EDUCATIONAL PLANNING: SOME REGIONAL PERSPECTIVES

APPROACHES TO EDUCATIONAL PLANNING[1]

The process of nation-wide educational planning is extremely complex, and not all of its aspects lend themselves to quantitative analysis or to the methodology followed in forecasting techniques. Nevertheless, a beginning has been made in educational model-building for planning purposes. One such attempt projects manpower requirements according to the forecasts of economic growth over a period of time, thus giving rise to the school of planning based on what is now known as the manpower requirements approach. A second school, using the rate of return to investment, represents the alternative approach of cost-benefit analysis in educational planning. A third school, drawing on both of these approaches and introducing new variables with a bearing on the quality of education, is now emerging in form of linear-programming models.

In the *manpower requirements model* an attempt is made, on the one hand, to derive the required educational output from a set of economic-growth projections and, on the other, to identify the variables that affect the required output of each segment of education. The educational output requirements are based on the forecasts of economic growth and sectoral distribution of output and employment in a given future year. The sectoral distribution of employment is then broken up through a series of computations into a distribution of the labour force by occupation and by level of education. These estimates and the data on the existing stock of educated manpower, less loss due to death, retirement, resignation, and other reasons, are used in drawing up a plan of educational development to produce the future manpower requirements. One of the advantages of the manpower requirements approach consists in its circumventing a problem, encountered in the rate-of-return approach, in estimating shadow prices for the use of resources for which there are no valid market prices.

An important assumption implicit in this method is that adequate data are available, on the demand side, relating to the number of persons required in the economy in each occupation for a given future year, the present number of persons in each occupation, the annual number of withdrawals from each occupation due to death, retirement, or movement

[1]This section has been based largely on Muhammad Shamsul Huq, *Education, Manpower and Development in South and Southeast Asia*, Praeger Publishers, 1975, Ch. 5, M. Blaug, 'Approaches to Educational Planning', *Economic Journal*, June 1967, & Tore Thonstad, *Education and Manpower, Theoretical Models and Empirical Applications*, Oliver and Boyd, 1969.

out of the labour force, and the annual number of separations from one occupation and accessions to another as a result of job changes.

Similarly, on the supply side, it is assumed that data are available on the existing output of the educational system by the year in question, adjusted for withdrawals and occupational changes. The difference between the required and anticipated stock of personnel in each occupation expected by the target year provides the basis for the computation of the required change in the annual number of graduates from the various levels and types of education. Such a computation further assumes that each occupation is uniquely related to a specific educational background, as indicated by the experience of the industrialized countries. In other words, this means that there can be no substitution between occupations in the production of a given industry's output and that there can be no substitution between different kinds of education in the performance of the operations or functions that define a given occupation.

Apart from the difficulty of obtaining such data, the use of norms or fixed coefficients applicable to industrialized countries can produce highly misleading results. It is also hard to estimate manpower needs for lower skills.

Owing to such difficulties, a modified manpower requirements approach has been developed. It is based on a much higher level of aggregation and it achieves considerable simplicity by assuming fixed coefficients in the relationship between the growth of each type or level of manpower and the growth of national income. Unlike the original manpower requirements approach, it takes into account the internal productive relations of the educational system and also overcomes the problem of linking skills to schooling by defining the manpower categories by educational attainments. It derives a set of required enrolments from "an exogenously given rate of growth" by using two sets of equations, one of which represents the input-output relations of the educational system, or the teachers, equipment, and other input per pupil year at each educational level, and the other represents the demand for educated manpower in the economy. The model uses only secondary and higher education in the equations, on the assumption that primary education presents no impediment to the required expansion of secondary education and production increases in the economy.

The rate-of-return model, on the other hand, is based on an analysis of the internal rate of return on investment in education through present value-cost comparisons derived from education-age-income data. Instead of estimating the manpower at various levels of schooling required for a given pattern of economic growth, the aim of this method is to estimate the economic benefits accruing from the costs of schooling. While this method provides a basis for an investment-decision theory, it has, for various reasons, not found wide acceptance with the planners. First, it ignores the

non-economic and also the indirect economic benefits of education, though this is equally true of the manpower requirements models. Secondly, the data necessary for this model are not generally available in the developing countries. Again, the same problem exists in some degree in the manpower requirements approach as well. Thirdly, it does not take into account the income effects of ability, motivation, and family status that interact with schooling.Finally, it does not seem to reflect the effects of future changes in contents and methods of the schooling system and in the pattern of economic growth, which are important variables affecting the productivity of investment in education. While the second defect and the third are statistically surmountable, the remaining ones are more intractable.

In view of the difficulties faced by the manpower requirements and rate of-return approaches, a move towards at least a partial convergence of the two approaches can be seen in the recent effort to apply linear programming to educational planning with the help of some elements of both planning models.

A typical linear-programming model uses activities comprising all levels of education, and divides the educational sector into three categories, namely, the humanities and social sciences; physical sciences and mathematics; and engineering and related subjects. It estimates the time profile of earnings and costs and takes into the account the expected increases in costs per pupil due in part to increases in teacher-pupil ratios and an anticipated annual productivity increase.

The linear programming and rate-of-return models have one important characteristic in common: both measure the demand for education manpower by the differences in earnings among various categories of workers without reference to the available supply of labour. However, in the manpower requirements models, the demand for education manpower is determined in terms of the required number of workers, without reference to their relative wages. Thus the demand appears to be totally inelastic in the manpower approach and highly elastic in the linear programming and rate-of-return approachers. Hence the manpower requirements approach, both in the conventional and modified forms, may be regarded as "technological" and the rate-of-return and linear-programming approaches as "economic".

The limitations of the *linear-programming approach* are clear. First, it is doubtful to what extent wages of different categories of labour adequately measure relative scarcity. Secondly, even if the wages of each type of labour were always equal to the value of the marginal product, the empirical assumption that relative wages of labour do not significantly depend on the relative quantities of available labour would be difficult to make. Thirdly, even where wages roughly measure marginal productivity, it is hardly feasible to measure precisely by the portion of the increment in

earnings that can be attributed to an additional year of schooling rather than to other factors. Finally, the shape of the demand curves for educated labour implies direct substitution among labour of different levels of schooling and indirect substitution through changes in the composition of final demand. The result is a considerable amount of substitutability among the various types of labour.

Table 1 summarizes the outcome of an effort to apply the manpower requirements approach to Thailand during its third plan period (1972–1976). It is clear that the Thai third development plan envisages the bulk of demand emerging, in line with economic growth, for middle-level technical manpower consisting of farmers, fishermen, hunters, miners and salesmen, though it not so clear what sort of role law departments and faculties can play in meeting it.

Table 1

Thailand
Estimated Manpower Demand During
Third National Economic and Social Development Plan
(1972–1976)

Occupation	*Estimated Demand*	
	No. of persons	*%*
Total	*2,586,000*	*100.0*
1. Professional, Technical and Related Personnel	78,000	3.0
2. Administrative and Managerial Personnel	30,000	1.2
3. Clerical Personnel	69,999	2.7
4. Sales Personnel	450,000	17.4
5. Farmers, Fishermen, Hunters, Miners and Related Personnel	1,560,000	60.3
6. Transport and Communications Personnel	89,000	3.4
7. Craftsmen, Manufacturing and Related Personnel	213,000	8.2
8. Service Personnel	97,000	3.8

Source: Office of the National Economic and Social Development Board, Thailand

Table 2

Thailand
Higher Level Manpower Demand
of the Public Sector and Supply of Graduates
by Field of Study

Fields of Study	*No. of Requirements 1972*	*No. of Graduates*	
		Local--1971	*Overseas--1972*
Total	*4,927*	*27,246*	*123*
Engineering	1,108	2,564	23
Sciences	264	733	13
Medical Sciences	1,447	1,935	10
Social Science	1,380	4,988	41
Humanities	44	808	9
Agriculture	445	1,297	9
Fine Arts	83	827	5
Law	112	1,577	3
Education	44	12,166	9
Military and Police		349	1

Source: Office of the Civil Service Commission, Thailand.

Table 2 attempts to match up the supply and demand sides of manpower during the Thai third plan period for the public sector only. It is clear from the table that, irrespective of the question as to whether trained specialists are of the right quality, there is an excess of manpower in all fields, classified according to the UNESCO system, in the public sector, which is by far the largest employer. Unless the private sector can absorb the excess manpower, one is tempted to conclude that unemployment and under-employment are bound to result. Law is an outstanding area where an excess supply of labour is being created, though lawyers could easily fill the role of administrators and managers in Table 1.

Fortunately, the number of university graduates entering the labour market represents only a minority; for the annual increase in university graduates is rather small when compared with the number of other graduates. For instance, according to Population Censuses of 1960 and 1970, university graduates constituted only 0.5 and 0.7 per cent of the total number of graduates in 1960 and 1970 respectively.

Since there is only a small output of university graduates each year and the demand for them remains persistent, it can be argued that the problem of finding employment for them is not serious when compared with that

faced by other graduates. For instance, a labour force survey (1972) reveals that most of the university graduates in Thailand have obtained employment, though 2.9 to 3.3 per cent are unemployed. However, the problem may become more serious if the government and private institutions keep on producing graduates without regard for change in labour-market conditions and national economic and social development priorities. It can also be argued that there does not exist a nationally-integrated labour market and that university graduates face a market quite unlike that facing other graduates,

Table 3 gives an idea of the occupational distribution of employed Thai

Table 3

Thailand
Number of Employed University Graduates by Occupation
1969 and 1972

Occupation	*1969*		*1972*	
	Academic Background	*Vocational Background*	*Academic Background*	*Vocational Background*
Total	*49,000*	*9,600*	*56,420*	*20,130*
1. Professional, Technical and Related Personnel	23,200	1,600	26,760	9,690
2. Administrative and Managerial Personnel	14,800	3,100	18,850	3,510
3. Clerical Personnel	1,500	800	4,470	3,300
4. Sales Personnel	1,400	200	3,130	810
5. Farmers, Fishermen, Hunters, and Related Personnel	—	—	—	—
6 Transport and Communications Personnel	300	200	300	250
7. Craftsmen and Manufaturing Personnel	500	1,600	430	2,070
8. Service Personnel	2,500	500	2,480	550

Source. National Statistical Office, *Labour Force Surveys*, Thailand.

university graduates. It shows that, perhaps contrary to the projections of manpower demand contained in Table 1, by far the largest number of them are employed as high-level technical manpower, both in the professional and managerial roles, which lawyers could readily assume. Perhaps the need for professional staff as well as managers during the process of accelerated social and economic development has been grossly underestimated in the third development plan, as can be seen by a comparison of lines 1 and 2 of Table 3 with corresponding lines in Table 1. It is quite possible, of course, that there is an element of under-employment of the people represented by Table 3 figures, while those of Table 1 certainly envisage a situation where people are fully employed. Again, it is quite likely, in the light of an *ex post facto* situation depicted by Table 3, that manpower projections contained in Table 1 could lead university authorities to over-estimate the capacity of their universities to produce "farmers, fishermen, hunters, miners and related personnel".

The possible contribution of legal education to development is in keeping with the positive role of universities in 'administering and managing' development. This comes out very clearly in Table 4, where the outstanding role of university graduates including those in law is found in the tertiary sectors, especially commerce, transport and other services. These have been the sectors which have witnessed tremendous rates of growth in real terms and have therefore made increasing demands on universities to supply the required types of manpower.

RATE OF RETURN APPROACH AS APPLIED TO THAILAND

The prospect of some university graduates being unemployed is not as gloomy as it may appear at first sight if it is remembered that educational development transforms potential human wealth into a real asset both in terms of working capacity and cultural and social satisfaction. Of course, the potential capacity for work which has been developed cannot be realized so long as university graduates remain unemployed, though it can be argued that their cultural and social needs have been met. The increasing degree to which such needs have been satisfied can be taken to be a sign of development, and, here again, it can be argued, law departments and faculties have had a positive role to play in the development process. On the other hand, it can be said that they can contribute to development only so long as their emphasis is on quality; for well-trained graduates remain a national asset through their lives, no matter whether they are employed or not.

Be that as it may, a developing country can ill afford to devote a sizable proportion of its scarce resources to tertiary education, least of all if only to turn out graduates many of whom become idle and eventually, unless work can be found, unemployable.

Table 4

Thailand
Number of Employed University Graduates by Industry
1969 and 1972

Industry	*1969* *Academic Background*	*1969* *Vocational Background*	*1972* *Academic Ba ckground*	*1972* *Vocational Background*
Total	*49,600*	*9,600*	*56,430*	*20,150*
1. Agriculture, Forestry Hunting and Fishery	–	–	60	–
2. Mining and Quarrying	100	–	710	70
3. Manufacturing	2,200	700	8,010	1,140
4. Construction, Repair and Demolition	2,300	700	1,310	360
5. Electricity, Gas, Water and Sanitary Services	1,500	1,200	1,560	1,140
6. Commerce	7,200	1,100	12,330	3,190
7. Transport, Storage and Communication	1,500	400	1,900	990
8. Services	34,800	5,500	35,550	13,260

Sources: National Statistical Office, *Labour Force Survey*, Thailand.

Table 5

Thailand
Educational Development Expenditure by Educational Level
1972–1976

(millions of baht)

Educational Level	*1972*	*1973*	*1974*	*1975*	*1976*
1. Primary & Kindergarten	2,924.18 (55.9)	3,117.12 (54.4)	3,378.18 (53.7)	3,598.22 (53.1)	3,746.87 (52.1)
2. Secondary, Vocational, Teacher Training & Higher Professions	1,169.46 (22.4)	1,383.34 (24.1)	1,552.65 (24.7)	1,655.69 (24.4)	1,729.60 (24.1)
3. Higher Education	878.93 (16.8)	953.89 (16.6)	1,064.59 (17.0)	1,196.90 (17.7)	1,357.96 (18.9)
4. Adult and Other Special Education	254.26 (4.9)	282.42 (4.9)	291.82 (4.6)	324.19 (4.8)	351.73 (4.9)
Total	5,226.83 (100)	5,736.77 (100)	6,287.24 (100)	6,775.00 (100)	7,186.16 (100)

Source: NESDB, *The Third National Economic and Social Development* Plan (1972–1976).

TAble 5 shows that an increasing proportion of the Thai government budget has been devoted to higher education, which, by 1976, should be getting a share of almost 19 per cent of the total devoted to education. If she is serious about maximizing the returns to resource use, Mark Blaug, applying the rate of return approach to Thai education, thinks that priorities have to be adjusted in the light of his study. His findings are summarized in Table 6.

It is clear from Table 6 that, as of 1970, private rates of return were considerably higher than social rates, since the private costs of schooling are usually only a fraction of the total resource costs. While this was true of all levels of education, the largest state subsidy seems to have gone to higher education, where direct costs amounted to only 18 per cent of the social costs.

Table 6

Thailand
Social and Private Marginal and Average Rates of Return, Men and Women Combined, 1970 (Percentage Figures)

Types of Level of Schooling	*Marginal Rate*[a/]		*Average Rate*[a/]	
	Social	*Private*	*Social*	*Private*
1	17	26	17	26
2–3	20	34		
4	27	49	20	38
5–6	14	18		
7	14	15	17	24
8–10	10	11		
11–12	10	11	14	16
13–14 (Academic)	7	12		
13–14 (Teacher Training)	8	9		
15 (Academic)	7	9		
16	7	11	11	13

a/ The marginal rate of return reflects the rate of return of *one more* grade of education, while the average rate of return shows the rate of return on the *total* education received.

Source: Mark Blaug, *The Rate of Return to Investment in Education: A Report to the National Education Council on the Third Educational Development Plan*, National Education Council, Bangkok, 1971.

The highest marginal social rate of return was observed for the lower primary level and successively higher levels of schooling yielded progressively lower rates of return. This appears to comply with the general proposition in capital theory that continued investment in an activity eventually yields declining returns.

The highest social rate (27 per cent) was achieved with the completion of the lower primary level. The marginal social rate of obtaining at least some primary schooling (2—3 years) was the second highest rate (20 per cent). This pattern suggests that, while considerable benefits accrue to individuals who have some primary schooling, the real benefit falls to those who complete the level by finishing the lower primary level. For higher edcuation the private rates did not differ much from those of secondary education.

In terms of social rates, it was found that vocational schooling, whether public or private, yielded a lower return than did general academic schooling (8 per cent as against 10 per cent) due to higher costs not matched by higher earnings among vocational school graduates.

Blaug's principal finding therefore suggests that resources in Thailand should be shifted towards the primary education and away from higher education. This follows from the economic objective of equalizing marginal rates of return in all directions to achieve an optimum allocation of resources: unequal marginal rates create the possibility of getting more out of existing resources by reallocating them. Surprisingly, Blaug's evidence demonstrates that secondary education is not a priority area in terms of economic objectives and that there is even less justification for spending extra funds on vocational rather than general academic secondary schools.

EVALUATION OF APPLICATION OF EDUCATIONAL PLANNING MODELS TO THAILAND

Conclusions of the manpower requirements and rate of return exercises for Thailand are not easily acceptable. The manpower demand forecast has not been of much help, and Thai planners now seem to have lost faith in it. Blaug himself has misgivings about the application of the manpower requirements approach to Thailand, and they are based on two practical grounds. First, since the latest population census (for his 1970 study) was the one for 1960, there was no reliable information from which trends in labour-force characteristics — shifts in occupational structure, changes in industrial occupation, changes in participation rates by sex and age — could be determined. The result was that he had to resort to international comparisons which do not necessarily indicate the optimum labour force structure, since not every country involved in the comparisons has planned educational development. Secondly, no figures have been published in Thailand on employment in the public as distinct from the private sector,

much less a breakdown of public employment by educational attainment. The wide-spread practice of multiple job holding – particularly by civil servants – severely limits the usefulness of data on the occupational and sectoral composition of the labour force in Thailand.

Blaug's rate of returns findings are equally fraught with difficulties. First, the earnings figures used as a basis of his research refer only to the Bangkok-Thonburi Metropolis and not the whole Kingdom. This casts doubt on his principal finding to the effect that there are higher rates of return to primary as against secondary and higher education. Secondly, his cost data, with respect to higher education were derived from an analysis of budgetary figures which are at best projections while those with respect to primary and secondary school were based on a new survey of educational institutions. It is likely that projected budget figures are on the high side due to the inability of universities to exhaust their projected appropriations within the fiscal year, thereby tipping the cost-benefit balance against higher education. Finally, such cost-benefit analysis as has been applied by Blaug is essentially static and short-run in nature. It does not possess data on a time-span sufficiently large to take account of the social impact of the generation and accumulation of knowledge by universities, and of the necessarily gradual and long-term nature of the demand response of society to the availability of new knowledge and skills generated by educational institutions.

Blaug's conclusions seem to be at variance with those derived from the manpower requirements approach, and there is no rational basis for exclusive reliance on one approach or the other.

Be that as it may, it seems best to steer the middle course. Instead of discarding both the rate of return approach and the manpower requirements approach, it seems more appropriate to let the conclusions derived from each approach stand as they are and complement each other.

REGIONAL CO-OPERATION

The application of some models to Thailand, viewed as an example of developing countries in Asia, has shown that they do not exactly fit her requirements in educational planning. Developing countries in Asia have, therefore, to look elsewhere for guidance. In fact, there is much that can be achieved, through such regional bodies as ESCAP[2] or the Mekong Committee, by way of regional co-operation, to develop a suitable manpower planning model for use by developing countries in Asia. Application of a well-adapted model should help to avoid difficulties caused by straight

[2] A good beginning can be seen in United Nations Economic Commission for Asia and the Far East, *Sectoral Output and Employment Projections for the Second Development Decade*, Bangkok, 1970.

borrowing of what appears to have been developed by more advanced countries for their exclusive use.

As far as legal education in particular is concerned, there also exists some room for regional co-operation. A regional liason committee of law departments and faculties could serve as a clearing-house of information, while a regional association of law could serve as a more tightly-knit forum. In fact, there now exist the Social Science Association of Southeast Asia, the Southeast Asian Mathematics Association and the Agricultural Economics Society of South-East Asia, all of which could serve as a regional model for lawyers.

Even within the existing framework of the Association of Southeast Asian Institutions of Higher Learning (ASAIHL), which has helped to found all such learned societies at the regional level, much can be attempted. The academic exchange programme, enabling a staff member to go from one university in one country to a sister university in another country, can help to strengthen a budding law department and foster personal contacts between colleagues in legal education. It could, in particular, acquaint law teachers in one country with the legal system existing in another country and lead eventually to the institution of regional comparative law. Much exchange of information can also take place through the ASAIHL *Newsletter*. *Ad hoc* co-operative programmes under ASAIHL's auspices equally offer a fertile possibility of concluding bilateral or multilateral arrangements. For instance, an urgent area for joint research would be an enquiry into the attributes of a legal system which is conducive to the development of a developing country. Again, joint development of curricula and such specially designed courses of study as water and environmental law would help to maximize the returns to investment in legal education.

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LAW AND DEVELOPMENT RESEARCH IN THE PHILIPPINES: SOME INSTITUTIONAL ALTERNATIVES

The Research Activities of the U.P. Law Center

INTRODUCTION

I have been asked to contribute a paper in this Conference on Legal Education and Development.

The paper that I have been asked to contribute is specially for the 5th session of the Conference which is devoted to legal research.

In the 5th session, according to those who organized the Conference, there will be an "inquiry into the problems and potentials of law and development research" which will be preceded, however, with "a review of the prevailing tradition of legal research in a particular country and the modifications in technique, perception, methodology and resources necessary to implement a new approach to research."

This paper will be about legal research at the University of the Philippines (U.P.) Law Center.

I am focussing on legal research at the U.P. Law Center because as its Director, I know its activities in this field quite well. A look at legal research at the Center is also a look at legal research in the Philippines. Except for legal research individually undertaken by some (very few) devoted law teachers at the University of the Philippines College of Law and some private law schools, and the "legal research" that some government offices undertaken as a necessary part of the discharge of their functions, it is the U.P. Law Center that undertakes (or should undertake) the major legal researches in the country. This is its mandate, pursuant to no less than the law that created U.P. Law Center.

THE U.P. LAW CENTER

Its Establishment

The U.P. Law Center was earlier, merely a Continuing Legal Education and Research Center in the U.P. College of Law. However, in order that it may undertake more vigorously its activities in continuing legal education and legal research, a law was passed formally creating the U.P. Law Center and providing for a very definite source for its funds. Thus, its charter provides:

"In order to provide for the support of the U.P. Law Center, the