

**Sudut Lain**

## **HEALTH ECONOMICS AS A SCIENCE**

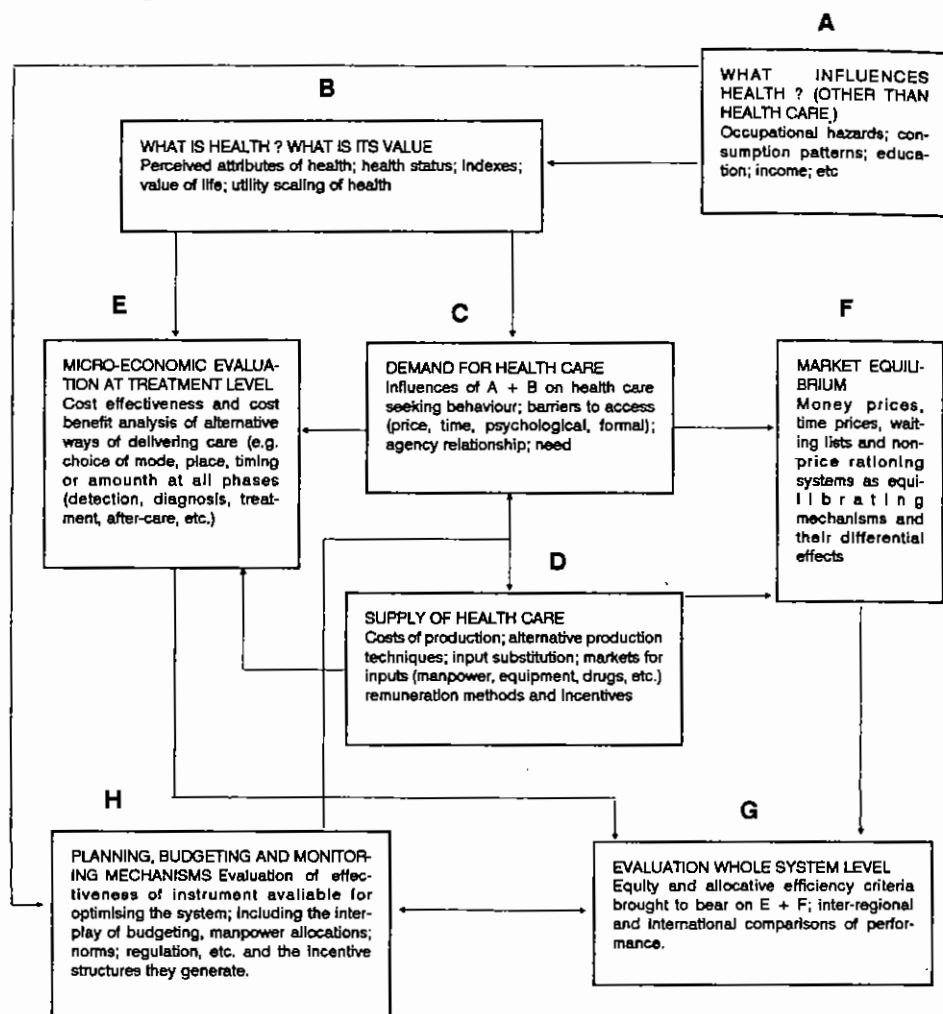
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Lee and Mills (1979) lucidly described health economics as the application of the theories, concepts and techniques of economics to the health sector. It is thus concerned with such matter as the allocation of resources between various health promotion activities; the quantity of resources in health service delivery; the organisation and funding of health service institution; the efficiency with which resources are allocated and used for health purposes; and the effects of preventive, curative, and rehabilitative health service on individuals and society.

Culyer (1981) defined health economics as the application of the discipline and tools of economics to the subject matter of health, accordingly encompasses the full range of two causal relationships between the health status of individuals and groups and their economics activities. Williams (1986) described in a more general way. He used topic and discipline terminology. Health sector is a topic area which may be investigated by various other disciplines. One of those disciplines is economics in its branch, called health economics.

There is an impression that health economics as a sub-discipline of economics has a very wide area. In Culyer's words the "economics activities" can be interpreted so that almost every activities of human being can be related to health economics. Contrastly, Evans (1984), McGuire *et.al* (1988) raised the importance for limiting scope of health economics. Bluntly Evans (1984) stated that the economics of health can easily becomes the economics of everything. The famous WHO definition of health as a state of a complete physical, mental and social well being will expand the scope of health economics into an unlimited area. He suggested the WHO definition should be restricted into a narrower definition of health, that is 'the absence of disease or infirmity'. But even if the scope is already restricted in fact health economics is still very wide. Lee and Mills' description is a clear reflection of the width of health economics.

A group of health economist at the University of York UK had displayed principal topics in the area of health economics (Williams, 1986). The display (see Figure 1) is used for post graduate teaching in the Department of Economics and research programs. The beauty of this display is the presentation of topics in health economics into boxes and arrows so that a layman in economics can understand easily the body of knowledge in health economics.

**Figure 1: The structure of the discipline of health economics**

The four central boxes, A, B, C and D, contain the analytical 'engine room' of health economics while the four peripheral boxes E, F, G and H, are the main empirical fields of health economics applications (Culyer, 1987).

In Box C the demand for health care can be analysed through the theory of derived demand and the household production (Grossman, 1972). This box is complicated because the demand of health care is influenced not only by price but also by education, social class, culture, access, psychological barriers, and

doctor-patient relationship. Therefore it needs contributions from other disciplines such as sociology, psychology, anthropology, and ethics.

In box D, the supply of health care is analysed through the theories of production, the behaviour of firms and individuals, the regulation and deregulation, the effects of remuneration and incentives for medical profession etc. This box is a reflection of the health-industry complex. Evans (1984) described this box as a complex supply network embracing not only the obvious sectors like hospitals and clinics (public and private) but also institutions operated by other authorities (e.g. some social services, some residential care for the elderly and for children) and also some at least of the main suppliers of medicine and equipment, as well as independent agencies under contract.

The questions on what is health and what are its values are raised in the Box B. It is very important to mention that health perception is very subjective. Health is a word which contains the basic matter of human life. The interpretation is influenced by culture, way of life, religion and also occupation. It is very subjective and abstract. The problem is that for the sake of health care service, health status index is needed. The abstract thing must have values to be measured. For utilitarian the value should be measured in utility unit. For clinician the value should be measured by clinical indicators. For health service managers and planners the value should be able to be collected, analysed and presented for management purposes. For accountants, health should be valued in money terms. Inevitably the abstract characteristic of health will induce an endless dispute and debate between different interpreter of the value of health.

In Box A the determinants of health (other than health care) have their place. Genetics factors, occupational hazard; consumption patterns, education, income, capital and various other things are regarded as the determinants of health. Epidemiologist, sociologist, dietician, politician and many other professions can contribute in this box.

Boxes E, F, G and H are mainly concerned with the application of health economics. In Box E the market analysis theory tries to use economics in health care sector. This application of economics in the market of health raised some controversies. The cons for the possibility of market analysis in health care argue that health care is totally different with other marketable goods or sectors. Mainly, the cons against the economic analysis of health care market is due to the opinion that health care sector is not the same with other economics goods like agricultural products or industrial goods. Mooney and McGuire (1988) carefully stated that health care seems to be rather different from other goods and services. The other view regards health care is not different with other goods. Therefore it has its market system and market theory can be applied within (Culyer, 1971).

Box F is concerned with the micro-economic appraisal for health care. Traditionally the appraisal for health care or medical intervention was done by health professional since the Hippocrates era (Sohl, 1988). Medical professions always try to improve the effect of treatments. But the traditional evaluations are still in terms of efficacy, effectiveness and availability (Sackett et.al, 1985). Economists add a further evaluation for health on the efficiency criteria. The forms of the efficiency

teria are cost-benefit analysis, cost-effectiveness analysis, cost-utility analysis and cost-minimization analysis (Drummond *et al*, 1987, Warren 1982). The micro-economic appraisal tends to become a subset of health economics which is called by Eisenberg (1988) as **clinical economics**. Amongst clinician, clinical economics become more popular within the growth of clinical epidemiology.

Box G is concerned with planning, budgeting and monitoring mechanisms of health service. It is closely related with health care management. This box is the macro aspect of health economics in health sector.

Box H is concerned with the highest communal-level of appraisal, such as international-comparative on health finance system ; determinants of differences in the international expenditure and outcome. It can be noted that this box is directly related with the political economy of health, international health and financing methods. Hence, like other boxes, box H is also wide and complicated.

In an overall view, this lucid display gives impression that health economics as a wide scope and looks complicated. Naturally health is a complex sector with various unexplainable parts. Medicine as the backbone science in health sector had grown into a very complex science. Economics with all of its streams became a complex and sophisticated science. It is logical that health economics, the combination' of complex sciences became complex as well. But whatever the complexity of health economics, the crucial question is what are health economics' contributions for solving the health problems in the world.

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