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Mechanisms of Socio-economic Change in Rural Areas: The Case of Education and Health in Thailand

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An emphasis on the public provision of health and education in Thailand assisted both sectors to make a substantial contribution to the consistently high growth rates achieved during the 1980s. However, a review of development goals is opportune. Three types of reform are recommended: (a) redirection of expenditure towards activities in which government participation is most critical; (b) increased reliance on user and other benefit-related charges to finance such spending; and (c) decentralisation of some public responsibilities to those in closer touch with local needs and conditions.

1. Introduction

Economic growth in Thailand has been formidable throughout the 1980s, with double-digit rates being the norm (NESDB 1991a). During the decade, Gross Domestic Product more than doubled in nominal terms and per capita incomes rose by more than 5 per cent per annum. Health has shown marked improvement (MOPH 1991): average life expectancy increased from 60 to 65 years; mean caloric consumption equalled caloric requirements; severe malnutrition was eliminated and population growth slowed to 1.5 per cent per annum (NESDB 1991b). With respect to education, expansion of school enrolment has been phenomenal and literacy has improved significantly (UNESCO 1992). Thus Thailand has fared well according to these indicators, and both health and education played important roles as cause and consequence of economic growth. Indeed, Thailand is often cited as an example of successful and balanced growth.

However, even with progress, there are looming problems caused by an overheated economy, infrastructure bottlenecks, inefficiency in resource use, environmental degradation, a widening urban/rural gap and inequitable distribution of wealth. Since income distribution has not perceptibly improved (despite increased social services) and pockets of poverty and inaccessibility to basic services remain, a review of development goals is indicated. Questions arise as to whether improved health and education (desired for their own sake), also result in improved opportunities and incomes for the entire population; whether public provision serves to counteract market failures; whether such provision can be improved so that both increased equity and efficiency can be achieved; and whether an appropriate mix between public and private provision can be attained.

The objectives of this paper are to assess the role of the government in the provision of health and education services; examine the extent to which market failures are counteracted; indicate the degree of success in inducing change in rural areas; and discuss the problems encountered.

2. Principles of Government Intervention

With quasi-public goods, achieving efficiency in resource allocation solely through reliance on market forces is likely to be impeded by capital market imperfections, imperfect information, externalities, and spatial monopoly elements. In the case of health and education, these factors are likely to be particularly important. Individual action with respect to, for example, immunisation and disease control, reduces risks to others, thereby producing positive returns that spill over to the rest of the community. School attendance is likely to benefit society by helping to produce a literate citizenry, but imperfect information is likely to cause private under-investment in education, resulting in welfare loss. Asymmetry of information and bargaining

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power is particularly relevant in health services where consumer knowledge is likely to be lacking. Capital market imperfections may be severe because, even if individuals were equipped with perfect information about returns to education and health, loans to finance such activities cannot be easily resorted to, since expected earnings may be unacceptable collateral. When other goals of society such as justice, fairness or equity are considered, added justification is given for government intervention.

However, the fact that intervention is justifiable does not indicate the form that intervention should take. In fact, intervention can take on a variety of forms, ranging from regulatory functions, fiscal incentives through tax and subsidies, information dissemination and direct government provision. Nevertheless, broad prescriptions can be made. In health, positive externalities suggest that governments should provide incentives to increase society's production and consumption in areas such as preventive and promotive care, as opposed to curative care, where problems of non-appropriation of benefits are less. Greater externalities arising from primary education and literacy programs imply that these endeavours should receive relatively more attention than higher levels of education. Where information imperfection and asymmetry are the problem, programs for disseminating information should be emphasised.

The public sector in Thailand has opted for a potpourri of intervention measures. However, in education and health, greater emphasis has been placed on direct provision, more through historical accident and/or political design than economic rationality. Overall, intervention has not been incorrect in its general direction, but specific problems remain.

2.1 Government Role in Education

Formal education, long viewed in Thailand as primarily a function of the State, has its origins in the 1870s when special schools for royalty were created. Royal interest and control (synonymous with government control at the time) gradually expanded, as literacy was believed to foster national awareness and enhance national security. Today, education at all levels is provided mainly by the government. Where private initiative is allowed, it is kept under strict control and supervision. In 1989, enrolment in public institutions as a proportion of total enrolment was about 90 per cent of total primary and lower secondary levels, declining to about 80 per cent at upper secondary, and hovering around 85 per cent at tertiary level (MOE 1991). The relative share of the public sector has been increasing steadily over time, reflecting an emphasis on quantitative expansion. Recently, however, attempts have been made to accommodate greater private sector participation, especially where external benefits are perceived as insignificant. In pre-primary education the government share is currently about 58 per cent, and at undergraduate level (excluding open universities) the share has dropped from 75 to 69 per cent during the last decade. Private participation in vocational training has increased so significantly that the public sector share has fallen from 90 to 55 per cent between 1979-89 (MOE 1991).

Public spending on education over the last twenty years fluctuated between 16 and 20 per cent of total government expenditure. In 1987 it accounted for almost 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 10 per cent, while grants to private schools ranged between 2 and 3 per cent (Chutikul-Khoman 1988).

In line with 'father knows best', government agencies are responsible for textbooks, formal syllabuses, building and running government schools, and control and supervision of private schools. Controls are exercised in three main ways: (a) administratively, through the chain of command from central government to district level, and through a maze of controls, from licensing requirements to rules and regulations (building styles, syllabus and curriculum content, skirt lengths and hairstyles); (b) financially, through budget and subsidy allocation, and fee control; and (c) planning, from macroeconomic level to regional education unit.

Since private school fees are higher, it is expected

that the division between public and private sectors is in line with the principles of welfare economics, if the private schools serve the higher income groups. However, evidence is inconclusive here. On the one hand, students in private schools come from slightly more advantaged backgrounds than their public school counterparts in lower secondary schools (Wattanawaha 1986). Moreover, a greater proportion of private than public school students had mothers with secondary school education or above (25 versus 15 per cent). These observations are reinforced by the slightly higher aspirations and expectations of private than public school students regarding further education: 28 as opposed to 21 per cent expected to obtain university degrees. Students in private schools also benefited from more out-of-school tutoring, home use of calculators, and parental input and encouragement. Preliminary conclusions (Jimenez *et al.* 1987) suggest that private schools are more 'effective' in enhancing achievement, but evidence is still fragmentary.

On the other hand, in the southern region, children whose fathers were high-level urban executives, professionals, businessmen or merchants were more likely to be admitted to public schools in large urban centres (Aswaraksa 1978). A larger proportion of private school children were from rural areas. There is evidence also that students who pass entrance exams of the best public schools tend to come from high socio-economic status (SES) families, and peer group quality contributes to learning.

In terms of quality, private schools on average have teachers with less experience and lower educational qualifications. According to a National Educational Council (NEC 1984) survey, teachers in private schools tend to be underpaid, receive lower welfare benefits, and face less attractive career prospects. Consequently, the turnover rate is relatively high, with many new graduates regarding teaching in private schools as temporary (Poapongsakorn 1981). If this is widespread, the quality of private schools may decline, making public schools more attractive to high SES groups. However, this would run counter to both efficiency and equity if the highly-subsidised, high-quality public schools were to cater more to high SES groups.

With respect to non-formal education, the government operates a wide spectrum of programs, from functional literacy groups, mobile technical-training units, seminars, radio programs, correspondences courses, to reading corners. These are likely to have contributed to advances in literacy, catering to those who miss formal opportunities.

2.2 Government Role in Health

Like education, health services are traditionally in government hands. Modern medicine has expanded rapidly since the beginning of the First Plan, which emphasised the provision of infrastructure and expansion of public health services to provincial levels. The health sector today is characterised by the coexistence of public and private elements although the former dominates, with most health care resources controlled by the Ministry of Public Health (MOPH). The MOPH accounts for about half the total physicians, 40 per cent of dentists, one-third of pharmacists, 70 per cent of nurses and 90 per cent of midwives (MOPH 1988).

The private sector is regulated by licensing controls and minimum standards with respect to staffing and facilities, but the dividing line is not as clear-cut as in education, especially in terms of medical personnel. Moreover, the enforcement of fee controls is generally accepted as unrealistic, possibly because of clearly-apparent product heterogeneity.

The division between public and private sector is clearer in terms of people served and services offered, according to the analysis of Khoman and Mongkolsmai (1993). Private health facilities are mainly concentrated in Bangkok and urban areas. Public facilities, with networks of hospitals and health centres in all 72 provinces, are more dispersed and serve rural people to a larger extent. Private clinics and hospitals tend to emphasise curative rather than preventive and promotive services, while government facilities (especially district hospitals and health centres) provide preventive and curative care in rural areas, offering a wide range of services (immunisation, maternal and child health, nutrition, family planning and health education). At village level, health posts and community sub-centres are run by volunteers. Village commu-

nicators appointed by MOPH report on health problems.

The annual budget of MOPH accounts for almost one-fifth of the country's total health expenditure and two-thirds of that of the public sector. Its role in total health expenditure has declined over time, from 24 to about 15 per cent during 1977-86, although its share of the total has been steady at about 4 per cent. More than 50 per cent of the MOPH budget still goes to medical care, but for preventive and promotive care the share has increased from about 33 to 38 per cent over this period. Distribution of the budget by area shows that the largest proportion goes to rural areas.

The MOPH budget allocated by level of care shows that in 1977 (beginning of the Fourth Plan) the largest real amount (about 60 per cent) went to secondary and tertiary health care. By 1986 (end of the Fifth Plan), although the latter still received the largest amount in real terms, the percentage share had fallen significantly. Meanwhile, the budget for primary health care had almost doubled in real terms over the same period and its share increased. This follows the stated shift of emphasis in orienting services towards primary care. Moreover, capital expenditure on primary care, while falling relative to recurrent expenditure, has increased in real terms and remained at about 18 per cent of expenditure in 1986. Yet the capital budget for secondary and tertiary care declined in real terms and accounted for only 10 per cent in 1986 (Khoman and Mongkolsmai 1993).

The emphasis on preventive care is evident in services offered by local government agencies, namely municipalities, sanitary districts, provincial administration, and sub-district committees. Their expenditures are mostly on waste disposal, water supply, immunisation, and other forms of preventive care. Regional disparity is evident with expenditure in Bangkok nearly equalling all the local municipalities combined.

For curative services, there are significant differences in fees charged, waiting time and other conveniences between public and private facilities. Those who opt for private medicine tend to be able and willing to pay higher fees. Fees in public facilities tend to be low, and preliminary findings indicates that charges are well below the costs of providing services (Satsanguan and Leopairote 1990).

In spite of this, total government contribution to health expenditure has been declining over time, from 36 to 28 per cent between 1977-86, while private health expenditure (mainly households and private business) has expanded its contribution (MOF 1992, NSO 1986, Mongkolsmai 1989). Unlike education, several government programs form 'institutionalised safety nets' by ensuring services to selected welfare groups. Most importantly, free treatment is seldom denied to the truly needy. Other formal programs include: (a) low-income support (free card program) providing for appropriate groups free of charge (within certain limits); (b) services in specific areas (border, northern hills, land reform areas); and (c) free services for senior citizens over the age of 60. Businesses employing more than twenty workers are legally required to contribute to the Workmen's Compensation Fund (established in 1972 under the Department of Labour), which provides compensation for on-the-job injury, disability, sickness, and death. The newly-enacted Social Security Act of 1990 provides for non-occupational illnesses and maternity benefits, with provision for child, disability, death, old-age, and unemployment benefits to be implemented later.

3. Mechanisms of Rural Change?

Achievements in both education and health have generally contributed to socio-economic change in rural areas in absolute terms. Living conditions and opportunities for self-determination have improved. Substantial evidence suggests that poor health impedes the ability to earn income and improve socio-economic status. As a corollary health improvements should have an overall positive effect on achievement. For education, its general effect on socio-economic change is clear. The occupational distribution of the labour force has undergone significant change and, broken down by educational attainment, attests to the correlation between pay, prestige and education. The educated, on average, have better jobs, and their share of earnings has increased over time. In fact, studies invariably

show that education is the single most important determinant of income and social mobility.

Analysis of the Labour Force Survey (NSO 1988) sample of 6 079 workers aged 20-60 years in the Central region shows that, on average, possession of 5-10 years of education raises earnings by 46 per cent above those with 4 years of education or less. Those with 11-14 years of education earn 134 per cent more, and those with 15 or more years earn as much as 227 per cent more (Pattamasiriwat 1991). Other factors augmenting earnings include state enterprise employment, size of firm and managerial position, whereas recency of migration, female gender, and non-Bangkok location depress wages. These findings lend support to the human capital theory as well as the market imperfections and labour market segmentation theory of wage determination.

However, the general observation that education augments income and that average educational attainment has increased, does not mean that all segments have benefited from expansion. In both health and education, nagging problems of regional disparity, inequality of access and inefficiency of resource use remain. It is not clear that the provision of health and education has reduced the gap between rich/poor and urban/rural areas. On the contrary, especially in education, disparities may have widened and society become more polarised.

3.1 Access to Health Services

The regional distribution of health resources indicates large disparities, as all kinds are concentrated in Bangkok. While one physician in Bangkok serves just over 1 400 people, one in the Northeast serves 13 000 people. There is one dentist per 7 000 in Bangkok and one per 192 000 people in the Northeast. Similarly, there are 340 people per hospital bed in Bangkok, but 1 150 in the Northeast. The Central region has most of the resources with less population per resource than all other regions.

Health services are demanded in response to 'occasional need', whereas education requires a more costly daily commitment. This results in a different kind of access problem. Like education, curative health services have an urban bias, but are less inaccessible because of infrequency of visits and because the truly poor are not turned away. Moreover, apart from severe illnesses, rehabilitation is often successful. Education deficiencies cannot be easily corrected in an *ad hoc* manner, because of education's sequential nature and the nature of the labour market in Thailand.

The two most important resource allocation problems in the health sector are: (a) over-utilisation of high-level providers; and (b) indiscriminate and heavy subsidy of users. To deal with the first problem a system of referral and health card has been introduced in rural areas. After purchase, the card allows a certain number of free visits and a special express 'green channel' for properly referred cases. It familiarises rural people with insurance and risk-pooling, and encourages health awareness and personal preventive behaviour.

The subsidy problem has not been so effectively addressed. Contributions to health expenditures by private companies and individuals have increased from 61 to 71 per cent of total health expenditures during 1977-86, while that of MOPH has declined. This is partly the result of greater general awareness about health, particularly among higher income groups. Yet part of this increased reliance on the private sector may exacerbate inequalities. Unlike on-the-job training which tends to be confined to specific training that the employer can extract benefit from, employer-provided health care is more akin to fringe benefits, used to induce employees to remain with the company. Such provision tends to be unequally distributed in favour of advantaged groups. Preliminary findings (Khoman 1990) indicate that, despite less knowledge, the more disadvantaged groups tend to resort to self-prescription.

3.2 Access to Education

In spite of three decades of rapid expansion, problems are clearly evident in differential access to educational opportunities, particularly on the basis of socio-economic status and regional origin. Of the total number of children and youths not attending school, more than 60 per cent lived in rural areas (NSO 1987), reflecting selective migration and conditions in rural and urban areas. Such differen-

tials translate into inequality of attainment and income-earning capacity, aggravating income distribution. Emerging evidence indicates that educational attainment is limiting the labour force in general, and disadvantaged rural workers in particular, in adjusting to changing economic conditions, at a time when flexibility and adaptability are crucial.

The problem of access is particularly acute at the secondary-school level. From 1960-70, enrolments doubled at the lower secondary and tripled at the upper secondary level, and secondary enrolment as a whole grew at an annual rate of 12 per cent throughout the 1970s. Despite this, secondary gross enrolment ratios have remained low. It was estimated that the enrolment ratios for lower and upper secondary level in 1986 were 41 per cent of ages 14-16 and 28 per cent of ages 17-18 (NEC 1986), so that more than half of Thai children aged 14-16 are still out of school. Statistics on continuation rates by cohort show that, while the percentage of primary students continuing to the next grade is high (85-98 per cent), the percentage of those continuing to secondary school drops dramatically to around 40-50 per cent. In 1988 this rate was 38 per cent for government and 61 per cent for private schools.

To some extent this low secondary enrolment results from expansion of enrolment at primary level, since transition rates tend to increase at lower levels first as schooling becomes universal. The failure of large numbers of students to continue beyond the compulsory primary level is linked to the fact that low continuation rates are mainly confined to children from socially and economically-disadvantaged backgrounds. Students in urban areas tend to leave school at a higher level of education than rural students; about 88 per cent of urban youth aged 12-14 are still in school, whereas the corresponding figure for rural youth is a mere 68 per cent (NSO 1988). This pattern has remained unchanged through the years.

In addition to access in terms of placement, equity concerns also arise if access to 'quality' is considered. Casual empiricism indicates that large divergences in quality exist between schools when using 'input' measures such as textbook availability, instructional materials, laboratory equipment, and teacher qualifications. Again, access to better-quality schools tends to be based on region and socio-economic status. The marked quality difference penalises rural students, unless families incur substantial additional costs for children to attend better-quality urban schools right from primary level. To the extent that scholastic achievement depends on school quality, the pattern of inequity is further accentuated.

The causes of inequity in participation can be attributed to factors on both the demand and supply side. On the demand side, SES has a consistent impact on school enrolment, appreciably affecting the probability of continuation to higher education. Family background is an important determinant of a child's probability of attendance (Tan and Naiyavitit 1984). For the lowest SES group, the probability of continuing to secondary school is only 14 per cent, while the corresponding probability for the highest group is 97 per cent. Opportunities for continuation to secondary level for children of farmers and labourers are much lower than for children of businessmen and government officials (Chantavanich 1979), while parents' education, household income and wealth are important determinants of whether children continue to secondary school (Sussangkarn *et al.* 1988, NSO 1987).

Education costs impose a disproportionate burden on the poor. The total time and monetary cost to a village household of sending a child to a public, urban, lower-secondary school can amount to almost four times the cost of his/her primary education. In 1983 the lower secondary school cost was estimated to be 2882 baht per year. If the child fails to be admitted to a public school, which normally selects students by competitive entrance examination, the cost of sending the child to a private school was estimated to be 4400 baht per year, or more than half total household annual income (NSO 1983). Upper secondary was estimated to cost almost 6000 baht per year and the figure was more than 10000 baht per year for the upper secondary vocational stream. Because of the sequential nature of the curriculum, if it is perceived that only completion of the higher level would make the lower level worthwhile, there would be no incentive to continue if the total financial burden of completing

the curriculum to the highest level is prohibitive. Low participation rates are mainly confined to the most disadvantaged groups of low income, rural households. The problem is transmitted vertically along the education ladder.

Educational attainment tends to be correlated between generations, and socio-economic status is transmitted across generations via education. The least-advantaged groups invest less in the education of their children. Market conditions that work against the poor, and perhaps employment limitations imposed by societal stratification and entrenched networks of information and contacts, appear to be influential factors.

Children in 'own-account' households are less likely than those in other types to continue beyond the compulsory level, reflecting the higher opportunity cost of time of school attendance, and the low perceived relevance of formal schooling (Sussangkarn *et al.* 1988). Returns to education above primary level are seen as low or almost nil for employees in the informal sector (Sussangkarn 1987). A study of farm productivity in Thailand (Jamison and Lau 1982) indicates that in traditional agriculture there is no clear evidence of any returns to education above primary level, while Hutaserani and Jitsuchon (1988) show that the education of the household head has no perceptible effect in improving farm income per worker. Only in the formal labour market (public sector and larger private firms), are there clear returns to education. Given the same credentials for secondary and tertiary education, working for the formal sector can more than double income, compared with working in the informal sector such as in loosely-organised family businesses and small firms whose revenues and activities go largely unrecorded (Sussangkarn 1987).

Members of farm and labourer households have lower expected returns to schooling and consequently drop out at a younger age. Higher education simply does not pay in traditional agriculture. This situation compounds the problem of inequity since low education begets low incomes. The intergenerational perpetuation of inequality is likely to accelerate in the future as production technology becomes increasingly more complex and employment shifts out of agriculture. In this process the demand for educated workers would undoubtedly increase and their wages would be driven upwards relative to those with less education.

A large number of siblings also depresses the chances of a child continuing to secondary school (e.g. Sussangkarn *et al.* 1988) and this finding links fertility and the demand for education evident in other countries. In addition, even when remaining in school with educational opportunities available, children from poor families do not perform as well as other children. High birth-order has an independent negative effect on school performance and possibly the ability to learn (Chutikul 1986). The main causes of drop-out and repetition of grades appear to be poverty, malnutrition, illness and absenteeism. In order to progress up the education ladder, several screening examinations have to be passed. Performance in these examinations (NEC 1977) showed that children from lower socio-economic backgrounds invariably registered lower scholastic achievements. In terms of expenditure, entrepreneurial, professional, technical and managerial households spend a somewhat greater share of their budget on education (Phananiramai and Mason 1988). This exacerbates the problems of unequal access, low continuation rates, and low income among low-status rural households.

On the supply side, provision of education is extremely unequal with respect to population and geographic distribution and is one of the main causes of non-continuation and low secondary enrolment among disadvantaged groups. Some regions have virtually no upper-level schools or persons educated to secondary level. Except for provincial primary schools which are evenly located in rural areas, a disproportionate number of schools are situated in towns and cities (predominantly Bangkok). *Education Statistics* (MOE 1989) show that of 2 923 private secondary schools almost half were located in Bangkok, and none in villages. For municipal schools, 427 of 894 schools were situated in Bangkok, with enrolment of 233 321 as opposed to 238 620 for the rest of the country. All public kindergartens are located in urban areas, as are most private kindergartens and schools. School location influences the cost of education for rural families, in terms of time and money as well as

forgone contributions to family production. For some, such costs may be prohibitive.

Variation in access among provinces can be explained by variation in quality of primary schools and in provincial levels of poverty (Chantavanich 1979), while a high rate of continuation to secondary level might be attributable to variables such as numbers of teachers holding higher certificates, a large budget (staff salaries), and low provincial land rents. Nitungkorn (1981), using different data, confirms the positive relationship between provincial education budgets and provincial rate of continuation to lower secondary level. Low perceived quality no doubt interacts with the expected return to continued education and the added cost of sending children to better schools elsewhere. The lower the student/teacher ratio at primary and secondary levels in the community, the more likely are children to continue (Sussangkarn 1988).

What happens to those denied access to secondary education? Sussangkarn (1988) suggests that the first entry into the labour market for those with primary education is predominantly as unpaid family workers on parental farms or household enterprise. As these individuals age, some become employees in the private and public sector, but the majority with lower primary education remain in family enterprises (farm and non-farm), either as heads (changing status to 'own-account') or as unpaid family workers. Since the income of 'own-account' workers is on average much lower, the gap in incomes between primary educated and better-educated groups has been widening. Of workers classified as private employees in 1988, 65 per cent had only primary education, while 30 per cent in the formal sector had only primary education. For the government sector, workers with only primary education accounted for two per cent of total employment.

The overall pattern of employment indicates that proportionately more workers with primary than secondary education are found in less prosperous and less progressive segments of the economy. In particular, agriculture has been, and remains, the main employer of such workers. Unfortunately, this sector has the lowest value added per head. The large share of employment in agriculture and the low share of agriculture in GDP indicates a high degree of income inequality between agriculture and the other sectors of the economy. To the extent that income determines educational accessibility, especially beyond the compulsory level, this would lead to lower secondary enrolment among agricultural households, a fact confirmed by the *Socio-economic Surveys* (NSO 1981, 1986). Income gaps between agricultural and non-agricultural households have widened since the mid-1970s. The higher the education level of the household head, the faster has been the increase in per capita household income between the 1981 and 1986 Surveys. For households headed by those with only primary education, nominal per capita income increased by 6.5 per cent, compared with an increase of 12.4 per cent for all other households.

Current income disparities will tend to persist across generations through education, and deteriorate over time, unless educational policies can be designed to counterbalance this tendency. Measures should increase the access of those with relatively low education to more prosperous sectors of the economy, and ensure increasing participation in education for the younger generation. Ironically, some evidence is emerging that private sector on-the-job training (OJT), though provided in the employer's interest, nevertheless tends to benefit the most disadvantaged groups more than government OJT. Since education is used as a more rigorous screening device in the public than in the private sector, those without educational credentials are weeded out of the former at the outset and denied subsequent participation in formal skill-augmenting programs.

4. The Need for Financial Reform

The problem of access to education and, to a lesser extent health services, is compounded by the financing problem. The education system limits access to favoured segments of the population and may, through public financing, tax some groups more heavily to subsidise others. The direct cost of many kinds of public education is almost entirely borne by the government. Fees charged, as a percentage of costs, vary between and within levels, from 1.6 to 21.8 per cent for secondary schools, 3.3 to 36.6 per cent in vocational education, 28.1 to

41.7 per cent in teacher training, and 7 to 12 per cent in public universities. Consequently, all calculations of rates of return on educational investment have invariably shown that the private rate exceeds the social rate of return at all levels. Tertiary tuition fees on average amount to only 2.5 per cent of annual family income. For health services, charges are only a small proportion of costs.

Public provision and the level of fees affect the behaviour of producers and consumers and influence the distribution of wealth and income. If the beneficiaries are not the truly needy, then public provision can be distortionary. Whether a disproportionately heavy burden is placed on the poor depends on how spending is allocated and revenue raised. Income and excise taxes in Thailand have been found to be progressive ex-post (Sussangkarn and Tinakorn 1988), but because various forms of wealth tax (property, capital gains, inheritance) are low or non-existent, the whole system is likely to have regressive elements. Moreover, allocated spending and construction of urban secondary schools give favoured access to the more advantaged. In addition, higher education is mainly confined to students from privileged backgrounds, so that the costs and benefits which reflect how spending is financed, combine to make the current situation inequitable.

At the secondary level, low fees in public schools and control of private school fees prevent private school expansion, quality improvements, and quality-enhancing competition. Private schools that charge tuition fees within the range set by the Ministry of Education (MOE) are entitled to a subsidy. Schools that charge higher fees are subject to a maximum set by MOE and periodically revised. Public school fees are lower than those of private schools (less than 20 per cent of maximum fees allowable at corresponding private school levels). If these schools cater to advantaged groups as some studies suggest, then such fee-setting practices are regressive (Chutikul-Khoman 1988).

The official rationale for offering direct subsidies to private schools has been to avert fee increases. The effect, however, has been rather perverse. Schools with outstanding reputations circumvent the maximum fee by engaging in rent-seeking behaviour, e.g. 'tea money'. Small to medium size schools who cannot command such rent and whose students tend to be less well-off, are unable to grow and improve. They become dependent on inadequate MOE subsidies. Private schools on average make a surplus over recurrent costs, but if capital costs (except land) are included, most private schools would be making a loss, if 'contributions' were not received (NEC 1977). Thus MOE control over maximum tuition fees chargeable by private schools has adverse effects on their growth. Both at pre-primary and secondary vocational level, where maximum fees are relatively high, the number of private schools has increased over time. Subsidy allocation needs to be reviewed in order to better serve its objectives. For genuine equity concerns a direct subsidy through *student* vouchers may prove to be more appropriate.

At the tertiary level, recommendations for fee increases have been made repeatedly on equity and efficiency grounds. Package programs of increased user charges, student loans, scholarships for the truly needy, and bonding (a subtler kind of loan) have been suggested, and may soon be adopted with the current move towards greater university autonomy.

Certain signs are encouraging. There is less inequity in the distribution of education than in that of income. This trend is likely to continue since the distribution of human capital investment in children tends to become more equal as capital markets become more developed, public services more widely dispersed, and access to family planning and health care lessens the burden on poor families.

5. Recommendations

Today's public finance concerns have troubled policymakers for centuries - how to raise and allocate public funds effectively while limiting budget deficits, and how to relinquish control while ensuring financial and social responsibility. Government involvement carries both risks and opportunities. Risks arise from inefficient use of public resources and over-extension of government (and non-personal accountability) into areas better handled by private markets. Opportunities arise from government ability, in principle, to improve re-

source allocation when markets fail to do so, and from its capacity to provide relief to the needy. The task of public finance is to balance the risks and opportunities.

Similar problems, notably limited access by the poor, beset public intervention in education and, to a lesser extent, health. Tackling the problem calls for three types of reform: (a) redirecting spending toward activities in which government participation is most critical; (b) increasing reliance on user and other benefit-related charges to finance such spending; and (c) decentralising some public responsibilities to those in closer touch with local needs and conditions.

Spending should be more sharply focussed. The shift in policy towards decentralisation and preventive care (particularly primary health care), the training of paramedics, and 'grass-roots' participation in the health sector should be continued. Measures to reduce costs of secondary education to low-income rural families must be implemented and properly targeted. Efforts should be made to target public programs towards the informal sector where the majority of poorly-educated people work. Government programs touching only formal sector employees (social security, subsidised employee health insurance, education subsidies for government employees' children, civil service housing assistance) are unlikely to assist disadvantaged groups. The 'health card', targeted towards the informal sector, should be encouraged[1]. Programs that relieve the financial burden on parents should improve investment in their children's education. For adult workers with primary education, increased non-formal education should be emphasised. Non-formal and adult education has contributed significantly to literacy and should continue to be stressed. In agriculture, extension services, already widespread, should be constantly modified to changing economic conditions, so that farmers can familiarise themselves with practices adaptable to their situation, and which will facilitate the shift towards non-traditional crops and non-farm activities. Those in industry should have the opportunity to upgrade their skills and knowledge, to assist job flexibility.

Generous subsidies for non-critical services should be reduced, and user charges more closely aligned to costs. Unlike taxes, these charges can be earmarked to finance priority services, while increasing efficiency. Publicly provided goods and services will be used more efficiently if they are priced to reflect the cost of production as well as externalities and other market imperfections. In contrast, subsidised (or underpriced) services result in excessive consumption and excess demand, and taxes needed to pay for such subsidies often create distortions elsewhere. User charges lead to a double efficiency gain: they allocate the supply of public goods and services efficiently, and they avoid the need for distortionary taxes.

Charging users of public facilities with large private benefits (including curative outpatient hospital care and university education) will increase efficiency in production and consumption. It will also mobilise resources to finance the expansion of priority services, many of which are used primarily by the poor. Selective scholarships are one way to give poor students access to higher education, with at least part of the cost borne by others. Efficiency and equity are not necessarily incompatible goals. Other specific recommendations include: curriculum revision to include productive activity, decontrol and commercialisation of private schools, development of financial institutions, and the legal and administrative framework to enforce financial contracts, such as loans for human capital investment.

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[1] This was introduced by the Ministry of Public Health to encourage a degree of cost sharing between government health facilities and beneficiaries who may otherwise receive health-care services free of charge. It also contains elements of health insurance since card-holders are required to pay a small fee in return for the right to a limited number of visits to health-care facilities. The terms of the card are still evolving with respect to the number of visits allowed, the upper limit on services received, the types of services included, and so on.

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