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THE EDUCATION SECTOR IN THAILAND : PROBLEMS,

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THE EDUCATION SECTOR IN THAILAND : PROBLEMS, POLICY DILEMMAS, AND THE ROLE OF THE GOVERNMENT

by

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ABSTRACT

The education sector in Thailand has expanded rapidly over the last thirty years, and there have been substantial achievements in terms of enrollment, curriculum development, and modernisation. However, rapid expansion has been accompanied by the equally rapid emergence of problems, such as regional disparity, inequality of access, irrelevance of curricula, dubious quality, and the dwindling of funds. These inter-related problems are symptomatic not only of the fundamental imbalances within the system, but may also underscore the inadequacy of the entire administrative machinery in foreseeing or even responding to the imbalances in a timely and effective manner.

This report presents an overview of the education sector in Thailand, and traces the salient features of the historical developments that have had important implications on the structure of the educational system at the present time. Particular attention is given to the role of the public sector in the provision of education, the modes of control it exercises, the salient features of the administrative set-up, and the range of problems inherent in, and produced by, the present system. The inter-relationships between the evolution of state control through the administrative setup, expenditures and finance, and the planning process are analyzed. These various aspects are then linked to present-day problems of inequality of access, quality and relevance, costs, the fiscal burden, and the dilemmas involved in determining and formulating the most appropriate policies.

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1. Introduction

Education in Thailand has expanded rapidly over the last thirty years, and substantial achievements in terms of enrollment, curriculum development, and modernisation have been attained. However, this period of rapid expansion has also seen the equally rapid emergence of problems concomitant with increasing social and economic complexity. Considerable changes have consequently been made in the aims and objectives of education over the years.

Currently, as policy-makers continue to wrestle with conflicting aims and ideologies, the nagging problems of regional disparity, inequality of access, irrelevance of curricula, dubious quality, and dwindling funds have become increasingly more acute. These inter-related problems are symptomatic not only of the fundamental imbalances within the system, but also underscore the sluggishness with which the administrative machinery is able to foresee or respond to the imbalances in an effective manner.

The objective of this report is to provide a cursory overview of the education sector in Thailand, with particular attention given to the role of the public sector in the provision of education, the modes of control it exercises, the salient features of the administrative set-up, and the range of problems inherent in, and produced by, the present system.

2. Education and the State

The idea that education is primarily a function of the State has long been accepted in Thailand, having its origins in the 1870s when special schools for the royalty were created. Royal interest and control (which was synonymous with government control at the time) gradually extended beyond the palace grounds, as King Chulalongkorn actively expanded Western-style schooling in earnest, convinced that the creation of a well-trained and educated elite was the only way to successfully fend off colonial domination. This belief led, in particular, to vigorous attempts to create a team of able government officials that would serve in the emerging bureaucracy.

Apart from this, a general modernisation of the education system (along Western lines) was also seen as a means of fostering literacy and national awareness among the general populace so that national security would be enhanced. Thus, the government's role began to extend to the far reaches of the kingdom.

Government activity was further increased with the subsequent creation of the Ministry of Public Instruction, responsible for devising textbooks and formal syllabuses, for building and running government schools which were displayed as models for the rest of the country, and for enlisting monks (whose influence on the general population was considerable) as teachers and spokesmen for the government, in order to graft new curricula and teaching methods onto the existing wide-ranging network of monastic schools.

With the 1921 Compulsory Education Act, the State system of education was consolidated. And with the passing of a series of Private Schools Acts between 1919 and 1954, the control and supervision of private schools was ensured. 1/

Today, the dominance of the State in the provision of education is clearly seen from the enrollment figures given in Table 1. It is evident that government schools dominate each level of education in the country in terms of enrollment, except for the pre-primary or kindergarten level, where private-sector initiative has burgeoned and prospered, especially in Bangkok. At present, the private sector share of pre-primary enrollment in Bangkok is as high as 90 per cent.

Certain fields such as teacher training are practically under the exclusive domain of the public sector, and at the tertiary level, private universities and colleges are dwarfed by the public sector, especially with the unrestricted numbers admitted into two recently-created "open" public universities. Here, the public sector accounts for almost 90 per cent of total enrollments.

The relative shares of the public and private sectors over time as presented in Table 1, Columns (3), (6), and (9), also show that the public sector share of enrollment has been increasing steadily at all levels except for vocational training and, more recently, graduate enrollment. This trend partly reflects the government's policy of quantitative expansion, and partly the tight control on schools and the recent moves towards loosening them at the tertiary level.2/ However,

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1/ Subsequent legislation, the latest of which was the Private Schools Act of 1982 merely dealt with the detailed aspects of control and regulation, in order to keep up with changing conditions. The structure of control itself was already firmly in place by 1954.

2/ There are at present 17 private universities and colleges, almost half of which were established within the last five years. Private vocational training, in particular, has increased so significantly that the public sector share has dropped from 90 per cent in 1979 to only 57 per cent in 1985.

Table 1. Comparison of student enrollment in public and private institutions, selected years.

	1979			1982			1985		
	(1) PUBLIC	(2) PRIVATE	(3) (1):(2)	(4) PUBLIC	(5) PRIVATE	(6) (4):(5)	(7) PUBLIC	(8) PRIVATE	(9) (7):(8)
(1) Pre-primary	130,570	187,558	41:59	173,655	235,032	42:58	398,981	273,099	59:41
(2) Primary	6,626,599	617,165	91:09	6,781,629	631,942	92:08	6,510,359	640,659	91:09
(3) Lower Secondary	1,294,084	274,368	79:21	1,008,670	182,249	85:15	1,140,217	168,655	87:13
Academic	1,017,434	274,368	79:21	1,006,662	182,249	85:15	1,137,596	168,655	87:13
Vocational	2,264	0	100:00	2,008	0	100:00	2,621	0	100:00
(4) Upper Secondary	334,962	176,672	66:34	662,999	284,279	70:30	720,412	214,089	77:23
Academic	198,852	43,471	82:18	455,933	60,266	88:12	513,015	51,094	91:09
Vocational	124,941	133,201	48:52	206,805	224,013	48:52	207,397	162,995	56:44
Teacher training	11,159	0	100:00	261	0	100:00	0	0	00:00
(5) Tertiary excl. open universities	168,836	22,474	88:12	239,628	61,006	80:20	265,909	117,331	69:31
Vocational	46,244	5,245	90:10	72,777	34,262	68:32	107,873	81,340	57:43
Teacher training	61,604	0	100:00	84,755	0	100:00	61,004	0	100:00
Undergraduate	52,471	17,229	75:25	69,918	26,744	72:18	81,541	35,811	69:31
Graduate	8,527	0	100:00	12,178	0	100:00	15,671	180	99:01
(6) Tertiary incl. open universities	412,661	22,474	95:05	898,799	61,006	94:06	835,778	117,331	88:12

Source: Ministry of Education, Planning Division, Office of the Under-Secretary, Education Statistics, 1979, 1982, 1985.

there may also be some as-yet-unexplained reasons for the reluctance (or inability) to expand on the part of the private sector at below-university levels, and this is an area that may need to be further explored.

Apart from direct provision, State involvement also pervades every aspect of education in the country, as can be seen from the network of controls, described in the following section.

3. State Control over Education

> The more laws and restrictions there are,
> The poorer people become.
> The sharper men's weapons,
> The more trouble in the land.
> .....
> The more rules and regulations,
> The more thieves and robbers.
>
> Lao Tsu, Tao Te Ching
> (circa 6th century, B.C.)

Even though Lao Tsu's indictment of rules and laws was made in reference to state control in general, his lament over state involvement in education would probably be no less severe, were he somehow present in Thailand today. And whether or not we agree with Lao Tsu's sentiments, we would have to admit that control over the education system is indeed pervasive.

Such control is exercised in three main ways -- (i) administratively, through the chain of command from the central government down to the district level, and through the maze of controls, ranging from licensing requirements to rules and regulations encompassing such matters as building styles, syllabus and curriculum content, textbooks, lengths of skirts, and hairstyles; (ii) financially, through budget and subsidy allocation, as well as fee control; and (iii) through the planning process, right down from the macro-economic level to the regional education unit.

3.1 Administration

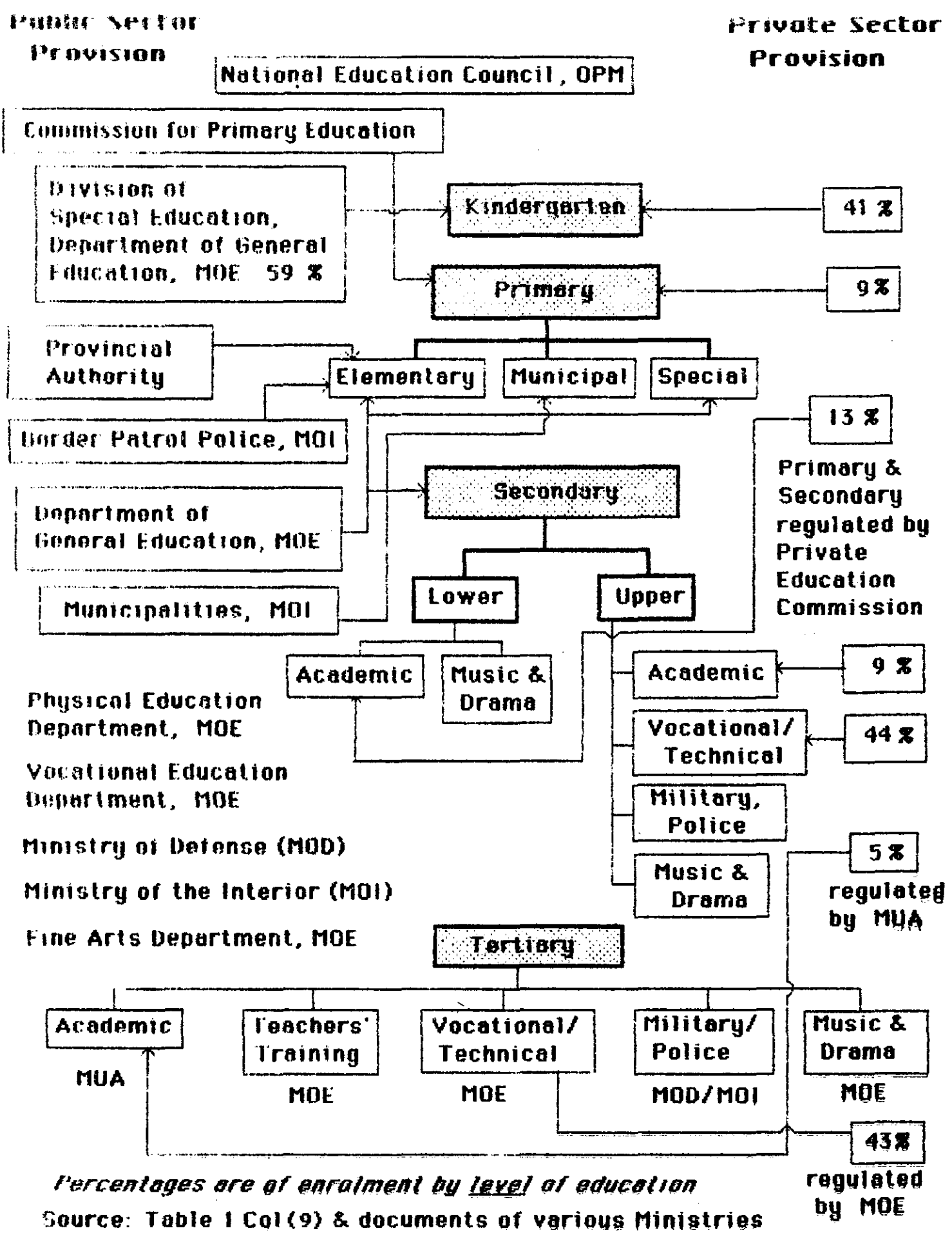
The administration of the Thai education system has been highly centralized since days of yore, partly as a result of the historical struggle to subdue and control rival kingdoms, and partly as a means of ensuring uniformity and national cohesion.

Responsibility for the administration of formal education is mainly divided among four government agencies: the Prime Minister's Office (PMO), the Ministry of Education (MOE), the Ministry of the Interior (MOI), and the Ministry of University Affairs (MUA). The MOI administers primary education through the local authorities under its command. The MOE is responsible for secondary and vocational education, for pedagogic and quality-control aspects at both the primary and secondary levels, for most of the teacher training in the country, for certain examinations and virtually all textbooks, and for the control and monitoring of all private educational institutions below university level. The MUA oversees university education and private colleges, lays down administrative procedures for government universities, makes broad policy decisions, and controls the curriculum and the staffing aspects in both public and private universities and colleges. The PMO handles longterm policy and planning and the overall financing and staffing of the whole system.

Under the umbrella of the PMO are several organizations solely concerned with educational administration, and a few others for whom certain aspects of education comprise but a small function. Among the latter are the National Economic and Social Development Board (NESDB), the Budget Bureau and the Civil Service Commission (all public-school teachers being civil servants). Of those solely concerned with education, the most important is the National Education Council (NEC), responsible for the formulation of policies and plans, co-ordination of educational planning, general research, and for the evaluation of the entire system. In actual fact, however, because of the close ties between the NEC and the MUA, much of the research undertaken by the NEC has tended to centre on university affairs. Nevertheless, this trend has improved recently, with added research emphasis on primary, secondary and vocational education.

In addition, there are a number of specialized and informal forms of education on the periphery, under a host of departments within the MOE itself, such as the Department of Fine Arts and the Department of Physical Education, and under the jurisdiction of other Ministries, such as the Ministry of Defense and the Ministry of Industry. The entire system is schematically presented in Figure 1.

Because of these complex arrangements, education administration has tended to display the curious dual characteristic of being a series of disjointed parts, yet with each level being designed mainly as a stepping stone to the next.



Percentages are of enrolment by level of education

Source: Table 1 Col(9) & documents of various Ministries

Figure 1: Schematic Representation of the Education Sector

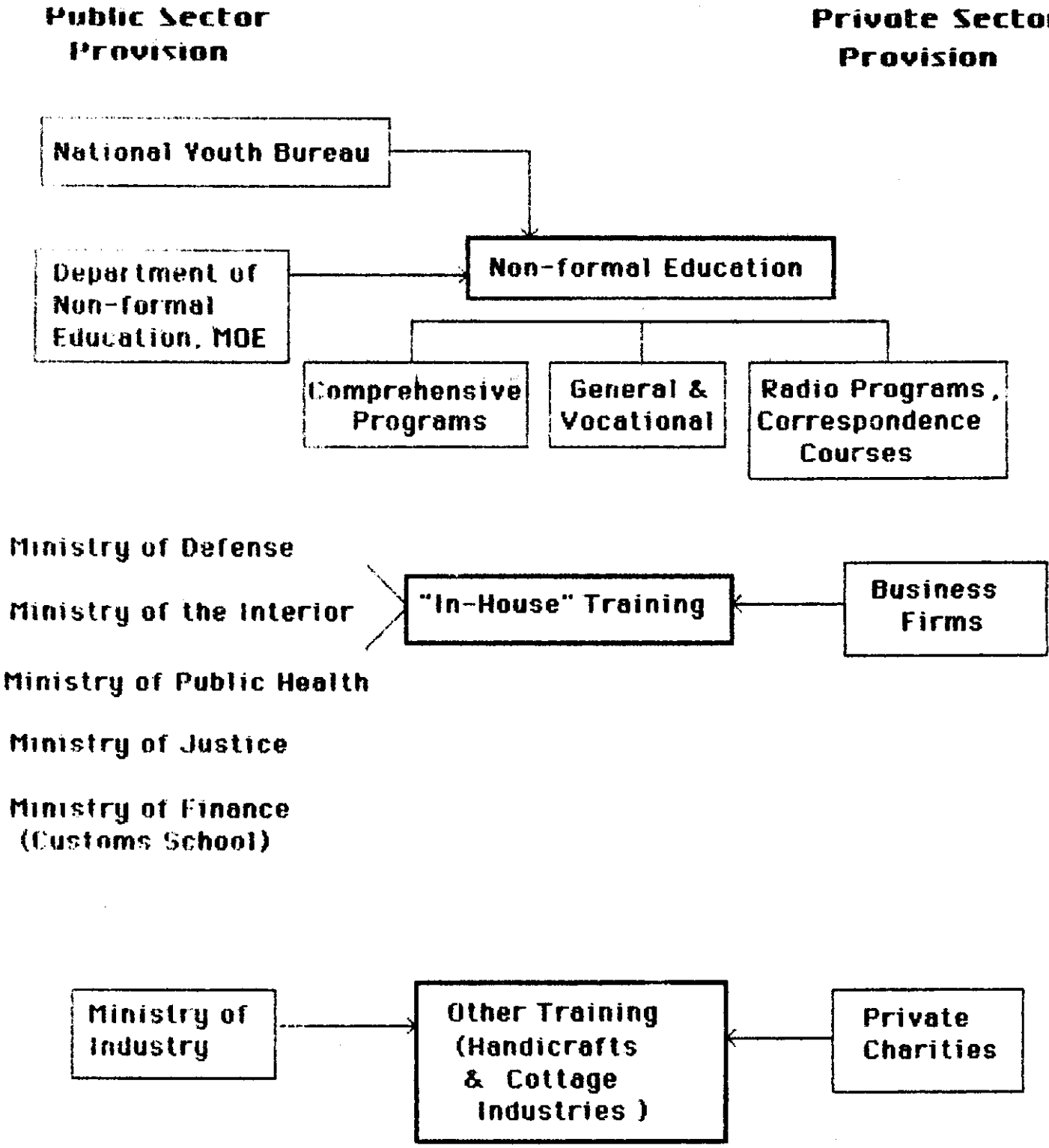


Figure 1 (continued):
Schematic Representation
of the Education Sector

At the more micro level, the administrative set-up is no less complex. The country is divided into 12 educational regions, each headed by a regional education officer. While having no clearly-defined administrative responsibilities, this regional education officer generally acts as a supervisor and an in-service training agent. In addition, he performs the task of monitoring school standards on behalf of the MOE.

In each regional office there are nine or ten elementary supervisors and a few secondary supervisors responsible for in-service training, curriculum development and overall improvement of standards. In actual practice, however, their numbers are insufficient to make any training or quality-improving function effective, and even ordinary monitoring is difficult to handle. Hence, to be on the safe side, the MOE has tended to reduce its role to merely that of control, rather than act as a catalyst for change.

Each of the 73 provinces has an education officer appointed by the MOE, but who also serves the local authority (under the MOI). Under these provincial education officers are the district education officers responsible for day-to-day operations at the district school level. These are also appointed by the MOE but also answerable to the MOI district officer. Since 1963, elementary schools in municipal areas have been run by the municipal authorities who raise much of their own funds for education, and exercise a fair degree of autonomy in operating their schools and employing their teachers. Since 1966, most of the provincial primary schools have come under the provincial administrative authorities. Nevertheless all schools use MOE textbooks and adhere to the MOE curriculum.

The municipal, provincial or district officers have the authority to establish, maintain or discontinue schools, appoint and dismiss teachers, as well as to increase or decrease the finance available to the schools under their jurisdiction. However, since the curriculum is controlled by the MOE, there is little variation in the courses taught, little room for innovation, and consequently little relevance to the realities of the local situation. Also, since quality control at all school levels still comes under the jurisdiction of the MOE, conflicts of interest and rivalry often result between MOE supervisors and the MOI local authorities.

In addition, many of the local officers still see themselves as answerable to the central government rather than the local populace, and this hampers their effectiveness as innovating agents. Moreover, in the rare cases where genuine interest in local affairs arises, this is often dampened by the rather arbitrary process of staff rotation (under the control of the central government) and the consequent uncertainty

with respect to the length of service in each locale.

National committees, such as the National Primary Education Commission, have recently been created to oversee the functioning of the system at each level. Some of these bodies, such as the Commission for Private Schools, are responsible for part of the workings at each level. Ironically, they were created because of the perceived complexity at each level of administration, but because the basic administrative setup has itself remained unchanged, problems of coordination persist. And although policy direction has improved in each level, the tendency towards greater segmentation of the entire education system may have increased.

Control over private schools is exercised through licensing requirements, as well as the range of regulations regarding curriculum, textbooks, dress codes, toilet facilities, equipment, classroom size, physical area, legal definitions of non-profit schools, and the full gamut of regulations that govern all private businesses. In particular, fees are regulated. The latter has long been a focus of controversy, especially since, on a de facto basis, annual fees actually charged by the majority of private schools can exceed the MOE ceiling by as much as ten times on average, albeit in the disguised form of "voluntary" contributions (Myers, 1986). Such rent-seeking (and rent-extracting) behaviour, however, is necessarily confined to the older-established and therefore more prestigious private institutions, so that fee-control essentially serves as a barrier to new entrants, thereby limiting the capacity of the private sector to expand.

A similar control on curriculum and fees is exercised at the university level, with government universities charging fees that cover, on average, only about 4 per cent of the average cost of producing a graduate. Likewise, private institutions are not permitted to charge fees above the ceiling established by the MUA.

The question of fees and finance are addressed in the following section.

3.2 Expenditure and Finance

Over the past twenty years, public spending on the education sector in Thailand has fluctuated between 16 to 20 per cent of total government expenditure. In 1986 government expenditure on education accounted for approximately 20 per cent of the central government's budget, approximately 50 per cent of which was allocated to primary, 15 per cent to secondary and 12 per cent to higher education. Technical

education accounted for some 10 per cent, while grants to private schools ranged between 2 to 3 per cent.

Fees charged vary from level to level and within levels: ranging from 1.6 to 21.8 per cent of costs at secondary level institutions, from 3.3 to 36.6 per cent in vocational education and from 28.1 to 41.7 per cent in teacher training. Consequently, all calculations of the rate of return on investment in education have invariably shown that the private rate of return exceeds the social rate of return at all levels.

In the early years after compulsory schooling was introduced, government expenditure on education came from a special head tax levied especially for the purpose of educational financing. This did not prove very effective or equitable, and by the 1930s it had ceased to be operational.

Another method of tax collection was experimented with between 1953 and 1962, when a special levy was charged on contract stamps; part of the revenue from the stamps went to the Ministry of Finance and the rest was earmarked for expenditures on education and health. It can be said that this system was not only ingenious but also efficient in the welfare economic sense, because the majority of those involved in signing contracts directly benefitted from the secondary and/or tertiary education provided by the government. The system can thus be seen as an attempt to ensure that the chief beneficiaries of the education system repaid to society some of the costs of their schooling. Unfortunately there was no attempt to adjust this arrangement to meet the increasing complexity of the economic system. Rather, it was discontinued just as the education system was beginning to expand rapidly.

Today, government educational revenues come from general sources of taxation, and since these are not always levied efficiently (such that taxes paid correspond to benefits received), sources of potential revenue are usually not fully tapped and equity concerns inevitably arise.

The financial aspects of private schools are regulated through fee controls and allocation of subsidy. Initially, private schools, whether primary, secondary or vocational, received subsidies from the central government according to a rather problematic formula that related the number of classes and fees charged to the number of teachers to be subsidized. The formula was as follows:

$$\text{No. of teachers to be subsidized} = \frac{280 \times \text{no. of classes}}{550 - (300 - \text{fee charged per annum})}$$

The number of teachers was then converted into monetary terms, depending on the actual qualifications, and the corresponding salaries, of the teachers. The higher the qualifications, the greater the subsidy. There was thus an inherent tendency towards qualification escalation built into the system. Schools also tended to deliberately undercharge in terms of overt fees, especially at the primary level, in order to be eligible for the subsidy.

The formula used for calculating the subsidy has since seen several revisions, some in close succession. The revisions in 1985 and 1987 are notable examples, the essential features of which are summarised in Appendix A. Such frequent revisions suggest either that the formulae are exceedingly complex, or that they are ad hoc in nature, and used on a trial-and-error basis, successively revised if found inappropriate. In any case, revisions within a span of a mere two years are certain to be problematic to the schools concerned.

Essentially, the current formula contains various conditions for eligibility, such as the status of the school, the number of required teaching hours for each category of teachers, the number of regular students per class, compliance with MOE evaluation guidelines, percentage of students passing examinations, and compliance with MOE regulations regarding student-teacher ratios. In specific terms, the required teacher-student ratio for each level (i.e. pre-primary and primary, lower secondary and upper secondary) is compared to the actual teacher-student ratio. The lower of the two is then used to calculate the percentage of teachers at each level that would be subsidised. This percentage would also vary according to a conversion scale based on the level of fees charged, such that any school charging over 1,600 baht per year would become ineligible. The number of teachers eligible for subsidy is converted into monetary terms according to a given salary scale based on the teachers' qualifications.

The required teacher-student ratios and the conversion scales (reproduced in Appendix A) were revised in 1987, but the formula remains just as complex. Also, since the subsidy is based on whichever is the lower of the required and the actual teacher-student ratio, no reward is given for above-standard staffing, and convergence towards the minimum requirement is implicitly encouraged. In addition, the singular focus on the number of teachers overlooks other important aspects such as teacher attitude and motivation, as well as other educational inputs such as textbooks and library facilities. The minimum requirements for school libraries were laid down in 1968, and have not

been revised since. As would be expected, these requirements are indeed minimal. This problem will be further explored in section 4.2.

With respect to the actual disbursement of the subsidy, it is interesting to note that even though the number of private schools has been steadily increasing, the number of private schools applying for subsidy each year has been declining, both in absolute and in percentage terms. Table 2 shows that in 1979, subsidy recipients numbered over 2,200 schools, representing more than 90 per cent of all private schools. This number dropped to about 1,700 schools in 1984, accounting for only about 60 per cent of all private schools. This trend may reflect the increasing importance of non-fee contributions, the greater willingness on the part of parents and students to pay higher overt fees than the MOE has so far presupposed, or the fact that in recent years, most of the new private schools have been kindergarten and vocational schools, whose fee ceiling is much higher than at other levels. In any case, it suggests that the market mechanism is working efficiently to equate supply and demand, such that dependence on government subsidy has declined. This is clearly evident from Table 2.

The official rationale for the subsidy has been to avert a fee increase that would otherwise occur, an increase that would presumably place too great a burden on parents and students (National Private Schools Commission, 1984, p. 5). There is little information on the extent to which fees (as well as non-fee contributions) have in fact increased in spite of this policy, and on the perception of private schools towards MOE regulations. This issue needs to be further explored, to determine the extent of redundancy and waste that may have inadvertently been created by the subsidy policy itself.

This is particularly important when we consider the size of the disbursement (of about 600 million baht per year), the possible inappropriateness of the subsidy, and the cost of the enormous administrative machinery that the subsidy policy requires. In addition, the method of granting the subsidy may need to be reviewed in order to better serve its objectives. For example, if there are genuine equity concerns for the burden that students and parents have to bear, then perhaps the method of granting subsidies may have to be overhauled. That is, a direct subsidy through such means as education vouchers to the student rather than the school may prove to be more appropriate.

3.3 Planning

Planning necessarily involves personal judgements about the desirability of accommodating anticipated demand and thereby educating

people to allow personal fulfillment (or merely personal desires), and about the degree to which the economy is to be transformed or altered in some desirable direction so that certain kinds of skill qualifications would be required. Since plans are basically initiated by the central government -- notably by the NESDB and NEC -- government control is enhanced by the current acceptance of the need for comprehensive planning. However, moves have been made during the past decade to decentralize both the planning process and the implementation of policy decisions.

Several agencies are involved in the planning process. There is a Manpower Planning Unit in the NESDB and an Education Planning Division in the Ministry of Education, responsible mainly for coordination between educational goals and general economic planning. Additional functions of the latter include policy research, evaluation of all projects, and drawing up schemes for program analysis and budgeting.

In addition, the MOI through its control of provincial governors also has control over plans relating to regional primary schools, and the Office of the Under Secretary, through its control of the regional, provincial and local education offices, influences plans at these levels. The involvement of so many agencies in different Ministries complicates not only the co-ordination process but also the implementation of plans.

At the operational level, the implementation of plans is undertaken by a plethora of government bodies. Chief among these is the MOE with its nine central departments, 12 regional and 73 provincial offices. In addition, there has been, since 1973, an Education Planning Office in the three major operational departments (General Education, Vocational Education and Teacher Training). At the municipal level the Municipalities are responsible for the operational planning in their own areas, and these come under the overall control of the Ministry of the Interior. In the provincial areas, the Provincial Administrative Authority (under the MOI) together with the Local School Division (under the MOE) is responsible for local planning. At the tertiary level, planning comes under the MUA.

The comprehensive planning of education has become very complex and difficult, partly because of the various bodies involved in the planning process, and partly because administration of the most important part of the school system, i.e. the primary school level, was taken away from the MOE during the First National Plan (1961-1966), while the rest of the sub-university system together with pedagogic and quality control remained under its influence. And even then, top-down planning was vigorously pursued.

Table 2. Subsidy to Private Schools, selected years.

Year	Total Number of Private Schools[a]	Subsidy Recipients # schools	% [b]	# teachers	Total Subsidy Received (million Baht)
1979	2,539	2,288	90.11	43,651	336.26
1980	2,581	2,207	85.51	47,689	474.69
1981	2,672	2,191	82.00	44,534	535.62
1982	2,633	1,819	69.08	39,037	569.34
1983	2,726	1,725	63.30	38,251	615.45
1984	2,853	1,701	59.62	36,962	582.59

[a] Excluding all school categories not entitled to subsidy, such as purely religious schools.

[b] Percentage of schools receiving subsidy to total number of schools.

Source: MOE, Education Statistics, various years.
National Private Schools Commission, Department of Promotion and Subsidy.

During the gestation period of the Third National Plan, attempts were made to remedy some of these defects by involving the regional areas more positively in the planning process. Accordingly a Regional Education Planning Project was set up "to encourage each province to establish an educational plan in two or three years in accordance with the National Plans, as well as in the light of their own conditions, and to use these as a basis for National Education Plans" (Sadab Attasara, Somchai Wudhiprecha and Surat Silpa-Anan; 1974, p. 184). A brief summary of the main educational emphases in each National Plan is given in Appendix B.

A two-way process of planning was gradually developed whereby plans initially drawn up at the local level by the Provincial and Municipal Administrative Authorities were transmitted upwards to the central departments, while at the same time two parallel planning activities at the central level took place under the Central Planning Committee of the NEC and under the Directing Committee of the MOE. The process of decentralization has continued in the following National Plans and the local authorities have been given greater control over the fulfillment of needs in their own areas.

However, in spite of the attempts to streamline the system, problems remain because of difficulties in coordination, inter-departmental rivalry and overlap, vested interests, excessive involvement with traditional administrative processes, insufficiently clear guidelines, low availability of finances, inaccuracies of manpower requirement forecasts, and difficulties in obtaining timely and reliable data.

In addition, even though bottom-up planning was ostensibly encouraged, local planning personnel tended to have little specialised knowledge in planning in general, and in linking and reconciling the planning stages with budget requests in particular.

Moreover, the Budget Bureau is constantly perceived as the supreme authority that decides the fate of the expenditure items requested, and there is a tendency to avoid unconventional items and adhere to previously-approved expenditure items and guidelines. Thus, innovative planning is hampered by the perceived inclination of the Budget Bureau. Avoiding requests that are likely to be rejected at the upper echelons of planning and budgeting is tantamount to relinquishing the power of decision-making.

4. The Problems

4.1 Access and Equity

Thailand has made substantial progress over the last two decades in providing access to primary education. Expansion in primary enrolment has been sizeable, a rather impressive feat considering the high rate of population growth during the sixties and seventies, and the consequent concentration of the population in the lower age groups.

A rough indication of this achievement is the primary gross enrolment ratio, defined as the ratio of the number of pupils of all ages enrolled in primary school, to the population in the official primary-school age group (in percentage form). It is evident from the high ratios (close to and even exceeding one hundred) presented in Row (1) of Table 3, that universal enrolment of the official primary school-aged population has virtually been attained. The growth of primary-school enrolment has now stabilized, with the decline in birth rates during the last decade, with primary enrolment now increasing at a rate of about 3 per cent per year.

However, even though the primary enrolment ratios provide some insight into overall participation in education and indicate the virtual absence of disparity of access to education between females and males, it conceals other important considerations such as the large disparity in participation rates between the rural and urban population, and between different socio-economic classes.

The Survey of Children and Youth in Thailand (NSO, 1977) revealed that, of the total number of children and youths not attending school, an overwhelming 90.8 per cent lived in rural areas. Six years later, this figure was not perceptibly lower at 89.6 per cent (NSO, 1983).

This is not surprising in view of the fact that provision of education is extremely unequal with respect to geographic distribution and the population served. Except for the primary schools run by the Provincial Authorities which are evenly located in the rural areas, a disproportionate number of schools are situated in towns and cities. And of these urban schools, a disproportionate number are located in Bangkok. The latest Education Statistics (MOE, 1986) show that, out of the 2,923 private secondary schools in the country, almost half (i.e. 1,046) were located in Bangkok. For municipal schools, 427 out of a total of 894 schools were situated in Bangkok, with enrollment of 233,321 as opposed to an almost equal number, i.e. 238,620, for the rest of the country. All public kindergarten schools are located in urban areas, not to mention the heavy urban concentration of private kindergartens and

schools.

School location has important implications on the cost of education for rural families. For some, such costs may be prohibitive. Having to attend secondary school in town entails additional time and money costs, and greater forgone productive capacity for those whose after-school labor contribution to family production might otherwise be substantial if the schools were located nearer to their homes. In addition, because the quality of the schools can differ quite markedly, children in rural schools are further penalized, unless substantial additional costs are again incurred to attend the better-quality urban schools right from the primary level.

In addition, Thailand does not fare as well when secondary enrolment is considered. Even though enrolments at the lower secondary level doubled during 1960 to 1970, and tripled at the upper secondary level, with secondary enrolment as a whole growing at an annual rate of 12 per cent throughout the 1970s, the gross enrolment ratios (which in any case overstate the number that remain in school) were still low. Row (2) of Table 3 shows that enrolment in secondary school drops quite drastically from the promising numbers in primary enrolment. This ratio also falls far behind most of the other ASEAN countries, as the figures in Table 4 testify.

Table 3. Gross enrolment ratios

	1970			1975			1985		
	MF	M	F	MF	M	F	MF	M	F
Primary	83	86	79	83	87	80	99*	101*	97*
Secondary	17	20	15	26	28	23	30	n.a.	
Tertiary	1.7	1.9	1.4	3.4	4.0	2.7	19.6	n.a.	

Source: UNESCO, Statistical Yearbook 1985, 1987.

* 1983 figures.

Table 4. Comparison of gross enrolment ratios at the secondary level in ASEAN countries

	1970			1975			1983		
	MF	M	F	MF	M	F	MF	M	F
Indonesia	16	21	11	20	25	15	37	42	31
Malaysia	34	40	28	42	46	38	49	50	49
Philippines	46	n.a.		54	n.a.		63	61	66
Singapore	46	47	45	52	51	52	69	68	69
Thailand	17	20	15	26	28	23	35	35	34

Source: UNESCO Statistical Yearbook, 1985, 1987.

Statistics on continuation rates by cohort also support the conclusion based on the gross enrolment ratio. That is, while the percentage of students continuing to the next grade is high -- between 85-98 per cent -- in the primary grades (Primary 1 to Primary 7 from 1976 to 1980), the percentage of those continuing on to secondary school after completion of the final primary grade drops dramatically to around 50-60 per cent.

The Survey of Children and Youth (NSO, 1977) also found that students in urban areas tended to leave school at a higher level of education than rural students; about 60 per cent of the youths aged 15-19 were still in school in the urban areas, whereas the corresponding figure for rural youths in that age group was a mere 20 per cent. The next Survey (1983) found a similar pattern, again with about 60 per cent of the youths aged 15-19 still in school in the urban areas, and only 18 per cent of this age group still in school in the rural areas.

Both surveys further suggest that financial difficulties were a major cause of non-continuation into secondary school, a problem that would further exacerbate the existing inequality of opportunity and income. Moreover, even when remaining in school, children from poor

families do not perform as well as other children. The main causes of drop-out and repetition of grades were found to be poverty, malnutrition, illness and absenteeism, and parental preference. In order to progress up the education ladder, several screening examinations have to be passed. A National Education Commission survey (NEC, 1977) of performance in these examinations showed that children from lower socio-economic backgrounds invariably registered lower scholastic achievement than their more advantaged classmates. A limited survey relating nutritional status to school grades (Chutikul, 1986) also showed that malnutrition has a negative impact on examination scores, independent of family income and other socio-economic variables.

At the tertiary level of education, Thailand's enrolment has jumped from about 55,000 in 1970 to over one million in 1986. The single most important cause of this increase is the government's policy of accommodating the huge increase in demand for university placement by creating two "open" universities, admission to which is unrestricted (and hence, unlimited). These two universities, founded in 1971 and 1978 accounted for 56 per cent of tertiary enrolment in 1978 and 85 per cent in 1985. Private universities and colleges have also been encouraged, but these still account for less than 10 per cent of total enrolments.

The gross tertiary enrolment ratios in Row (3) of Table 3 reflect this large increase, the ratio jumping from 1.7 in 1970 to a huge 25.0 in 1982, but falling to 19.6 in 1985.

The large increases in tertiary enrolment in Thailand is again clearly evident when comparison with the other ASEAN countries is made. Tables 5 and 6 show that the increase in tertiary enrolment in Thailand far outstrips that of the other ASEAN countries, growing at an astounding annual rate of 27.9 per cent over the 1970-83 period, a rate of about four times that of Indonesia, the Philippines, and Singapore.

The inequity induced by the present system of access to university education is apparent when we examine who the beneficiaries of the current system are. It can be seen from Table 7 that students from professional and commercial backgrounds are substantially over-represented in the student population. A value of one for the Selectivity Index (alternatively called the Ratio of Advantage) would roughly indicate equality of access -- that the proportion of the student population from a particular background corresponds to the proportion of that occupational category in the total population. Even though the index ignores possible deviations due to factors such as differences in family size and age structure, the magnitudes are such as to indicate that differential access is likely to be a major consideration.

Table 5. Comparison of gross enrolment ratios at the tertiary level in ASEAN countries

	1970			1975			1985		
	MF	M	F	MF	M	F	MF	M	F
Indonesia	2.6	4.0	1.3	2.4	n.a.		5.6	7.8	3.5
Malaysia	1.6	2.3	0.9	2.8	4.0	1.6	6.0	6.7	5.3
Philippines	19.8	17.4	22.2	18.4	n.a.		38.0	35.5	40.3
Singapore	6.7	9.3	4.1	9.0	10.7	7.3	11.8	13.3	10.2
Thailand	1.7	1.9	1.4	3.4	4.0	2.7	19.6*	n.a.	

Source: UNESCO, Statistical Yearbook 1985, 1987.

* It is interesting to note that this ratio has fallen from 25.0 in 1982

Table 6. Average annual growth rates of students enrolled

	Period	Primary	Secondary	Tertiary
Indonesia	1970-1982	5.4	8.5	7.9
Malaysia	1970-1983	1.8	5.2	12.1
Philippines	1970-1981	1.8	5.0	6.7
Singapore	1970-1983	-1.7	2.0	7.5
Thailand	1970-1983	2.0	9.2	27.9

Source: UNESCO, Statistical Yearbook 1985.

An Index value above one indicates over-representation, and below one, under-representation. It is clear that students from farming and working class backgrounds are under-represented in the student population, with indices of 0.16 and 0.12 respectively.

Inequality of access is further evident in Table 8. This table compares the average family incomes of students and other population groups. It shows that the average family income of university students exceeds that of the population at large by 5-7 times. And compared with farming and working-class families, the student population has considerably higher family incomes, i.e. up to 10-20 times higher.

Looking at the affordability of university education, it can be seen from Table 9 that on average, tuition fees amount to only 2.5 per cent of the annual family income of the student population.

It is clear that the main beneficiaries of the present situation of low fees and heavy government subsidy of higher education in Thailand are not the low-income families. However, if fees are raised, a main concern is whether such increases would further limit the chances of the poor. Given the sequential nature of formal education, and the evidence on the pattern of enrolment and participation among different population groups at the lower levels of education, it would appear that the disadvantaged groups would in fact be excluded from the educational system even before they have a chance to qualify for admission to higher education. We will return to the issue of cost recovery through fees in the section 4.4.

One area of accessibility which has progressed steadily in Thailand is perhaps adult and informal education. These programs have grown from traditional intensive-learning schools, to various services which seem to be both diverse in nature and comprehensive in area coverage. In 1980, there were a total of 3,784 schools offering courses to almost half a million adult students. Many programs are noticeably established outside Bangkok, such as the 829 functional literacy schools, and the mobile vocational-training units. Informal learning groups sponsored by the the Ministry of Education have grown rapidly, and now number in the thousands. At present, training in vocational skills at correctional institutions is also widely organized, and some 14 schools have been set up. There has been no systematic assessment of the success of these programs or its relative contribution, but the declining adult illiteracy rate (Table 10) that UNESCO reports for Thailand (though somewhat suspiciously low) may to some extent be attributed to some of these programs.

Table 7: Distribution of University Students by Father's Occupation, with Selectivity Index, 1983

OCCUPATION	POPULATION DISTRIBUTION	STUDENTS' DISTRIBUTION	SELECTIVITY INDEX
Professional	3.05	27.35	8.97
Commerce	8.99	45.36	5.05
Farming	68.52	11.15	0.16
Production workers	10.41	1.29	0.12
Others	9.03	14.85	1.64

Source: National Statistical Office (1984)
National Education Council (1985)

Table 8: Average Family Income Per Month of Students and Other Population Groups, 1983

POPULATION	AVERAGE FAMILY INCOME (Baht)
Students in Public Universities	11,197
Students in Private Universities	15,477
Total Population	2,380
Farmers	578
Manual/Production Workers	1,362

Source: National Education Council (1985)
National Statistical Office.

Table 9: Tuition Fees as a Percentage of Annual Family Income

INSTITUTION	AVERAGE ANNUAL FAMILY INCOME (Baht)	TUITION FEES	%
All Universities	137,364	3,328	2.5
Lowest tuition* (Thammasat)	155,505	2,455	1.6
Highest tuition* (King Mongkut)	97,774	6,103	6.2

* The level of tuition fees mainly reflects the nature of the courses offered (for example, humanities as opposed to the sciences).

Source: National Education Council (1985)

Table 10: Illiterate population,* 1980

	ILLITERATE POPULATION			PERCENTAGE ILLITERATE		
	Total ('000)	Male ('000)	Female ('000)	Total	Male	Female
Indonesia	28,325	9,490	18,834	32.7	22.5	42.3
Malaysia	2,399	791	1,608	30.4	20.4	40.3
Philippines	4,626	2,200	2,426	16.7	16.1	17.2
Singapore	300	75	225	17.1	8.4	26.0
Thailand	3,296	1,049	2,246	12.0	7.7	16.0

Source: UNESCO, Statistical Yearbook 1987

* The adult population is defined as aged 15 and above.

4.2 Quality and Relevance

4.2.1 Quality Measures

The task of defining "quality" is perhaps an intractable one, since it can be viewed from many different perspectives, each of them imperfect because of education's multi-dimensional nature. Analysts sometimes use such measures as examination scores, cognitive tests, length of time needed for students to attain some target level of formal schooling, standardized tests of reading ability and language, mathematics and sciences and non-cognitive tests designed to measure students' attitudes, motivation and aspirations (Psacharopoulos and Woodhall, 1985).

Others attempt to measure the ability to utilize knowledge gained, such as through success in finding appropriate employment, career advancement, success in being admitted to institutions of higher learning, and so on.

Still others measure the inputs into the educational machinery such as student-teacher ratios, student-teacher contact hours, availability and use of libraries and laboratory equipment, faculty research activity, teacher qualifications, measures of teaching ability and attitude, and other amorphous characteristics such as the learning environment. From there, a positive relationship between these inputs and the quality of the output is implied.

None of these measures are free from problems. Apart from the obvious difficulties in administering external tests and making inferences about outcomes from the inputs, there are other difficulties in disentangling the effects of schooling and the confounding effect of natural ability, and of defining and judging quality, such as the need to distinguish between a poorly taught/administered relevant curriculum, and a well-taught/well-administered irrelevant one (as well as other combinations and permutations). In addition, the ability to get through a curriculum, and the ability to learn may not be synonymous, and neither may be related to analytical ability or any other specific aspect of "quality" that one may be interested in. Hopefully, performance in a well-designed curriculum would also indicate differential ability.

Casual empiricism suggests that in Thailand, the average quality (in terms of cognitive and analytical ability) of the graduates at each level generally falls below the educational objectives. This may be especially so in the rural areas, a reflection of the low availability of educational inputs. In particular, expenditure on teaching materials, textbooks, and other education equipment is minimal, or even non-

existent in the small remote schools.

A review of ten studies in developing countries (Hyneman, et. al., 1978) found a more consistently positive relationship between student achievement and the availability of books than between achievement and any other input factor such as class size, teachers' training, or boarding facilities. In the Philippines, it was observed that scores in the first grade increased by 12 per cent on tests in mathematics, science and language after the ratio of students to books increased from 10:1 to 2:1 (Hyneman, et. al. 1984, p. 35).

In Thailand, the portion of recurrent expenditure for education spent on teaching materials or textbooks is very low and, as in most of the developing countries, teachers' salaries absorb a large portion of that expenditure. Especially in Thailand, the input that does not seem to be lacking in general is teachers. The student-teacher ratio is quite small, and class sizes range from 25 to 40, which is considered a manageable number. In fact, in the ASEAN region as a whole, the student-teacher ratio may even be on the low side (Table 11), with figures rarely exceeding 30.

Even though geographical imbalance is also present here, with some remote schools having only one teacher handling all the classes in his/her elementary school, nevertheless the situation has improved over time. The overall student-teacher ratio has declined steadily, and teachers' qualifications have also increased over time. In 1980, 98 per cent on the teachers in the teacher training colleges in Thailand had at least a bachelor's degree. In the public secondary schools, 52 per cent had similar credentials and another 40 per cent had a diploma in education (National Statistical Office, 1980).

Whether the decline in the student-teacher ratio or the rise in teachers' qualifications can be considered an achievement, however, is a different matter. With widespread unemployment of university and teacher-training-college graduates, the favorable statistics may merely be a symptom of qualification escalation or what some have called "the diploma disease", unaccompanied by any significant increases in skill, ability, or productivity. If this is the case, and education is reduced to a mainly unproductive screening device, then the resources spent in higher education should usefully be diverted elsewhere.

Table 11. Number of students per teacher in ASEAN countries, at various educational levels.

	PRIMARY		SECONDARY		TERTIARY*	
	1970	1982	1970	1982	1970	1982
Indonesia	29	29	13	16	12	8
Malaysia	31	26	26	21	10	n.a.
Philippines	29	32	33	34	22	30
Singapore	30	29	20	20	12	11
Thailand	35	22	16	27	7	26

Source: UNESCO, Statistical Yearbook 1985

* tertiary does not include open universities.

Table 12. Percentage of repeaters at the primary and secondary levels

	YEAR	PERCENTAGE OF REPEATERS	
		Primary	Secondary
Indonesia	1983	9.0	2.0
Malaysia	n.a.	n.a.	n.a.
Philippines	1982	2.0	n.a.
Singapore	1983	1.0	5.0
Thailand	1980	8.0	3.0

Source: UNESCO, Statistical Yearbook 1985.

The question of whether higher teacher credentials improve the quality of teaching and student achievement is still the subject of much debate. In developed countries, some studies cast doubt on this (Coleman, 1966; Plowden, 1967; Jencks, 1972), suggesting that teacher attitude is more important than academic qualification in improving student achievement. However, there probably exists some threshold level beyond which teacher qualification may cease to be a major factor. Studies in developing countries provide some indication that trained teachers do seem to improve the level of achievement among the students (Husen, et. al., 1978).

With respect to the student-teacher ratio, it is often argued that a reduction in student-teacher ratio would improve the quality of learning and that very small classes (of 15 students or less) can have an important positive effect on student achievement. However, while a large class-size is obviously unwieldy and distracting, and instruction may be hampered by it, some reports (Haddad, 1978) argue that "variation in the size of the class within a range of 20 to 40 makes little or no difference in average performance." This is an area in which research is needed to identify where the upper threshold lies for each specific locality so that teacher recruitment can be optimized.

Thailand has placed great emphasis on teacher training in the past, as articulated in the national development plans. Teacher training was seen not only as a natural prerequisite for the expansion of education, but later evolved by default into one of the outlets for the unemployed high-school graduates failing to gain admission into university. Today, the excess supply of teachers protrudes itself on even the casual observer. Thousands of teachers vying for less than five vacancies, have become a common phenomenon. The government is the major employer and teachers' salaries already takes a huge chunk of recurrent expenditure.

The difficulty with education policy here is that it has to link up with the overall problem of national unemployment. Thus, while it may be argued that a further reduction in the student-teacher ratio is generally unwarranted, except in the remote areas, this would exacerbate the unemployment of teachers. This dilemma is typical of the problems in the education sector today. A holistic approach to education planning needs to be taken, for the piece-meal method that has characterized past policy can at best deal with specific problems, and allow the underlying causes to persist. The education system needs to be overhauled and rationalized, if ingrained imbalances are to be tackled and corrected.

Turning to other measures of "quality" and the "internal efficiency" of education, common measures are the repetition rate and the drop-out rate at each school level. The average percentage of repeaters at the primary and secondary level for the ASEAN countries, presented in Table 12, show that considerable variation occurs in these countries. At the primary level, an average 8 per cent of the pupils repeat their grades in Thailand, while only one per cent do so in Singapore.

However, both the repetition rate and the drop-out rate are misleading as indicators of "waste" and "internal inefficiency". They are misleading for several reasons. First, if waste is defined as the use of educational resources in such a way that does not produce learning or enhance ability, it is debatable whether dropping out before a specified cycle is completed implies that no knowledge had been gained before that time. Second, if repetition is considered wasteful because it allows fewer students to be admitted, this would hold true only for the first level, and not at others.

In addition, the repetition rate may be influenced by a host of other factors. For example, in the 1960s, when a standardized national school-leaving examination was used, the rate of progression from the penultimate year to the final year of high school was only about 65 per cent. This was low because the school's reputation rested on the percentage of students passing the national examination, and therefore, those deemed unprepared for this hurdle would be retained in the penultimate year. As the curriculum became increasingly more diversified, the common national examination became more and more untenable. Also it came to be recognized that the examination system may have distorted the motive for learning as both teacher and student alike became obsessed with examination scores. Thus the national examination was abolished in 1976. Immediately thereafter, the progression rate jumped to 95 per cent. To infer from the lowered repetition ratio, that internal efficiency had improved would be grossly inappropriate.

Ultimately, of course, the success of the education system depends crucially on the student inputs themselves. Evidence exists to indicate that poor children perform less well in tests of ability in schools than those from more affluent segments of the population. In many cases, nutritional deficiencies in early childhood may have affected their learning capacity, but the magnitude of this effect is uncertain since it is confounded by the presence of many other influences.

It is nevertheless well known that poor health affects attentiveness and motivation which in turn may increase absenteeism,

induce apathy and harm a child's cognitive development. Several studies also show that a vibrant home environment is extremely important for intellectual stimulation and the motivation to learn.

Since school achievement depends on the capacity of the students to reap benefits from the facilities provided, programs to expand enrolment and cover wider segments of the socially and economically-disadvantaged population will therefore have to be undertaken in conjunction with other poverty alleviating measures so that these initial handicaps can be counteracted.

4.2.2 Relevance

With respect to the relevance of education which is sometimes called its "external efficiency", there are grave doubts in Thailand about the appropriateness of skill training at all levels, but for different reasons at each level.

The curriculum that was used at the school level from 1954 onwards into the 1960s had long been deemed unsuitable because of its singular focus on academic pursuits. This curriculum has been compared to a straight-jacket (Puntasen, 1987), forcing students to continue on to successive levels in a narrow predetermined course. There was no flexibility in the choice of subjects and standardized school-leaving examinations were administered by representatives of the central government or the district authority along Western models of education. High-school graduates aspired to enroll in universities, partly because they were ill-equipped to find professional employment. High-school graduates also flocked to Bangkok, since the material learnt in school had little to do with the rural working environment.

The curriculum has since been revised with vocational and professional studies gradually introduced. Purely academic schools were modified into what is now known as comprehensive schools. And with flexibility in curriculum design at the local level and the abolition of the centralized school-leaving examinations, each school was in a position to design their own curriculum to suit local needs.

However, this system of diversified education has not been working well. First, funds are too limited for the purchase of tools and equipment necessary for vocational education. Curriculum diversification involves higher cost, requiring new teachers and additional physical resources. With insufficient resources, the skills imparted are often inadequate to bring about significant differences in employment prospects. Secondly, parents and pupils alike are often reluctant to aim

for a vocational profession. Social mobility is perceived as being dependent on academic education. Once the vocational stream is chosen, the chances of competing for admission to higher education are substantially reduced. Many students who are forced to choose the vocational route because of failure to find placement in the highly competitive academic streams, are not motivated to take best advantage of the potential benefit that the vocational stream may offer.

In addition, the benefits of vocational training tend to be uncertain. There is no dependable empirical evidence to suggest that skills are significantly improved or that positive attitudes towards work are better inculcated among students who have gone through the diversified curriculum. Blaug (1971) also finds that vocational education is very costly relative to other types of education, both to the students and to society as a whole.

Another quirk in the system is that, being enrolled in higher education (for four years instead of two years in the vocational stream) allows military training to be undertaken once a week, and this grants exemption from full-time military service. There is thus an added incentive to stay in school and circumvent the military service requirement. This path is made particularly attractive with the two open universities, and the low level of fees charged in all public universities.

The policy of passively accommodating students' demand by providing quick and ready admission into the fields of study that are relatively easy (because of the absence of equipment costs) such as the social sciences and humanities, has to be critically reviewed, in the face of stark imbalances between demand and supply as already mentioned, the fiscal strain that the present system of heavy subsidy no doubt causes, and the whole range of efficiency and equity issues. This is particularly true of one of the so-called open universities, Ramkamhaeng, which actually operates like a closed university, complete with campuses and regular classroom lectures. To its credit, the other open university, Sukhothai Thammathirat, relies almost solely on distance learning techniques, generally serves the working population, and may thus prove more cost effective and more relevant to the country's needs.

The extreme wastefulness of attending universities and colleges for reasons other than the hope of gainful, productive employment after graduation cannot be over-emphasised. Regular surveys of graduates conducted by the Ministry of University Affairs indicate that 30 to 40 per cent of the graduates from government universities fail to find employment one year after graduation.

The average waiting period for first degree holders in 1983 was 12 months for males and 14 months for females, 13 months for male master's degree holders, and for Ph.Ds it was also as high as 12 months. Such long waiting periods were experienced not only by holders of degrees in the arts and humanities, but also by science graduates. More detailed investigation by field of study reveals that in the behavioural sciences, the unemployment rate by cohort, one year after graduation, can be as high as 45 per cent. The number of educated people unemployed in 1986 was estimated at 200,000 people.

It is clear that the accommodating policies at the higher education level leave much to be desired in terms of the relevance of such education in serving the country's manpower needs. Even when productive pursuits are stressed, emphasis is placed more on employment-seeking rather than on entrepreneurship and innovative undertakings.

4.2.3 Manpower Planning

The kind of manpower planning that seeks to identify future requirements and thereby design educational systems so that a labor force with the required skill and attributes is produced at the right time, has not in general been successful in avoiding and alleviating critical shortages and surpluses.

The fixed relationship normally assumed between output and skill and the consequent matching of skill requirements and projections of output growth in the different sectors, ignores the impact of technological changes and the potentially vast possibilities for substitution between different kinds of labor and/or between labor and other productive inputs.

In addition, the assumed relationship between the type of education received and the type of occupation undertaken is often untenable, due to the various circumstances that affect the operation of the labor markets and the choice of employment. Also, manpower planning tends to focus on the formal wage sector and on higher levels of education or training, and most importantly, it tends to suffer from wide margins of error (Psacharopoulos, 1983). The result is the imbalance that is clearly evident. The seriousness of the situation also raises important questions about the desirability of maintaining the current level of subsidy, especially to higher education where private marginal benefits far exceed the marginal benefits of that level education to society.

With respect to external efficiency and the relevance of education to manpower needs, the recent phenomenon of unemployment and long waiting periods before job placement among the educated raises further questions that should be explored. For example, what effect do long waiting periods and the reduced prospects for employment have on the wage structure? Does it lead to compression of the wage structure, a narrowing of the wage differentials for different qualifications, a "bumping off" effect down the qualification ladder? Do declining job prospects encourage a change of attitude; do they reduce the prestige value of higher education? A dynamic picture is needed, but our vision is at present rather blurred.

4.3 Costs and Rates of Return

The most important estimates of costs and rates of return at each level of education in Thailand are those of Mark Blaug (1971). Other studies along the same lines, but differing in coverage and methodology, include works by Puntasen (1976), Panichpakdi (1976), Plengkhum (1977), Vilasdechanond (1978), and the National Education Council (1981 and 1982). The most recent calculation of costs and rates of return at the university level was undertaken by the National Education Council (1987). On the cost side alone, there have been several works such as those by Pornnapa (1962), Thongkoom (1965), Roongdang (1970), Chatragupta and Silpa-Anan (1974), Soongsathitanond (1975), Rueksamran (1977), and Uampuang (1982). However, the coverage of these cost studies is rather limited, mostly being confined to certain fields and to certain institutions only.

The rate of return studies invariably show that the private rates of return on investment in education exceed the social rates of return at all levels. Blaug's study, based on a survey of Bangkok-Thonburi residents in 1970, found that the highest marginal social rates of return were for the lower primary level (Primary 1-4), with progressively lower rates for successively higher levels of schooling. The highest social rate of 27 per cent was associated with completion of Primary 4, which at that time, was the statutory minimum schooling requirement in Thailand. The private rate, on the other hand, was found to be considerably higher. That is, the private rate for completing Primary 4 was 49 per cent, almost double the social rate. And as with the social rates, the private rates also declined with each successive move up the educational ladder.

The ratios of total private to total social costs, and of direct private to direct social costs, reproduced here as Table 13, also confirm the fact that, at least officially (i.e. disregarding rent-extracting

solicitations of contributions) education is subsidised at all levels. More interesting is the large government subsidy to higher education, especially in comparison with the much smaller subsidy to the secondary (academic) level, where students actually paid 83 per cent of the direct costs.

The difference between total and direct costs, according to Blaug, consists of the earnings foregone while still in school. Thus, inclusion of this component of costs at the tertiary education boosts the figure to 70 per cent in Column (1). It can be observed that, with the high rates of unemployment among the educated population at the present time, any current estimates of earnings foregone would have to be substantially revised in a downward direction.

Preliminary findings by the NEC (1987) also show that the private rate of return to investment in university education is quite high, averaging about 18 per cent. On the other hand, the social rate of return to investment in university education is estimated to be only about 10 per cent, which compares unfavourably not only with the private return, but also with the social rate of return to other social investments such as irrigation, as well as the social rates of return to higher education in other developing countries. In addition to the economic benefits, the NEC study also explored the contribution to society made by university graduates. This was found to be not significantly higher than the contribution of high-school graduates. And on the cost side, it was found that the burden borne by the state is extremely high, at around 88 to 93 per cent, while the private contribution remains at 7 to 12 per cent.

Table 13. Comparison of private and social costs at each level.

	Ratio of total private to total social costs	Ratio of direct private to direct social costs
	(1)	(2)
Primary	0.46	0.46
Secondary (Academic)	0.95	0.83
Tertiary	0.70	0.18

Source: Adapted from Blaug (1971, p. 5-8).

4.4 Financing

The basic issues with respect to the financing of education involve determining how much of the economy's total resources should be devoted to education, how much should be spent by the government, and how much reliance should be placed on non-government sources of finance to meet the balance.

In order to answer such questions, the providers, beneficiaries and sources of finance in the present system need to be first identified. The situation in Thailand is depicted in Figure 2. Providers include the Ministry of Education, other Ministries, and the private sector. The beneficiaries, as we have seen, tend to be the more privileged members of society.

To answer questions regarding the financing of education, the characteristics of the recipients need to be analyzed to determine their willingness to pay and to deal with problems of equity.

The problem of how to pay for commodities such as education which contain public-good elements and which some consider as "merit goods" in their own right is quite simple at the conceptual level, but very complex at the operational level. At the conceptual level, the question is who should pay for the cost of providing services: the recipients of the services through pricing mechanisms (fees), the government through subsidies, or other funding sources such as private businesses, collective bodies, and charitable organizations.

The basic principles in dealing with the issue are well known. Each good or service should ideally be priced so that the marginal social cost to users (including fees as well as non-fee expenses such as travel costs) equals the marginal social benefit. However, this criterion is difficult to apply directly, since marginal social costs and benefits cannot be easily observed. Nevertheless one may proceed by first setting the price equal to marginal private cost and then adjusting this (upward or downward) by exploring the existence and size of externalities, public-good and merit-good elements, transactions costs, the administrative burden, the effect on services supplied, the difficulty in determining the level of individual consumption, and market failures in other sectors.

It is extremely difficult, however, to translate these general considerations into concrete financing strategies but a financial masterplan and recommendations for its implementation are urgently needed. Apart from the magnitudes and the overall levels of spending,

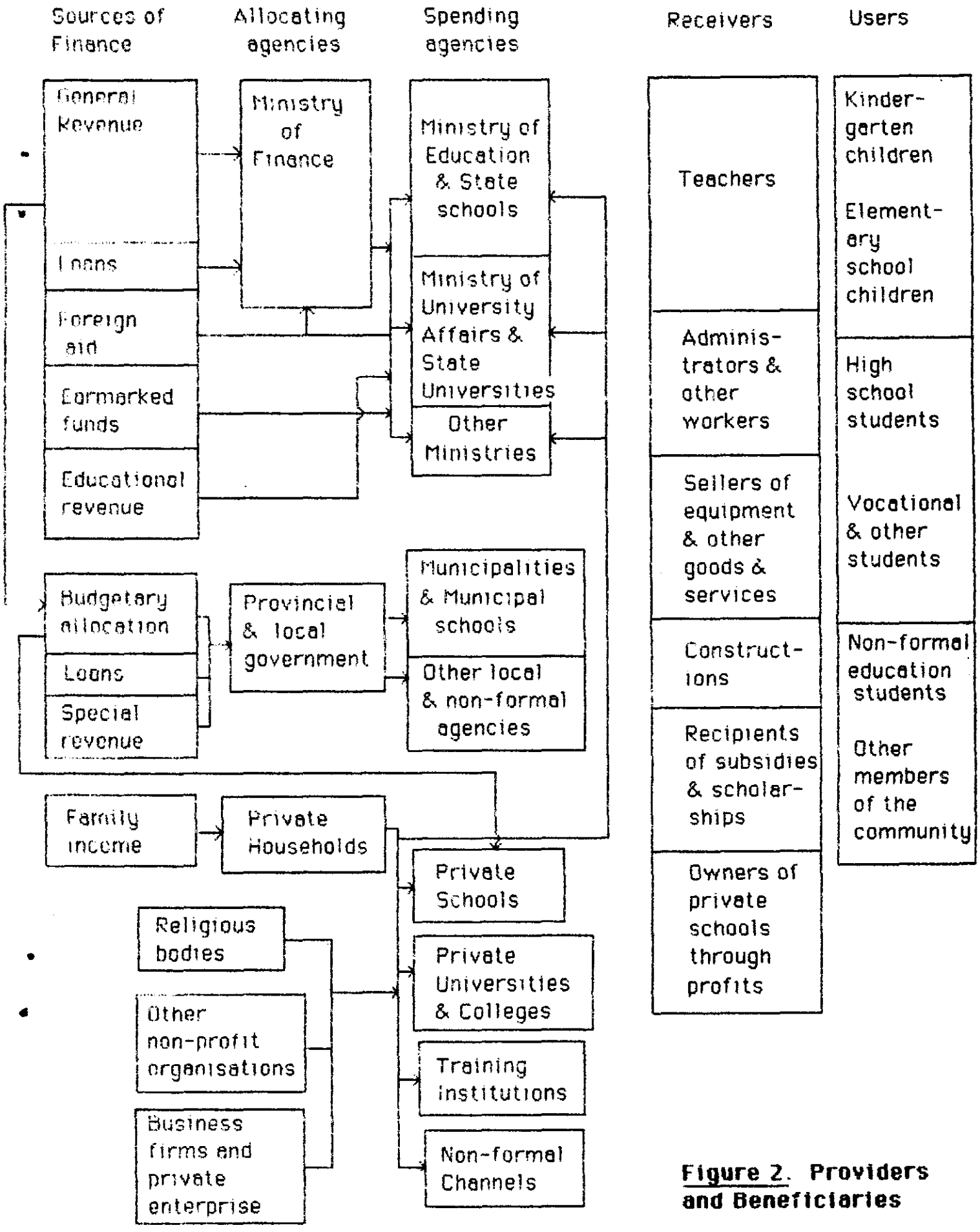


Figure 2. Providers and Beneficiaries

it is also necessary to resolve how public expenditure on education is to be allocated among the different levels of education and how public expenditure on education is to be distributed between different kinds of educational inputs. Given the current fiscal constraints, it is also imperative that cost-effective procedures are seriously incorporated.

The current level of public expenditure on education in the ASEAN countries is presented in Table 14. The proportion of government expenditure on education hovers around 2-4 per cent of GNP, with Malaysia standing out with expenditures growing from 4.4 per cent of GNP in 1970 to 7.5 per cent in 1982. As a percentage of the government budget, Thailand diverges from the general pattern of falling expenditure, registering an increase from 17 per cent in 1970 to more than 20 per cent in 1986.

Table 14: Public expenditure on education as a percentage of GNP and total government budget

	Percentage of GNP			Percentage of total government budget		
	1970	1975	1982	1970	1975	1986
Indonesia	2.8	3.0	2.2	n.a.	13.1	9.3
Malaysia	4.4	6.3	7.5	17.7	19.3	n.a.
Philippines	2.6	1.9	2.0	24.4	11.4	n.a.
Singapore	3.1	2.9	4.4	11.7	8.6	9.6
Thailand	3.5	3.6	3.9	17.3	21.0	20.1

Source: UNESCO, Statistical Yearbook 1987, pp. IV-12-IV-18, Table 4.1
Thailand. Budget Documents, 1986.

One of the problems with rising expenditures is that much of it is non-discretionary. It can be seen from Table 15, that teachers' salaries take up a major portion of the recurrent expenditure on education. And in most developing countries, teachers are government officials with lifetime employment and automatic annual promotion up the salary scale. Given this system of tenured, guaranteed employment, teacher remuneration alone will soon conceivably absorb the entire education budget, if current trends persist.

Even though evidence abounds that teaching materials in general, and textbooks in particular, have an important effect on student achievement, the realities of the situation in the civil service must be taken into account. Because of the inability to terminate employment, a reallocation of resources to education inputs other than teachers' salaries can be achieved only if a radical redeployment of personnel between different government departments is undertaken, or employment termination with severance pay becomes more acceptable. However, the problem with the last alternative are well-known, and in fact, any attempt to even prevent the current pay structure from being upwardly revised would be inappropriate since individual teacher's pay is actually not high, relative to other occupations.

Turning to the distribution of expenditure by level of education, it can be seen from Table 16 that a disproportionate emphasis is placed on higher education. In view of the abundant evidence that private returns from this level of education is high, the continued subsidization of this level of education is highly questionable.

Lessons in public finance tell us that if there is reason to believe that individuals tend to underestimate the returns of education and under-invest, thereby causing a loss of future welfare in a given society, then government intervention can be justified on the grounds of the "father knows best" argument. However, if the under- estimation refers only to the individual's own private return, intervention would only take the form of information provision. In the case where some of the positive returns to the individual spill over to the rest of the community, making social returns higher than the sum of individual returns, then government subsidy can be justified in order to induce students to obtain more education. Effectively, society would be sharing the costs with them. Such intervention is particularly important in a situation of imperfect capital markets. For even if individuals were equipped with perfect information about their own returns to education, loans from the capital market cannot be easily resorted to, to finance education since the individual is unable to offer his own (expected) earnings as collateral.

Evidence from various studies (such as Psacharopoulos and Woodhall, 1985) invariably indicates that the private returns to education exceed the social returns at all levels, and this is particularly true for tertiary levels of education. In view of the inequality of access discussed earlier, and the high private returns, the efficacy of cost recovery through fees should be seriously considered, together with built-in mechanisms, such as scholarships and fee exemptions, to protect the really needy.

However, a great deal of information is required to obtain the appropriate level of fee increases, the actual costs, the ability to pay, as well as the elasticities involved. The data problems involved here are enormous. In estimating costs (without huge, expensive surveys), one has to rely on macrodata taken from government budgets, that give information on expenditures and not on costs. (Opportunity costs are of course ignored).

In addition, the available data generally show planned and not actual expenditures. The budgetary distinction between current accounts and capital accounts also does not coincide with the economic distinction between variable and fixed costs. Also budgetary itemization by type and not by activity, makes it difficult to obtain the cost of inputs other than that of teachers' salaries. In addition, the definition and classification of expenditures on education, as well as the coverage of data often changes over time. Difficulties also arise in attempting to synthesize and reconcile all budgets on education from all the different agencies. Even though all schools are required to submit reports on costs, there is doubt about the reliability of reported figures, and the system of data collection itself can be said to be oriented more towards storage than retrieval.

That it is difficult to ascertain what the cost of education is, given current budgetary practices, is more of a problem today than it was earlier because of the severe financial constraints that the government is facing. And it certainly impairs the capacity of economic analysis to help make policy recommendations. Nevertheless, it is imperative that attempts be made to rationalise the system of education finance so that the limited resources can be more efficiently utilised.

Table 15. Percentage distribution of public current expenditure on education by type of expenditure

	Year	Teachers' salaries	Teaching materials	Other
Malaysia	1982	70.9	5.5	23.6
Philippines	1982	84.5	3.1	12.4
Singapore	1982	90.1	1.0	8.9
Thailand	1983	78.0	4.9	17.1

Source: UNESCO, Statistical Yearbook 1985, pp. IV-26 - IV-28, Table 4.2

Table 16. Percentage distribution of public current expenditure on education by level of education

	Year	Primary	Secondary	Tertiary
Malaysia	1980	35.0	34.0	12.4
	1982	33.6	34.0	14.0
Philippines	1976	65.7	6.7	22.4
	1982	60.0	19.1	20.1
Singapore	1975	38.1	34.3	17.6
	1982	34.3	34.4	26.4
Thailand	1975	62.5	16.2	11.1
	1983	60.2	21.1	13.8

Source: UNESCO, Statistical Yearbook 1985, pp. IV-36 - IV-40, Table 4.3

5. Policy Dilemmas

Like many countries, Thailand has expanded educational enrollment very rapidly over the last three decades, such that universal primary education has practically been achieved. Education has increased the geographical mobility of workers by increasing their range of possible occupations, thus allowing them to take advantage of better earning opportunities. However, the benefits of education have not been equally distributed, and general dissatisfaction has contributed to either disillusionment with the education system and its perceived non-relevance, or to even greater desires to complete even higher levels of education in the hope of capturing the benefits that apparently accrue to the few.

The high rate of unemployment among newly graduating high-school leavers as well as vocational school and college graduates, due to gap between the supply and demand for educated manpower, has been particularly serious in recent years. The development of educational opportunities has raised the level of educational attainment of the economicallly active population, but this has not been accompanied by a parallel expansion in the economy to enable these graduates to be absorbed into the labor market. This is symptomatic of the fact that the type of education provided is generally ill-fitted to labor market needs.

The situation is particularly problematic in the current period of austerity since budgetary allocation for social expenditure is not likely to be increased in real terms, and current levels of subsidy, if maintained, would considerably strain the country's fiscal capacity.

Given the situation of limited resources, the country is faced with a three-fold dilemma. First, the relevance of the curriculum has to be improved in order to avoid waste of resources. The problem here is to decide between a more or less uniform curriculum as opposed to a more varied one. A curriculum that is deemed relevant to local needs may be seen as more appropriate, but such a curriculum is necessarily discriminating, and would thus deny students the opportunity to become more mobile both geographically and socially.

The debate over the introduction of productive work in the school curriculum is almost as old as the debate about what "relevance" actually means. Opinions about the virtues of such reforms are as divergent today as they were more than a century ago. In recent years, many developing countries have introduced, or at least recommended, productive work into basic education. In a majority of cases, the official rationale behind this reform seems to be that such

work increases the relevance of the curriculum. But a by-product of the reform is the possible sale of the products of this activity, and this could be a way to help finance recurrent costs and quality improvements.

The second dilemma is to reconcile the need for quality improvements as well as for quantitative expansion. Given the social pressures to expand education, a reduction of unit costs must be achieved if enrollment is to be increased within a given budget. However, cost reduction may have detrimental effects on quality, unless the internal efficiency of education is improved such that unit costs are reduced at the same time that the quality of education is also improved or at least maintained. This requires reduction of wastage and organizational improvement. Also, various methods of cost recovery need to be explored in order to identify the extent to which new sources of financing for education may be tapped. Contributions by private firms who make use of the output of the education system, alumni associations, and "goodwill" contributions by foundations and firms should particularly be looked into as sources of finance. In addition, package schemes involving graduate taxes, student loans, scholarships, and fee increases should be seriously explored. Moreover, a general reallocation of resources between levels of education, as suggested by rate of return calculations, may be warranted. That is, by cutting subsidies to higher education, public resources can be more efficiently shifted toward primary education.

The third dilemma is to determine the appropriate role of the government vis-a-vis the private sector, balancing the need to "inform and protect" the public without undue restriction, and sharing the cost of education between the public and private sectors, the latter including the individuals directly benefitting from the education system. Here also, recommendations differ by level of education, depending on the perceived external benefits to society as a whole that are generated by each type of education. In addition, because controls and regulations are also costly, the loosening of controls on private educational institutions particularly at the higher levels, may also be a way to alleviate both equity and efficiency problems.

A P P E N D I X A :

Main Features of the 1985 and 1987 Revisions of Regulations Regarding Subsidy to Private Schools

The latest revision of the formula used for calculating the subsidy to private schools occurred in 1985 and 1987. The essential features of each formula are summarised below.

The 1985 Regulations

Schools eligible for subsidy are those registered under the Private Schools Act of 1982, charitable schools, and schools subject to promotional privileges at the discretion of the Cabinet. However, permission to operate must have been obtained before June 1, 1974. In addition, schools are required to abide by the following conditions. First, tuition fees charged cannot exceed 1,600 Baht per year, with other fees not exceeding the limit set by the Chairman of the Private Schools Commission or the Provincial Governor. In addition, the schools must fulfill the following attendance requirements: at least 20 regular students per class, or at least 40 students at the kindergarten level, 120 students at the primary level, 60 students at the lower secondary level, and 60 students at the upper secondary level. Exceptions are permitted for charitable schools.

Furthermore, schools must meet the quality standards laid down by the 1985 Ministerial Regulations regarding Minimum Standards, the Private Schools Act of 1982, as well as all the rules and regulations issued by the Ministry of Education. In addition, schools are required to keep records of their student evaluation process and achieve a progression rate for students of not less than 50 per cent in the preceding year.

The subsidy is based on the number of full-time teachers, defined as those having a teaching load of not less than 15 hours per week for class and subject teachers, not less than 6 hours per week for assistant principals and supplementary teachers, and no teaching-load requirements for school principals.

The subsidy is calculated as follows. First, the number of teachers to be subsidised is based on the student-teacher-qualification requirements (presented in Table A.1). If the requirements are fulfilled, this number will be used for the next step in the calculation. If the actual number of teachers falls below the requirement, the actual number is used.

The next step is then to multiply the number of teachers so obtained for each level, by the percentages given in Table A.2. Step Three

involves going back to Table A.1 to determine the exact number of teachers to be subsidized, based on the figure obtained form Table A.2 and the required qualifications under Heading (2) of Table A.1. The actual subsidy, by qualification, is given in Table A.3. In addition to these subsidies, various other minor supplements are given, such as cost of living allowances, salary adjustments, and subsidies for temporary teachers.

The 1987 Regulations

In general, the revisions meant that subsidies were granted on a more generous basis.

The attendance requirements were revised as follows: at the kindergarten level, the number of required regular students was reduced from 40 to 30; at the primary level, the number was reduced from 120 to 90; and at the secondary level, the number was reduced from 60 to 45. Schools not meeting these requirements by level would be considered on a class-size basis; classes with at least 15 students will be eligible for subsidy. Further, these requirements are waived in the case of cost of living and salary adjustment allowances. In addition, the percentage of Bachelor degree holders teaching at secondary levels eligible for subsidy was increased from 50 per cent to 100 per cent.

Table A.1 Teacher-Student Ratio and Percentage by Qualification Eligible for Subsidy

Requirements	Kindergarten	Primary	Lower Secondary	Upper Secondary
1. Teacher-Student Ratio	1 : 25	1 : 30	1 : 25	1 : 20
2. Percentage of Teachers by Qualification				
Bachelor degree	–	–	50	60
Teaching certificate	–	50	50	40
Dip. Ed. (Higher)	40	50	–	–
Dip. Ed.	60	–	–	–
3. Additional allowance (number of additional teachers eligible for subsidy)				
Principal	+ 1	+ 1	+ 1	+ 1
Administrative assistant	+ 1	+ 1	+ 1	+ 1
Librarian	–	+ 1	+ 1	+ 1
Accountant	–	+ 1	+ 1	+ 1
Registrar	–	–	+ 1	+ 1
Counselor	–	–	–	+ 1

Source: Ministry of Education, Ministerial Regulation Regarding Subsidy to Private School Teachers, 1985 (Table 1).

Table A.2 Percentage of Teachers Eligible for Subsidy by Fee Level and School Level

TUITION FEES		PERCENTAGE OF TEACHERS TO BE SUBSIDIZED		
Academic Year 1977 (Baht)	Academic Year 1985 onwards (Baht)	Kindergarten & Primary (%)	Lower Secondary (%)	Upper Secondary (%)
1,000	1,000 - 1,600	10	15	20
900	900 - 1,600	15	20	30
800	800 - 1,600	20	30	40
700	700 - 1,600	35	45	50
600	600 - 1,600	50	60	60
500	500 - 1,600	60	70	70
400	400 - 1,600	70	80	80
300	300 - 1,600	75	85	85
200	200 - 1,600	75	85	85
100	100 - 1,600	75	85	85

Source: Ministry of Education, Ministerial Regulation Regarding Subsidy to Private School Teachers, 1985 (Table 2).

Table A.3 Subsidy by Level of Qualification

QUALIFICATION	SUBSIDY (Baht per month)
Bachelor Degree in Education	2,765
Teaching Certificate (Secondary)	2,485
Higher Diploma in Education (or equivalent)	2,205
Teaching Certificate (Primary)	1,950
Diploma in Education	1,780
Diploma	1,470
Higher Vocational Certificate + Teaching Certificate	2,625
Vocational Certificate (6-year curriculum)	2,625
Higher Vocational Certificate	2,485
High School Certificate (MS 6) or Vocational Certificate	1,950
High School Certificate (academic stream)	1,255

Source: Ministry of Education, Ministerial Regulation Regarding Subsidy to Private School Teachers, 1985 (Table 3).

APPENDIX B:
Brief Summary of Educational Objectives in Development Plans

First Plan (1961-66) - largely concerned with expanding primary enrolments - which rose from 4 million to 4.8 million largely in the Bangkok/Thonburi area.

Second Plan (1967-71) - emphasized the quantitative expansion of secondary, technical, professional and teacher education, in order to provide both the middle and high level manpower needed for economic development. More funds were allocated to education and expenditure almost doubled from 11.6 million baht to 20.05 million baht. Four per cent of GDP and 18 per cent of the national budget were devoted to the education sector in this period, and enrolments in all sectors dramatically increased.

Third Plan (1972-76) - concentrated on social aspects of education, emphasising quality, reducing wastage, improving schools in rural areas, and extending non-formal vocational and literacy education. Lifelong education became a major educational objective and decentralization became an important feature. In higher education, equality of opportunity was emphasized and institutions of higher learning began to be located in the major regional centers and provinces.

Fourth Plan (1977-81) - continued emphasis on qualitative improvement, making greater use of non-formal channels, decentralization, and improvements in rural schools. Greater flexibility in the curriculum was initiated to suit local needs and private-sector involvement in the overall provision of places was encouraged.

Fifth Plan (1982-1986) - increasing austerity, imbalances becoming more stark, emphasis on opportunity, social objectives, alternative financing strategies, and encouragement of the private sector at the tertiary level.

Sixth Plan (1987-1991) - greater encouragement of the private sector, perhaps greater possibility for decontrol.

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