.

韓國은 여러가지 理由로 中央集中的 現象이 두드러지며, 또한 傳統 및 慣習으로 보아 學問은 韓國社會에서 극히 큰 重要性을 지니고 있다고 보여지는바, 서울大學 出身이 社會生活에서 큰 利點을 지닌다는 것을 確然히 느낄 수 있을 程度이다.

美國의 경우 大部分의 醫大生 등은 자기가 태어난 州에서 醫學教育을 받고, 「인턴」 및 「레지던트」 訓練을 받고 있다고 多數의 研究調査가 밝히고 있다. 이와 關聯 「아이오와」州에서는 當初 醫大卒業生中 약 切半程度가 他州로 轉出해 가는 實情이었음에 비추어 卒業生 등을 確保하기 위한 對策으로 州立醫大의 定員을 늘리고 州出身醫師志望者에 대해 여러가지 特典(入學定員의 85%는 「아이오와」州 出身志願者에 配定하고, 卒業後 「아이오와」州에서 醫療에 從事하기로 約束한 學生에게는 無償으로 貸付를 해주는 등)을 提供하고, 農村地域指導醫師制度(rural area preceptorship programs) 등을 實施하여 改善을 試圖하였으나 별 效果가 없었는데, 60年代末 州當局이 地方分散策을 講究하여 地方病院에 대한 「인턴」 및 「레지던트」 「프로그램」을 擴充하였고 大學當局 또한 醫大의 核心教授들을 地方病院으로 巡廻시키 이들 地域에서의 教育「프로그램」을 開發·設置했으며, 地方醫師들을 臨床教授(clinical professor)로 任命하여 再教育을 받게 하였고, 몇 개의 地方病院을 選定하여 醫大의 核心教授와 臨床教授로 하여금 講義를 擔當케 한 結果, 他州로 轉出하는 醫大生들의 數가 相當히 줄어들었고, 「아이오와」州는 美國에서도 가장 크고 가장 發展된 形態의 醫療團地(medical complex)를 자랑하게 되었다.

韓國의 경우도 이와 類似한 方案을 講究할 수 있을 것인바, 서울大學과 連結을 짓는다면 더 이상 좋을 수 없겠지만, 他大學이나 主要病院과 地方을 連結시켜 醫大의 分校를 設置한다면 이들 地方에 居住하는 學生들을 包容할 수 있을 것이며, 이들은 특히 서울과 釜山에서 開業權을 制限시킬 경우 訓練을 받은 後에도 그 地域에 滯在하면서 奉仕할 수 있을 것이다.

다른 한 가지 改善策은 基礎醫學 教育年限을 短縮시키는 대신 「인턴」過

程을 1年 延長하여 서울서 修學을 계속할 必要가 있는 專門醫 志望許容 學生들을 除外한 나머지 學生들을 農村地域에서 1年間 「인턴」 過程을 보내도록 措置하는 것이다. 이 方案은 「레지던트」過程許容에 대한 「쿼터」設定과 더불어 農村地域의 醫師 增員을 위해 좋은 刺戟劑가 될 것이다.

#### 第4節 「서어비스」의 配分

**命題 4 :** 西歐型 保健醫療 傳達方式은 保健醫療傳達을 위한 座待式接近方法(sit and wait approach)이다.

西歐型 保健醫療 傳達方式은 健康狀態改善과 關聯, 需要·供給 接近方法이라고 할 수 있다. 즉 醫師와 病院은 醫療「서어비스」提供「센터」이며, 醫療「서어비스」利用을 원하는 患者들의 需要에 즉각 副應하여 「서어비스」를 供給하게 된다. 따라서 病에 걸렸다고 느끼게 되면 當事者가 直接 必要한 保健「서어비스」를 받기 위해 醫師나 病院을 찾아 나셔야 할 것인데 따라서 保健「서어비스」를 分明히 利用하게 되는 경우는,

- (1) 健康 不良의 症狀이 뚜렷하고
- (2) 患者 스스로 아프다고 느끼고
- (3) 患者 스스로가 醫療「서어비스」를 받게 되면 健康狀態가 改善될 것으로 確信하고
- (4) 患者가 適切한 醫療를 받을 수 있는 場所를 알고 있고
- (5) 患者가 交通費, 待期時間, 勤務地離席時間 및 治療費用을 負擔할 수 있고
- (6) 醫療「서어비스」를 利用할 수 있을 때 등으로 限定된다.

經濟學者들은 傳統的으로 生産物의 配分을 論議한 경우 資金의 負擔 및 調達側面, 더욱 正確하게는 所得 및 富의 分配面에 執着하게 된다. 왜냐하면 市場에서의 需要 및 供給機能에 依存하는 自由經濟體制下에서는 生産物

의 配分은 주로 個人所得 및 富의 分配에 달려 있기 때문이다. 그러나 商品으로서의 保健財와 保健醫療傳達機關은 資源의 適正配分과 關聯, 市場經濟의 原則이 適用될 수 없는 特性이 있으므로 保健關係 生産物의 配分을 論議함에 있어서는 保健醫療傳達의 資金調達面이 가장 重要한 考慮對象이긴 하나 單純히 資金面보다는 보다 廣範圍한 觀點에서 이 問題를 考察해야 할 것이다.

이와 關聯, 韓國政府는 保健計劃 樹立時 農村과 都市貧民層에 대한 保健資源의 不均等 配分問題 즉 6項에 대해서는 熟考하였다고 보여지나, 그보다 앞선 5가지 경우에 대해서는 별다른 關心을 기울이지 않았다고 느껴진다.

**補助命題 1:** 農村保健施設의 利用率이 낮은 것은 部分的으로 醫療「서비스」需要에 대한 知覺不足, 適正「서비스」에 대한 知識缺如 및 治療가 健康狀態를 增進시킬 것이라는 信念缺乏 때문이다.

農村의 所得水準에 비해 醫療「서비스」의 酬價가 높은 것 또한 農村保健施設 利用率이 낮은 部分的 理由가 되고 있으나, 이 問題는 主로 農村 및 都市貧民層이 都市民에 비해 疾病을 느끼는 程度, 現代 醫療「서비스」가 健康狀態를 改善할 수 있다고 믿는 程度나 어디서 「서비스」를 받을 수 있는가에 대한 情報 등의 差異 때문에 發生한다고 보여진다.

韓國에 있어서 農村地域을 對象으로 한 大部分의 保健醫療必要(need for health care)에 대한 調査가 面接方式으로 행해졌기 때문에 一貫성이 없고 직접 比較가 어려우나, 農村地域이나 都市地域을 莫論하고 疾病의 類型이나 分布樣相이 비슷하게 나타나고 있다. 그러나 健康狀態에 대한 專門的 評價를 中心으로 한 다른 研究에 의하면 全體人口에 비해 農村住民들의 健康狀態가 훨씬 나쁘다는 것을 알 수 있다. 따라서 農村住民이 느끼는 疾病의 程度는 都市住民에 비해 낮다는 結論에 到達하게 되는데, 이와 같은 結論은 前述한 바와 같이 都市民과 農村 居住者 사이에 內在하고 있는 年齡이나 教育程度의 差異와 相應하는 것이다. 젊은층과 老人層 및 未教育者는 現代的 判斷基準에서 본 健康狀態, 現代醫藥 및 治療場所 및 方法 등에 대

하여 相對的으로 無知하며, 西歐型의 醫療「서비스」가 疾病 狀態를 適切하게 治癒시켜 준다는 信念이 없으며, 또한 西歐型 保健「서비스」를 받기 싫어 하므로, 西歐型 保健「서비스」가 遠隔 醫療活動을 통하여 促進된 때 비로소 이러한 環境은 急速히 改善될 수 있을 것이다.

**補助命題 2:** 政府의 保健醫療「達網」에서는 마을 居住者와 保健支所間을 連結하는 後送 經路를 繼續的으로 維持하기 위해서 補助人力을 包含시켜야 할 것이다.

遠隔醫療活動은 保健「서비스」를 찾는 住民들을 기다리기보다는 찾아 가는 방식이 되어야 할 것인데, 이 活動이야말로 韓國에 있어서 試驗的, 示範的 地域保健事業의 必須不可缺한 한 部分인 것이다. 地域保健事業은 보통 住民들과 偶別的으로 혹은 集團的으로 接觸할 마을補助員, 마을保健要員 또는 어머니會會員 등을 包含한다. 이들 保健 補助人力은 疾病에 걸린 者를 찾아내고, 健康을 增進시키고, 保健教育을 擔當하고, 西歐型 保健「서비스」에 대한 認識 및 知識不足으로 인한 障壁을 打破하고, 疾病의 知覺을 도와주는 其他 活動 및 後送作業 등 重要한 役割을 擔當하게 된다.

**補助命題 3:** 政府는 醫療傳達이 제대로 되지 않고 있는 農村 및 都市에서 補助保健要員으로 일하게 될 全國保健「서비스」要員團(National Corp of Health Services Workers)의 設置를 檢討해야 할 것이다.

特定 農村 및 都市地域에서 勤務할 補助保健人力에 대한 公式的 訓練 方案(訓練이 끝나면 이들에게 修了證 發給)을 講究해 보는 것이 좋을 것인데, 이들을 保健「서비스」團員으로 稱하고 地域保健「서비스」活動遂行에 있어 顯著한 功勞가 있는 者에 대해서는 保健社會部 또는 其他 政府 部處에서 褒賞을 주도록 措置할 수 있을 것이다.

그런데 重要한 것은 遠隔醫療要員들이 保健醫療傳達體系의 一部임을 政府 및 國民大衆들이 認定하고 이들을 農村保健 醫療傳達網으로 공식 統合할 수 있도록 訓練시켜야 할 것인데 이들이 遂行할 役割은,

- (1) 患者發見, 病歷記錄 및 後送活動

- (2) 基礎保健教育, 個人的攝生, 衛生 및 疾病豫防
- (3) 家族計劃教育和 避妊器具 및 妊娠中絶者 後送 등 母子保健
- (4) 縫合 및 가벼운 外傷治療 등 基礎應急處置 등을 包含한다.

**補助命題 4:** 政府는 國民들의 健康을 增進시켜야 하며, 新聞·放送을 통해 政府供給 保健「서비스」의 利用을 促進시켜야 할 것이다.

醫療職種の 倫理는 保健「서비스」의 利用可能性, 酬價表 또는 個別醫師나 保健施設이 提供하는 「서비스」 利用에서 얻는 潜在的 利點에 대한 廣告行爲를 禁止하고 있는데, 이는 돌팔이醫師 등 醫療詐欺로부터 無知한 大衆을 保護하려는 意圖이다. 그러나 그 結果 前記한 事項 등에 대해 大衆들은 完全히 無知한 實情에 놓이게 된다.

그런데 個別醫師가 자신이 提供하는 「서비스」의 利點을 助長시켜 所得 또는 利潤增大를 통하여 無知한 大衆들을 利用, 個人的인 利得을 얻으려고 한다면 잘못된 일일 것이나 集團的으로 國民들의 保健과 厚生의 責任을 法的으로 保障받고 있고, 또한 非營利 原則에 立脚하고 있는 政府가 各種 活動의 利點을 鼓吹시키는 것은 合當한 일이라고 생각된다. 따라서 政府가 保健「서비스」를 提供하는 場所, 그리고 其他 利用案內, 利用上 利點 및 酬價 등에 관해 紹介·宣傳하는 것은 合理的인 것이다. 이러한 紹介活動은 國民大多數의 便益을 위한 것이니 만큼 新聞, 放送 등 「매스 미디어」를 통하여 가장 效果的으로 遂行될 수 있을 것인데, 여기에는

- (1) 保健支所의 位置, 運營時間, 要員 및 「서비스」에 대한 案內廣告를 地方新聞에 定期的이고 定規的으로 掲載하고,
- (2) 保健支所 活動과 特記할 만한 事項을 「텔레비전」, 新聞 및 定期刊行物 등에 紹介하며,
- (3) 地域保健要員의 生活相과 活動에 관한 興味있는 이야기를 「텔레비전」이나 主要定期刊行物에 隨時로 紹介하고,
- (4) 功勞가 顯著한 保健專門家 및 補助人力에 대한 褒賞授與 所息을 事情이 許諾할 경우 夕刊紙에 掲載하는 것 등이 包含될 수 있을 것이다.

이와 같은 獎勵活動은 醫療傳達이 제대로 되지 않고 있는 地域住民들을 啓蒙하여 保健에 대한 認識을 높일 뿐만 아니라 一般大衆들로 하여금 醫療에 대한 必要性 및 政府가 이와 같은 必要性을 充足시키기 위해 기울이고 있는 努力에 대한 關心을 드높게 할 것이다. 따라서 이러한 獎勵策은 貧民地域에 대한 政府의 努力을 合當하게 만드는데 有助할 것이며, 앞으로 不可缺少하게 隨伴될 補助金 또는 「富者로부터 貧者」로의 富의 移轉등을 包含하는 保健「서어비스」制度의 資金調達面에서 볼 때 極히 重要的 意義를 지닌다. 이와 關聯, 追加基金의 必要性, 同基金의 使用 目的 및 그에 따른 惠澤에 대해서도 一般國民들에게 周知시켜야 할 것이다.

命題 5: 保險制度의 實施는 結果的으로 保健費支出增大, 酬價上昇, 利用度增大 및 醫療質의 向上을 招來한다.

美國 및 其他 等地의 政治家들의 생각처럼 健康保險(health insurance)의 效果는 단지 保險加入者의 「서어비스」 利用增大에 限定되는 것이 아니고 이보다 폭 넓은 效果를 가져오는 것이다.

加入者의 非選別的 資金負擔을 主內容으로 하는 醫療保險의 경우 加入者(어떤 特定階層 혹은 全國民)의 立場에서 볼 때, 保健「서어비스」 利用에 있어 資金面에서의 障壁이 除去될 뿐만 아니라, 總體的으로 保健「서어비스」에 대한 支出이 增加하게 된다. 이는 大多數 國家가 바라는 것인데, 왜냐하면 各國의 保險制度導入 目的은 어떤 特定한 對象階層으로 하여금 保健「서어비스」 利用度を 높이게 하는 것이고, 따라서 이는 保健費 支出增加를 要求하기 때문이다.

公的 또는 私的 保險制度 및 이와 類似한 制度(先拂制度; prepayment, 無料 혹은 實費로 國民大衆에게 醫療를 提供하는 國民保健醫療制度 등)는 두 가지 側面에서 保健「서어비스」에 대한 支出을 增大시키는데, 그 하나는 保險金 支給範圍나 資格要件에 따라 다르겠지만 주어진 期間 동안 保險金 支給額 限度까지 醫療「서어비스」에 대한 被保險者의 購買力이 增加하게

되어 醫療費 支出이 增加될 것이다. 즉 一旦 어떤 個人이 保險에 加入하게 되면 주어진 期間 동안 所得이나 富의 水準에 關係없이 總量面에서 그 制度가 支給하는 最高 限度까지 保健「서비스」를 利用할 수 있을 것으로 健康保險을 實施한 結果 一定期間中 保健「서비스」에 대한 潛在的 需要는 增加(또는 個人의 需要曲線이 右側으로 移動)하게 된다. 疾病이 發生하게 되면 이러한 潛在的 需要增加는 有效需要(effective demand)를 增加시킬 것이므로 그 結果 保健「서비스」에 대한 支出이 增加하게 되는 것이다. 經濟學 用語를 빌어 쓰자면 個人所得이 增加한 경우나 마차가지로 需要曲線의 移動이 保健「서비스」에 대한 支出增加 및 有效需要增加의 源泉이 될 것이므로 이 現象은 有效需要를 增加시킨다는 點에서 「所得效果」라고 볼 수 있겠다. 그런데 이와 같은 효과는 保險釀出金의 引上으로 中和될 수 있으나, 實際로는 大部分의 健康保險制度가 어떤 補助金 要因을 內包하고 있어 保健「서비스」에 대한 限界消費性向이 一般大衆의 경우보다 高危險階層(high risk group)의 保健「서비스」에 대한 購買力은 相應하는 實質所得의 減少없이 不比例的으로 增加하게 된다. 結局 有效需要는 總需要의 右方向移動을 통하여 增加하게 될 것이다.

그런데 高危險階層을 效果的으로 選別하지 않거나 그들에게 充分히 높은 釀出金率을 適用하지 않을 경우, 健康保險制度는 全加入者의 保健「서비스」에 대한 有效需要를 增加시킬 것이다. 그러므로 美國의 保險制度(「메디케어」 및 「메디케이드」)는 一般人보다 保健「서비스」에 대한 限界消費性向이 높은(따라서 需要增加가 쉬운) 反面, 醫療「서비스」를 제대로 利用하지 못하고 있는 高危險階層의 保健「서비스」에 대한 有效需要增大, 즉 그들의 利用率 提高를 意圖하고 있다.

健康保險이 保健「서비스」에 대한 有效需要를 增大시키는 두번째 側面은 相對價格의 攪亂과 關聯된다. 大部分의 健康保險制度에서는 共同負擔率이 거의 無視할 정도로 낮은데 賠償保險制度(indemnity insurance schemes)의 경우 當事자에게 支給된 保險金額이 治療費보다 적을 때는 保健「서비스」費用(共同負擔)의 一部를 當事者が 負擔하도록 規定하고 있다. 여기

서 한 가지 分明한 것은 共同負擔制가 治療費 全額보다 적은 金額을 當事者에게 支給한다는 特性을 지니고 있다는 點이다. 따라서 治療費의 90%를 保險金으로 支給하도록 規定한 경우, 共同負擔率은 10%가 되는데 共同負擔率이 낮을수록 他財貨에 비해 保健「서비스」의 實際 價格은 더 크게 減少하게 된다. 他財貨에 대한 保健「서비스」의 相對價格이 떨어진다면 保健「서비스」에 대한 需要彈力性이 크면 클수록 保健「서비스」의 利用率은 커지게 될 것인데 負擔控除 規定 역시 共同負擔의 要因이 된다.

有效需要를 增大시키는 두 가지 側面中 後者の 경우를 「폴리」(Pauly)와 「에로우」(Arrow)는 道德的危險(moral hazard)이라고 부르고 있는데 이는 保健「서비스」의 有效價格이 낮아짐에 따라서 그 利用者들이 既存需要曲線을 따라 右下方으로 움직이는 것을 意味한다. 그러나 이러한 行動을 利用者의 無責任이라고 보기는 어렵고, 오히려 他財貨에 대한 醫療「서비스」의 相對價格의 變化에 따른 合理的인 經濟行態라고 보아야 할 것이다. 따라서 利用者들은 保健「서비스」의 相對價格이 引下되면 市場價格을 全額 支拂해야 하는 경우보다 疾病發生時 醫師訪問, 藥品購入 및 入院日數 등의 面에서 더 많은 利用率을 보일 것이다. 保健「서비스」의 利用率增大가 可能하고 그것이 健康保險制度의 社會的 諸目的中的의 하나일진데 保健「서비스」 利用率 提高와 保健費 支出增大는 극히 바람직한 것으로 判斷된다. 그러나 여기서 한 가지 밝혀 두고 싶은 것은 有效需要增大가 期待한 만큼 利用率을 增加시킬 것인가와 與否가 分明치 않다는 點이다.

**補助命題 1:** 健康保險制度가 保健「서비스」利用率에 미치는 效果는 供給側 事情에 달려 있다.

通常, 供給이 一定한 경우 需要가 增加하면 醫療「서비스」의 酬價 또한 增加하게 될 것인데, 그 結果는 供給彈力性이 낮으면 낮을수록 醫療酬價는 크게 뛰어 保健「서비스」 利用率은 조금밖에 增加하지 않을 것이다. 需要增加가 保健「서비스」에 대한 總支出을 增加시킨다면 供給彈力性이 낮으면 낮을수록 社會의 非醫療部門으로부터 醫療部門으로의 所得 및 富의

移轉程度는 커지게 될 것이다. 다시 말해서 保健「서비스」의 供給彈力性이 非彈力的일수록 醫師의 所得은 그만큼 높아질 것이고, 病院 收入 또한 그만큼 크게 늘어날 것이지만 保健「서비스」 利用率은 그만큼 작게 增加할 것이다.

**補助命題 2:** 政府의 保險制度가 政府의 保健醫療傳達網을 利用하는 特定階層을 對象으로 하지 않을 경우, 保健「서비스」 産業의 全般的 價格은 不利한 影響을 받게 될 것이다.

價格이란 限界的으로 決定되는 것이므로 保健産業의 價格은 政府活動의 影響을 받게 되는데, 政府의 目的이 政府가 直接 供給하는 「서비스」에 대한 利用率 增大만이라면 政府醫療體系 利用에 局限되지 않은 政府保險制度는 民間部門에 影響을 줄 것이다. 따라서 이 경우 政府는 그러한 政策을 執行할 수 없을 것이며 民間部門의 움직임을 無視할 수 없을 것이다. 마찬가지로 만약 政府保險制度가 政府의 保健醫療傳達網을 利用할 目標階層을 限定된 對象으로 하는 것이 아니라면, 民間部門의 收入增大는 國家의 保健政策目的과 遊離되어 民間部門의 擴張을 支援해 주는 셈이 될 것이어서, 民間保健部門의 收入增大를 통해 醫師와 醫院의 都市集中을 助長하고 都市等地에서의 民間病院 및 醫院擴張을 鼓吹시킬 것이다.

**補助命題 3:** 政府의 保健醫療傳達體系를 利用하는 特定階層을 限定된 對象으로 하지 않는 政府의 健康保險制度는 保健「서비스」의 利用量 增加보다도 民間 保健「서비스」의 質을 더욱 提高시킬 것이다.

美國의 경우, 지난 25年間에 걸쳐 保健「서비스」 價格上昇의 原因을 調査해 본 結果,

- (1) 1955年頃까지는 保健「서비스」價格이 消費者物價上昇率과 같은 程度로 增加하였고,
- (2) 1955年 以後에는 病院費用 및 酬價가 消費者物價上昇率을 훨씬 앞질러 引上되었으니,
- (3) 1950~70年의 全期間中 醫療酬價의 消費者價格指數는 23.4에서 155.0

으로 되어 111.1% 增加한 反面, 全體消費者物價指數는 83.8에서 127.7로 올라 52.7% 增加에 그침으로써 醫療酬價의 急上昇現象이 全國的保險制度(1965년에 「메디케어」 및 「메디케이드」 實施) 實施보다 훨씬 以前에 일어났음을 알 수 있고,

(4) 醫療酬價의 相對的 增加가 醫療「서어비스」를 支辨하는 資金源泉上의 큰 變化에 隨伴한 것임을 <表2-1>을 통하여 밝힐 수 있다.

<表2-1>은 保健「서어비스」利用者의 直接 負擔率이 漸減하고 있고, 反面 民間保險 및 政府의 役割이 점점 커지고 있음을 보여주고 있다. 여기서 注目할 만한 것은 1960年의 民間健康保險이 차지하는 保健費 支出比率이

<表 2-1> 美國에 있어서 醫療「서어비스」에 대한 資金源泉, 1950~71

資金源泉	年度	1950	1960	1971
1. 利用者直接負擔		68.5%	55%	37 %
2. 民間健康保險		8 %	21%	25 %
3. 政府(州, 地方 및 聯邦)		20.5%	22%	36.5%
4. 慈善寄附金		3 %	2%	1.5%

資料: Social Security Bulletin, 各選定年度分

相對的으로 醫療酬價의 急上昇을 反映하여 크게 높아진 點인데, 이는 같은 期間中 政府의 比重이 거의 不變이라는 結果 날카로운 對照를 이루고 있다.

(5) 對 GNP 保健費 支出比率은 1955年 以前의 경우 4~4.5% 程度였으나 1960年에는 同比率이 5.4%로 最近에는 다시 8%로 提高되고 있다. 이와같이 支出面에서 본다면 保健「서어비스」産業은 美國에서 建設業, 農業 다음으로 3번째로 큰 産業이다. 美國의 社會保障廳이 調査한 바에 의하면 1950~71年 사이에 總支出增加額의 47.2%가 酬價上昇 때문이었으며, 16%가 人口增加에, 나머지 36%만이 利用度 增加에 各各 基因하였다.

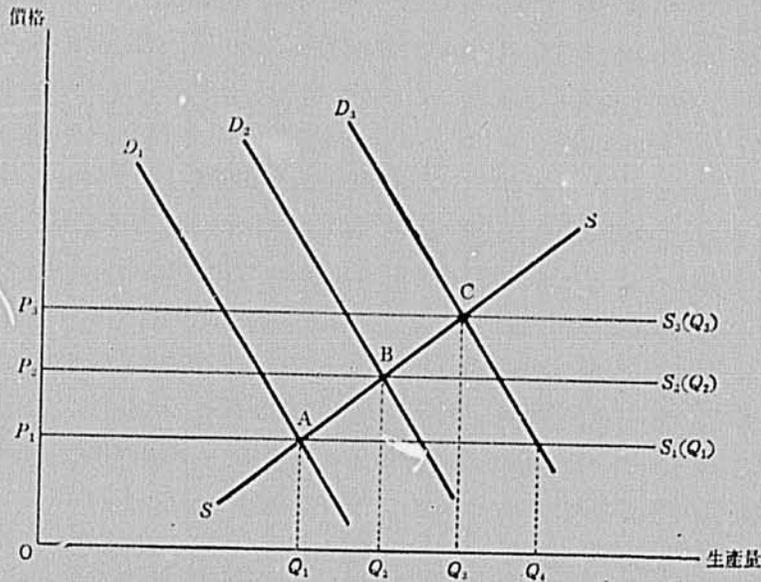
(6) 保健專門家들의 用語를 빌자면 保健「서어비스」에 대한 支出增加分中 相當部分이 「서어비스」 利用量 增加보다는 「서어비스」의 質的 改善으로

인해 保健「서비스」産業으로 流入되었는데, 病院의 경우가 특히 두드러져 現在 病院「서비스」에 대한 支出은 美國에 있어서 總保健費支出의 40%를 上廻하고 있다. 美國의 거의 全域에 걸쳐 病院은 利用率面에서 過少 利用狀態에 있지만 價格은 醫療費目中에서도 가장 빨리 增加해 왔으며, 특히 1955年 以後의 上昇勢가 刮目할 만하다. 美國病院協會의 調査에 의하면 患者 1人當 平均 病院費用이 1950~68年 사이에 4倍 以上 뛰었고, 最近에 와서는 1950年에 比해 6倍 以上이나 올랐다. 이와 같은 價格引上은 약간의 病院利用率增加와 病床日數對比 資產(設備外 面積), 醫療人力 및 供給物量의 顯著한 增加를 同伴함으로써, 病院은 한편으로는 더욱 複雜, 精巧해지면서, 다른 한편으로는 利用者の 負擔을 加重시키게 되었다. 保健經濟學者들의 推計에 의하면 美國에서 未利用 病床이 주는 費用 負擔은 患者 1人當 平均 病院費用의 60~80% 水準이라고 알려지고 있어 病院이야말로 값비싼 間接施設이 되고 있다.

한편 「서비스」의 質의 水準이 利用率의 보다 느린 增加를 代價로 하여 向上되는 過程을 [圖2-1]에서 살펴보기로 하자.  $S_1$ 에서  $S_2$ 로 다시  $S_3$ 로 漸次的으로 「서비스」의 質이 向上됨에 따라 각기 다른 質의 「서비스」를 表示하면서 過剩施設을 反映하는 3개의 完全彈力的인 供給曲線을 생각해보자. 「서비스」의 質이 向上됨에 따라 對應하는 價格 또한  $P_1$ ,  $P_2$  및  $P_3$ 로 각각 上昇하며 需要水準의 增加는  $D_1$ ,  $D_2$  및  $D_3$ 로 各各 表示되고 있다.

初期의 需要가  $D_1$ , 供給이  $S_1$ 으로 주어졌다고 하자. 이 경우 價格은  $P_1$  그리고 生産量은  $Q_1$ 이 되는데 만약, 어떤 理由로 需要가  $D_2$ 로 增加했다면 供給者側은 質이나 價格을 바꾸지 않고, 單純히 生産量을 늘리거나, 혹은 質·量 모두를 增加시키거나 하는 兩者中에서 擇一하게 될 것이다. 後者の 경우를 本圖表에서 살펴보면, 供給者側이 醫療의 質을  $S_2$ 로 向上시킬 경우 價格 또한  $P_2$ 로 上昇하고, 生産量 역시  $Q_2$ 로 增大될 것이나 이러한 生産量水準은 單純히 生産量을 늘리는 경우보다 낮게 될 것이다. 마찬가지로 說明을  $S_3$ 에도 適用할 수 있을 것이므로 各各의 需要 및 供給曲線

〔圖 2-1〕 保健「서비스」의 質的向上과 生産增大



이 交叉하는 點을 A, B 및 C로 할 때, 이 點들을 連結하여 얻는 有效供給曲線 SS는 價格上昇에 對應하는 不連續的인 「서비스」質의 向上을 表現하고 있다. 이들 質的水準의 向上은 利用率의 小幅增加( $Q_1$ 가 아닌  $Q_2$ 까지의)의 代價로 얻어지는데, 完全彈力的인 供給曲線은 需要가 相當水準 增加되더라도 如前히 過剩施設 및 過少利用狀態를 보여주고 있다. 이와 같이 過剩施設이 存在하는 경우에는 規制를 통하여 「서비스」의 質을 固定시킬 때만 需要增加가 利用率의 最大增加를 가져올 것이다.

補助命題 4: 健康保險制度의 加入對象이 政府의 保健施設을 利用하는 特定階層에 限定되지 않을 경우, 民間保健部門의 資本支出, 酬價策定 및 生産政策 등을 規制하는 것이 바람직하다.

이와 關聯하여 韓國의 경우는 美國의 경우보다 좀 複雜한 樣相을 띠고 있는데, 民間病院이 利用者를 놓고 公共病院과 競合하고 있다는 點은 兩國

의 共通 現象이나, 美國에서는 醫師나 病院이 補完的 生産主體인데 비해 韓國은 그렇지 않다는 差異가 있는 것 같다. 美國에 있어서 患者는 醫師의 承認이 있어야만 入院할 수 있고, 民間醫院에 入院하는 例는 극히 드문데 비하여 韓國의 患者들은 疾病이 發生하면 醫院에도 종종 入院하고 있어서 韓國의 경우는 美國의 경우보다 必須的인 補完的 生産主體로서의 病院에 대한 依存도가 낮은 것 같다. 따라서 이런 點이 民間醫院의 入院室을 利用할 수 있는 韓國의 農村地域에 있어서 病院利用率이 낮은 理由를 部分的으로 說明해 주고 있으며, 保健支所를 맡고 있는 時間制醫師가 그 이웃에서 個人醫院을 開業하고 있는 地域에서는 특히 病院利用率이 낮게 마련인 것이다. 그러므로 當該地域에서 利用할 수 있는 民間醫療資源의 分布를 考慮하여 政府의 保健施設에 대한 必要度を 判斷하여야 할 것이며, 또한 더 많은 量의 「서비스」를 보다 効率的으로 供給하자면 利用可能한 民間資源의 利用率을 높일 수 있는 方案을 檢討할 必要가 있을 것이다.

그런데 한 가지 銘心해야 할 일은 韓國에서는 民間保健部門이 公共保健醫療傳達體系와 直接的으로 競合하고 있다는 點인데, 民間部門이 提供하는 「서비스」의 量이 增加하고 그 質이 向上된다면 그만큼 政府保健體系의 利用도는 계속 낮게 되고, 「서비스」의 質 또한 劣等함을 免치 못하게 될 것인즉, 이로 인해 利用率은 더욱 떨어지게 될 것이다.

政府는 潜在的 利用率이 너무나 낮아 私的 및 公的 保健「서비스」의 効率的 利用이 어려운 地域에 대한 供給制限策으로 民間保健部門을 規制하는 方案을 講究해야 할 것이다. 그렇지 않을 경우 民間部門은 少數 富裕層만 상대함으로써 소위 「단물 빨아 먹는식」이 되어 大多數 住民들은 政府體系를 利用하도록 放置될 것이므로, 그 結果 政府體系는 適正水準 以下の 非能率的 運營에 直面하게 될 것이다. 그러므로 市場의 規模가 작은 地域에서는 「競爭」이 오히려 供給者의 非能率的 運營을 招來할 것이며, 富裕層을 상대로 알차게 運營할 수 있는 民間供給者들에게 惠澤이 돌아갈 것이므로 이와 같은 狀況下에서는 電話, 버스, 水道, 電力 등의 경우와 마찬가지로 公共獨占이 社會的으로 利益이 될 것이다.

命題 6: 政府의 健康保險制度는 韓國에 있어서 保健醫療傳達體系의 改革範圍의 擴大를 促進하는 方向으로 導入되어야 할 것이다.

現在 韓國은 두 가지 保健體系를 지니고 있는데, 民間體系는 주로 個別醫師의 個人的 利得을 위해 運營되고 있으며, 都市富裕層이 主利用者인 反面, 政府體系는 非營利 目的이며, 주로 都市 및 農村零細民을 對象으로 하고 있다.

그런데 兩體系 모두 本質적으로 病院—醫師 集約的 生産技術 關係를 包含하여 類似한 「서어비스」를 提供하는 西歐型 保健醫療傳達體系를 模倣한 類型을 보이고 있다. 兩體系의 特徵으로는,

(1) 특히 農村地域住民을 包含하여 「高危險」低所得層에 대한 施惠는 民間部門이 할 수 없거나 할 意圖도 없어 政府에 맡겨져 있으며,

(2) 政府體系가 人口稀少地域에 대해 西歐型 保健「서어비스」를 提供하자면 必然적으로 많은 費用이 所要되나 現實적으로 全般的인 資金投入이 過少한 點을 들 수 있다.

農村 및 都市貧民層의 保健「서어비스」 利用率을 높이자면 上記한 方向 (보다 集約度가 낮은 醫師—病院生産技術採擇 및 遠隔醫療供給 등)으로 政府의 保健醫療傳達體系를 改革하여야 할 것이며, 이와 더불어 醫學教育制度 改善 등 民間部門을 規制함으로써 民間體系가 公益에 보다 잘 奉仕할 수 있도록 指導해야 할 것이다.

韓國은 이미 保健醫療傳達事業을 遂行하고 있으며, 上述한 여러 問題點을 낳을 可能性을 內包하고 있는 保險制度에 着手하고자 計劃案이 作成되고 있는 中이다. 새로 導入될 保險制度는 保健醫療傳達體系의 一部要素를 成長, 擴大, 開發시킨 것인바, 相當한 規模의 資金을, 同制度에 投入하게 되면 利用者들로부터 供給者들에게로 가는 直接·間接的 收入이 增大되어 供給面의 擴大·成長이 可能한 것이다. 따라서 만약 政府의 保險制度實施로 保健醫療傳達體系中 民間의 保健醫療傳達部門의 收入이 增大되면 이는 이미 定立된 民間部門의 體系 擴張을 위해 投入될 것이므로, 이미 他國의

經驗에서 費用負擔이 많을 것으로 判明된 內因性疾病에 대한 「서비스」增加, 값비싼 生産技術의 活用 및 保健「서비스」의 不充分한 配分 등을 招來하게 될 것이다. 그러므로 政府의 保險制度가 民間醫療部門의 收入을 增加시키게 되면 保健醫療傳達體系가 現在 (혹은 앞으로) 제대로 醫療惠澤을 받지 못하고 있는 貧民層의 保健必要面에서 볼 때, 더욱 不均等하고, 不適當하며, 非能率的이고, 不公平한 方向으로 擴大, 成長할 것이며, 더불어 앞으로 民間部門에서 틀림없이 發生하게 될 保健醫療酬價 및 費用增加 現象이 公共部門에 移轉됨으로 해서 公共保健「서비스」 提供費用을 引上시키게 될 것이다. 이러한 價格引上 現象은 政府의 保險制度 實施 以前인 現在에도 部分的인 理由이겠지만 所得上昇에 따른 急速한 需要增加 때문에 일어나고 있다고 보여진다. 이를테면 서울의 경우 1965~69年間 一般物價가 277% 上昇했음에 비해 病院 및 醫師費用은 같은 期間中 318%나 뒤어올랐다.

**補助命題 1:** 韓國政府가 民間保健部門을 徹底하게 規制할 意圖가 없거나 할 수 없다면 政府의 保健醫療傳達體系에 大規模健康保險制度를 導入한 後의 年年의 豫想收入은 그 增加幅이 制限받게 될 것이다.

政府가 健康保險制度의 加入對象을 全國民으로 한다 하더라도 마찬가지로 일 것이므로 支給된 保險金이 政府體系로 還元되도록 措置되어야 할 것이다. 全國民들로 하여금 公共施設이나 政府의 保健專門家들로부터 保健「서비스」를 提供받도록 措置한다면, 政府는 國民들에게 租稅를 賦課하거나 保險料를 釀出할 수 있을 것이므로 加入對象이 特定階層에 限定되는 경우보다 더 많은 資金을 動員할 수 있어 「서비스」를 擴充시킬 수 있는 長點이 있는데, 短期的으로 보아 都市富裕層은 政府가 提供하는 「서비스」 利用을 꺼려 할 것으로 假定할 수 있을 것 같다. 그러나 政治的인 側面에서 보아 追加的인 租稅負擔이나 釀出金 形態의 一般國民負擔增加는 그 金額이 極少額인 경우가 아니면 相當한 反對輿論이 일게 될 것인바, 都市富裕層은 재빨리 民間健康保險組合이나 會社 등을 組織하고 그와 같은 民間制

度 加入者에 대해서는 租稅나 醜出金을 免除하도록 規定하는 立法을 推進하게 될 것이다. 全國民에게 이러한 租稅나 醜出金을 負擔케 하는 方式은 保險金 受領者의 對民間部門利用禁止措置와 더불어 窮極的으로 韓國에서 民間健康保險制度의 急速한 發展을 招來하게 될 것이다. 이러한 傾向은 長短點이 있을 수 있겠는데 무엇보다도 1955年以後의 美國의 經驗이 示唆해 주고 있는 바와 같이, 韓國에 있어서도 民間保險制度가 없는 경우에 비해 民間部門의 保健醫療酬價나 費用이 急激히 增加될 것을 豫想할 수 있다. 이는 民間保險制度 加入者에게 租稅나 醜出金을 窮極的으로 免除해 줄 것으로 假定한 場合, 收入減少로 인해 政府의 保健「자이비스」供給費用이 上昇하게 될 것이므로 이에 對處하기 위해 政府는 民間部門을 強力히 規制할 수밖에 없을 것이다.

都市富裕層이 政府가 供給하는 保健「자이비스」를 利用하게 되면 그만큼 政府體系의 運營費는 增加하게 될 것이고, 또한 都市富裕層이 醫療利用度가 낮은 貧民層과 混雜하게 될 것이므로 貧民層에 대한 政府 保健「자이비스」供給의 潛在的 惠澤이 줄어들게 될 것이다. 따라서 全國民을 加入對象으로 하여 全國民에게 附加稅나 醜出金을 負擔케 하는 政府保險制度는 短期的인 觀點에서 볼 때, 財政面에 問題가 될지 모르나 많은 問題를 招來할 것으로 보인다. 그러므로 政府는 同制度의 加入對象을 全國民으로 할 것이 아니라 醫療利用率이 낮은 特定階層에 局限시키야 할 것이며, 특히 政府供給 保健「자이비스」의 擴張을 支拂하고자 全國民에게 追加的인 負擔을 안겨 주어서는 안될 것이다.

**補助命題 2:** 韓國政府는 政府의 健康保險制度下에서 支拂된 保險金이 公共保健醫療傳達網으로만 流入되도록 措置해야 할 것이며, 同制度의 資金調達은 加入者의 醜出金 및 一般 歲入에 對의 補助金으로 充當해야 할 것이다.

支拂保險金의 公共保健體系로의 流入 措置는 改善된 政府의 保健醫療傳達體系가 成長할 수 있도록 資金面에 基礎를 提供해 줄 것이므로, 韓國에 있어서 全體的인 保健醫療傳達體系의 均衡있는 發展에 貢獻할 것이다.

이 경우 民間部門 역시 계속 成長하겠지만 保險加入자들이 民間「저이비스」로 利用할 수 있도록 許可되는 경우만큼 急成長하지는 않을 것이다. 但, 保險加入자가 政府體系가 供給할 수 없는 特定「저이비스」를 提供받아야 할 例外的인 경우에는 民間體系를 利用할 수 있도록 許可되어야 할 것이다. 그런데 一般的인 支給保險金の 政府體系 流入 措置에 따라서 政府가 供給하는 保健「저이비스」의 相對的 比重이 앞으로 增加할 것인데, 政府供給의 保健醫療「저이비스」 利用 資格을 公共保健醫療傳達體系가 擴大·實施될 때까지 醫療利用을 제대로 하고 있지 못한 貧民層에 限定시키는 措置는 部分的이나마 社會開發 目的에 調和할 수 있을 것이다.

그러나 同公共體系의 資金調達을 政府保險制度 加入對象者인 醫療 利用후의 낮은 階級의 負擔(先拂制 또는 後拂制)만으로 充當하는 것은 韓國社會의 不平等을 줄이고자 提示된 社會開發 目的에 비추어 妥當치 않을 뿐만 아니라 矛盾되는 일이다.

醫療 利用을 제대로 하지 못하고 있는 貧民層으로 하여금 先拂制(pro-spective assessment; prepayment)로 保健「저이비스」를 다 많이 利用하도록 하자는 생각은 非現實的이다. 貧民層으로 하여금 그들이 提供받는 保健「저이비스」費用의 一部를 負擔하도록 하는 方法은 수용이 가난한 者에게 費用의 全額을 負擔시키는 것은 妥當치 못하다. 더불어 貧民으로 하여금 保健「저이비스」를 利用하여 病이 完快된 後에 餘生동안 賦課償還하도록 하는 등 後拂制(retrospective assessment)로 「저이비스」費用을 負擔케 하는 方法 또한 無理한 생각이라고 判斷된다. 殊나하면 病에 걸리기 以前에 가난한 사람은 病이 回復되고 나면 다음 가난해질 것이기 때문이다.

富裕한 者만이 負擔할 수 있는 「저이비스」의 全費用을 가난한 者에게도 負擔시킨다는 것은 生活의 負的面에서 보아 社會衡平達成과 矛盾되는 일 이므로 貧者를 直接·間接的으로 支援해 주는 健康保險制度의 講究가 社會開發이란 目的成就와 調和되는 것일 것이다. 따라서 人間의 尊嚴性을 維持하고 責任있는 利用姿勢를 保障할 수 있도록 貧者로 하여금 共同保險料(妥當한 경우에는 賃金稅[pay-roll tax]賦課) 혹은 賦出金을 負擔하도록 하

거나 「자이미즈」 利用에 있어 負擔控除條項을 주는 것이 適切한 措置인 것이므로 結局, 保健「자이미즈」는 貧民層에 관한 한 總費用보다 작은 費用負擔으로 提供되어야 할 것이다. 이와 關聯해서 政府의 保健醫療傳達體系가 낭패 憵赤字는 貨金稅基金에서가 아니라 一般 租稅收入에서 補充되어야 할 것이며, 이로써 所得이 富裕層으로부터 貧民層으로 移轉될 것이므로 社會衡平을 增進시킬 수 있을 것이다.

保健「자이미즈」 費用의 一部는 先拂制 및 後拂制로 거두어질 수 있겠으나 後拂制에 크게 依存해서는 안될 것인바, 疾病에서 回復한 貧者는 더욱 負擔能力이 없게 될 것이기 때문이다. 後拂制에 있어서 割賦償還率은 必然코 낮게 策定되어야 할 것이며, 疾病이 發生한 各 경우에 대해서 個人別로 適用되어야 할 것이고, 大部分의 個別 경우에 대해서 費用全額을 免除해 줄 수 있도록 規定이 마련되어야 할 것이다. 또한 後拂制에서 生길 수 있는 問題點으로는 年々の 潜在的 收入規模가 작아 行政費조차 充當하지 못하게 될지 모르며, 덧붙이 未償還負債가 많은 個人에게는 精神的 衝擊과 苦痛을 안겨다 줄 것이라는 點을 들 수 있다.

### 第5節 組織 및 資金管理機構

現段階에서 모아 韓國의 保健醫療傳達體系의 改革은 組織面에서 두 가지 重要한 相衝되는 問題가 있는 것 같다. 保健「자이미즈」의 効率的 傳達을 위해서는 「자이미즈 프로그램」 및 活動과 關聯, 相當한 地方分散이 要請되고 있다고 보아지나, 基金面에서는 統合해서 運用하는 方式을 採擇하는 點이 健康保險制度 實施에 있어 相當한 便益을 提供해 줄 것이다.

命題 7: 健康保險基金의 最適活用을 위해서는 中央集中式 基金運用 및 管理方式을 採擇하여야 할 것이다.

廣義로 모아 健康保險의 長點은, 疾病에 걸린 個人이 必要로 하는 保健

「서어비스」를 쉽게 利用할 수 있을 것이므로 利用面에서 不確實性을 減少시켜 준다는 點이며, 嚴密히 이야기하자면 健康保險은 疾病에 걸린 個人에게 保險金을 支拂할 것이므로 必要한 「서어비스」를 利用하는데 도움을 준다는 點이다. 保險 및 그 類似制度中에서도 先拂制度는 比較的 새로운 方式인데 이것은 病에 걸린 個人에게 直接 「서어비스」를 利用하도록 하는 制度로서, 病에 걸린 加入者에게 保險金을 支給하는 健康保險制度와는 이 點에서 差異가 있다. 그런데 一般的으로 健康保險을 넓은 意味에서 이야기할 때는 그 目的이 病에 걸린 者가 保健「서어비스」를 쉽게 利用할 수 있도록 考案된 兩制度를 總稱하나 健康保險과 先拂制度와는 分明히 區分해 둘 必要가 있다. 모든 個人은 貯蓄을 통하여 自己 스스로를 保險(self-insure)할 수 있을 것이나 돈만 있다고 해서 「서어비스」를 즉시 提供받을 수 있는 것은 아니다. 많은 사람들이 스스로 「서어비스」를 利用(self-prepay)할 수는 없을 터인즉 病에 걸렸을 경우 必要한 醫療「서어비스」를 스스로 提供할 수 없기 때문이다. 그런데 大多數 醫師들이 이 兩者의 區別을 제대로 하지 못하고 있다는 느낌이 든다.

健康保險 및 先拂制 모두, 病에 걸린 者에게 醫療「서어비스」를 즉시 利用할 수 있게 한다는 點에서 不確實性을 減少시켜 준다는 共通性이 있다. 만약 所得의 絕對水準이 낮거나 또는 相對的으로 所得水準에 비하여 醫療「서어비스」價格이 높을 경우, 健康保險制度는 個人이건 團體이건 必要를 잘 充足시켜 줄 수 있으나, 保健「서어비스」利用이 物理的으로 不可能한 경우 健康保險制度는 별 所用이 없게 되는데, 돈이 있어도 必要한 物件을 살 수 없는 경우나 마찬가지이기 때문이다.

많은 사람들이 政府의 健康保險制度가 實施되면 保健醫療傳達이나 利用問題가 解決된 것으로 錯覺하고 있는 것 같은데, 適切한 保健「서어비스」의 供給 없이는 健康保險制度를 導入한다손 치더라도 이는 다만 利用者들에게 挫折感만 안겨다 줄 뿐이며, 國民들의 必要度에 대해 關心을 기울이고 거기에 應할 수 있는 能力을 지녀야 할 政府편에서도 信任喪失이라는 重大問題에 直面하게 될 것이다.

만약 適正價格으로 適切한 量의 保健「서비스」를 提供할 수 있다면 健康保險이나 先拂制度 共히, 必要로 하는 醫療「서비스」의 供給을 容易하게 할 수 있을 것이다. 이와 關聯하여 人口集團을 對象으로 하는 健康保險制度는 個別保險의 경우에 비해 훨씬 有利한데 個人的 경우 疾病發生은 극히 豫想이 힘든 反面, 集團의 경우에는 「大數法則」의 作用으로 豫想疾病의 變動幅이 全般的으로 減少되어 疾病發生의 豫想이 쉽기 때문이다. 그러므로 個人的 경우는 貯蓄을 너무 많이 하거나 또는 너무 적게 하는 상황이 있을 수 있겠지만 團體保險의 경우에는 危險을 共同負擔(pool risks) 하게 되는 것이다. 團體保險의 경우, 適切한 保險料率은 行政費, 利潤差額, 留保金 및 保險金 支給額 등 保險數理的인 計算을 통하여 決定될 수 있을 것이므로 加入者는 一定保險料를 支拂하고 病에 걸릴 경우 最高限度 內에서 保險金受拂資格을 保障받게 된다. 通常, 一部 加入者는 資金에 대한 必要도가 높은 反面, 다른 一部는 資金에 대한 必要도가 낮아 서로 相殺될 것이므로 加入者 全部가 危險을 共同으로 負擔하게 될 것이고, 따라서 個人的 不確實性은 減少될 것이다.

한편 先拂制度는 一定釀出金の 先拂에 대한 補償이란 點에서 다를 뿐 前者와 비슷한 性質을 지니고 있는데 加入者는 病에 걸릴 경우 一定한 醫療「서비스」를 提供받을 資格을 賦與받게 된다. 通常 「서비스」에 대한 必要도가 높은 一部 加入者가 있는 反面, 낮은 一部 加入者도 있어 서로 相殺되어 健康保險의 경우나 마찬가지로 危險은 全加入者에게로 分散된다.

**補助命題 1:** 保險制度 또는 先拂制度의 加入者가 많으면 많을수록 運營費는 資金面의 經濟로 인하여 낮아지게 된다.

우선 加入者의 危險發生의 特徵이 비슷하다면 加入者가 많으면 많을수록 大數法則이 作用하여 豫想疾病의 變動幅이 멀어지게 된다. 둘째 一般的으로 加入者數가 많을수록 運營, 請求, 書類保管 및 保險金支給 등 文書作業量이 많아질 것이므로 大量資料處理技法을 利用할 수 있어 單位當費用이 減少한다. 이러한 作業過程에 있어서 單位當費用은 作業量과 反比例하

며, 高價의 資料處理設備 購入 때문에 初期의 費用이 通常 높는데 單位當 費用이 減少되려면 作業量이 巨大해질 必要가 있다.

세째, 保險運用的 경우(先拂制의 경우는 좀 덜하겠지만) 當分間 保險金 支出이 많지 않을 것이므로 定期的인 保險料徵收로 巨額의 基金이 累積된 것이다. 이와 더불어 傳染病, 洪水 등으로 多數의 加入者가 疾病에 걸린 事態에 對備하여 留保金을 確保하여야 할 것인바, 이들 遊休資金은 보통 投資되어 年年의 收入을 늘려 줄 것이므로 保險料率이나 釀出金率을 引下 시키는데 도움을 줄 것이다. 그러나 이와 같은 基金의 運用에는 仲介人 手 數料, 文書作業費 및 其他 運用費 등 費用이 따를 것인데, 單位當運用費는 基金의 規模가 크면 클수록 引下될 것인즉 加入者가 많으면 많을수록 그 만큼 基金의 規模가 커질 것이고 單位當資金運用費用은 낮아질 것이다.

**補助命題 2:** 어떤 形態의 保險 및 類似制度를 採擇하든 保險金請求, 留 保金 및 運營基金 등을 中央集中的으로 管理해야 할 것이다.

保險 및 그와 類似한 制度가 몇 개의 작은 單位로 分散되어 管理된 경우, 中央集中的 管理에 비해 危險의 共同分擔 및 資金運用上의 經濟面에서 不利하다. 따라서 地方分散的인 制度를 採擇할 경우, 費用이 크게 늘어난 것이므로 中央集中 管理方式보다 全般的인 管理 및 協業이 더욱 어렵게 될 것이다.

**補助命題 3:** 韓國政府는 保險基金管理에 있어서 既存類似制度를 統合하 여 共同으로 행할 수 있는 方案을 講究하여야 할 것이다.

理論的으로 資金面의 經濟는 無限한 것이므로 既存制度를 새 制度와 統 合하여 基金을 만들고, 管理하고, 費用을 支出하는 方式이 費用面에서 相 當한 節約을 낳게 된다. 그러나 資金支出對象이 되는 疾病發生이 獨立的 이 아닐 수도 있고, 逆의 相關關係가 있을지 모르므로 危險의 共同分擔 程度가 減少될 수 있다는 點에 留意하여야 할 것이다(危險發生疾病이 正 의 相關關係에 있다면 統合한 結果 全體的으로 疾病의 變動幅이 줄지 않 을 것이다).

여러가지 既存制度가 保險 및 類似制度와 統合될 수 있다고 보여지는데 그 例로서는 產災保險 및 立法措置된 國民福祉年金制度 등을 들 수 있다. 그러나 一般的으로 말해서 貨金稅는 逆進的이어서 그보다는 一般財政收入에서 健康保險을 支援토록 하는 것이 더 좋은 方便이 될 것이다.

첫째, 保健費 支援을 產業勤勞者나 그 家族에게만 局限시킬 수는 없을 것이다. 왜냐하면 社會開發의 指針과 關聯, 一次 對象目標은 醫療를 제대로 利用하지 못하고 있는 農村 및 都市貧民層을 中心으로 社會衡平을 增進시키는 方向이어야 할 것이기 때문이다.

둘째, 만일 保險 및 類似制度가 廣範圍한 基礎를 지닌 福祉年金制度와 連結된다면 高所得層으로부터 低所得層으로의 所得移轉을 더욱 容易하게 推進할 수 있을 것인즉, 所得移轉이란 社會開發目的과도 相應하는 社會衡平增進에 必要한 것이기 때문이다. 短期的으로는 保險制度 및 類似制度를 產災保險과 連結시키는 편이 新制度의 管理 및 擴張을 보다 容易하게 할 것이나 長期的으로는 效果가 보다 制限된 것이다. 왜냐하면 늘어나는 貨金稅를 國民들이 負擔할 수 있을지 與否는 疑問이기 때문이다. 이 問題로 인해 企業側은 價格을 引上하거나 勤勞者의 貨金引上率을 낮추게 될 可能性이 있는데, 後者の 경우 이는 분명히 社會開發目的과 相馳되는 것이므로 이러한 結果를 豫想하면서 冒險을 敢行할 必要는 없을 것이다. 따라서 低所得層도 負擔할 수 있을 程度의 낮은 水準으로 釀出金率을 定하여 先拂制를 實施하는 한편, 政府의 保健醫療傳達體系는 一般財政에서 補助하는 方式을 採擇하도록 勸告하고 싶으며, 이 方式의 採擇은 앞으로 施行될 附加價值稅制와도 容易하게 結合될 수 있을 것으로 생각한다.

## ABOUT THE AUTHOR

James R. Jeffers is a Professor of Economics and Director of the Health Economics Research Center, University of Iowa. He is currently on leave from Iowa and has been undertaking research at the Korea Development Institute as a Health Economics Adviser under a USAID-Westinghouse Health Systems Health Planning Contract, since May, 1975. He received a Ph.D. in Economics from Tulane University in 1966 and has taught at the University of Iowa since 1963. Professor Jeffers has conducted numerous professional and research activities and has served as a consultant to various Federal Agencies in the United States including the United States Price Commission during 1972-73. He has co-authored a monograph entitled, *Health Manpower Resources* (1971) and has contributed various articles on health economics to professional journals, including "On the Demand Versus Need for Medical Services and the Concept of Shortage" (co-author), *American Journal of Public Health* (January, 1971). In December of this year, Dr. Jeffers will be leaving Korea and returning to the University of Iowa.



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