CRISIS, SOCIAL SECTOR AND INCOME DISTRIBUTION IN SOME SOUTHEAST ASIAN COUNTRIES

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Crisis, Social Sector and Income Distribution in Some Southeast Asian Countries[#]

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Abstract
This paper examines the social impact of the recent Asian Economic crisis, drawing on the results of studies in two countries: Singapore and Thailand. The economic crisis had interrupted three decades of steady growth that had been accompanied by remarkable progress in poverty reduction and a betterment of social indicators like health and education. In particular, this crisis is feared to have a large negative effect on household welfare. It is found that absolute poverty became more acute in Thailand and with the wake of unemployment and decrease in real wages, income inequality increased both in Singapore and Thailand. This paper has examined the effect of crisis on other social indicators, such as school enrolments, dropouts and health. It is observed that the crisis has exposed significant limitations in the ability of social safety nets to cope with a negative shock of this magnitude, and manifested the need for better targeting to help households tide over their difficulties.

The JEL classification: D30, D63, I18, I28, I38
Key words: Inequality, Gini, Social sector, Singapore, Thailand, Education, Health, Financial Crisis.

1. Introduction

A vast body of literature is now available on the postmortem of the financial crisis that hit East Asian economies during 1997-98.[1] The economic slump provoked by the crisis has caused widespread social distress in the worst-affected countries (like Thailand, Indonesia, the Philippines) and relatively least affected countries (like Singapore, Korea) also experienced slash on government expenditure on various aspects of social sectors. A fall in output and incomes (whatever is the severity of the effect) was invariably accompanied by massive job losses (due to bankruptcies and

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[1] List of reference will be found in Goldstein (1998), Lee (1999) among others.

cutbacks in the production sectors). This leads to sharp rise in unemployment. It was fueled by the rise in inflation which exerts a further toll on real wages and incomes. The combined effect increased the incidence and severity of absolute poverty and worsened the distribution of income. The main objective of this paper is to explore the effect of the financial crisis on the distribution of income and poverty. Two countries are considered for analysis: Singapore (one of the least affected countries) and Thailand (where the crisis starts and had a very adverse toll).

In those crisis days it was feared that economic and financial reversals would impose severe hardship on the social welfare of the families of the countries concerned. Beyond the employment and wage impacts, it was anticipated that government social programs would cut-back and the prices of key social commodities (eg, imported medicines) would escalate. It is also assumed that families would reduce their expenditure for health and education, and those services would be out of reach to a growing number of impoverished families. We, thus, will make an effort, in brief, to analyse the effect of crisis on the education and health sector of Singapore and Thailand as well.

The arrangement of the paper is as follows: in the next section we will consider the backgrounds of Singapore and Thailand. Section 3 analyses the profile of income inequality and poverty during crisis in Singapore and Thailand. Effects on education and health sectors are discussed in sections 4 and 5 respectively. Section 6 examines various government actions to protect the vulnerable during the crisis and the last section concludes.

2. Overview of the Economy and the Social Sector: Singapore and Thailand

Singapore, a city state of a little over three and half million people, recorded the world's ninth highest GNP per capita of US $29,610 in the list of 174 countries covered in the World Bank (2000/2001). Singapore has been among the fastest growing economies in the East Asia. Its average rate of growth (in per capita real GNP) was 6.4% during the 1980-90 period and 8.7% during the first half of 1990s.

With the increasing growth in National Income, there was a prominent increase in total labour force in Singapore. Over the span of 25 years from 1970 the labour force almost trebled, the increase in female labour force being the most prominent. The doubling up of female labour force participation rate is a clear indication of increased educational attainment.[2]

Over the past 30 years, real per capita GDP in Thailand has tripled. Between 1980 and 1995, growth averaged 6.4% annually. The rapid growth rate has been accompanied by a steep decline in poverty and an increase in inequality. With rapid economic growth, disparities between urban and rural areas and between well-educated and less-well-educated households increased. In 1992, a household whose head has a basic education, elementary or junior secondary school, has 60% less likely to be in poverty than in 1975 (Ablett and Slengesol, 2000). If the household head had little or no education, that household was only 38% less likely to be in poverty. Life expectancy increased by 12 years to 70 between 1975 and 1998. Illiteracy rate fell to 6.2% of population in 1995. While Singapore made a better progress in the health sector, it could not catch up the high educational expansion rate of Thailand, thus Singapore's illiteracy rate is higher than that of Thailand.

Table 1
Various indicators: Singapore and Thailand

	Singapore	**Thailand**
Life expectancy at Birth (1998) (M-F)	75-79	70-75
Infant Mortality rate, per 1,000 live births (1980, 1997)	12, 4	49, 29
Adult illiteracy rate (M, F)	4, 12	3, 7
Public edu exp (% of GNP) (1980, 1997)	2.8, 3.0	3.4, 4.8
HDI rank (1997, value)	22, 0.888	67, 0.753
Average. annual growth rate (GNP pc)(1980-90, 1990-95)[3]	4.7, 6.7	5.9, 7.5
Avg. Annual Rate of Inflation rate (1998)[4]	-1.5	8.7
Public exp on health (% of GDP)(1990-98)	1.1	1.3
Total Unemployment (% of Labour Force) (1991)[4]	1.9	2.7
Gini coefficient (1971-80, 1981-90)[2]	0.45, 0.41	0.37, 0.37
Head-count Index (1975, 1985, 1993, 1995)[1]	Nil	8.1, 10.0, <1.0, <1.0

[2] See Mukhopadhaya (2001a).

Urban Population (%)	100	20.6
Per capita GDP (1997 $PPP)	28460	6690
Illiteracy rate (1980, 1985, 1990, 1995) (%)[5]	17.0,14.3, 11.0,8.9	12.6, 9.8, 6.6, 6.2

Source: 1: Estimated from Ahuja et al (1997); 2: World Bank (1993); 3: World Bank (1997, 1999/2000); 4: Human Development Report, 2000; 4: World Development Indicator CD ROM (2000); 5: UNESCO Statistical Yearbook, Various years; All other variables are taken from World Bank, 2000/2001

From the above table of comparison (Table 1) it is quite clear that Singapore enjoys the advantage of a fully urban state and its per capita GDP is more is almost 4 times that of Thailand. World Bank (1993) included both Singapore and Thailand in its list of miraculous economies because of their very high growth rate and low inequality.

On the contrary, the case of Thailand is quite different. The land area of Thailand is more than 1300 times that of Singapore and thus it has a wide regional diversity. The mean per capita income of Bangkok in 1990-99 is more than twice of that of Central region and 4 times of the North-East region. However, a decomposition analysis showed that this regional divergence does not have much effect on the income distribution scenario.[3] It is noted that educational divergence is the main cause of high income inequality in Thailand. Unlike Singapore basic education is free and a constitutional right of the Thai people. Thai government with a heavy investment on the education sector was able to increase the enrolment rate at both primary and secondary level of education.[4] In the decade prior to the crisis Thailand made remarkable progress in expanding education with gross enrolment ratio increasing significantly at most levels of education. According to the statistics published by the Office of National Education Commission, near universal enrolment in primary education has been achieved. Gross enrolment ratios at the lower secondary level increased from 40 per cent in school year (SY) 1990/91 to 72 percent in SY 1997/98. Upper secondary and vocational enrolment ratios almost doubled to 47 per cent. With the decline in poverty, between 1992 and 1997, the number of school dropouts

[3] World Bank (2001).

[4] Mukhopadhaya (2001b).

decreased.[5] The Child and Youth Survey[6] reveals that over 3 million more students (from pre-primary to secondary) attended school in 1997 than in 1992.

Poverty is another aspect to be addressed for the case of Thailand. Data from the Socioeconomic Survey (SES) shows a sharp decline of poverty from 1988 to 1996. The head count ratio declined from 32.6 per cent to 11.4 percent, while poverty gap ratio declined from 10.4 per cent to 2.8 percent.[7] During this period the average income was growing very rapidly and poverty rate decreased due to the high migration rate from poor areas of North-East to Bangkok and the Central. Employment generated at the construction sectors of these rapidly growing cities where demand for un-skilled and semi skilled manpower was very high. With this, school enrolment increased at the primary and the lower secondary level. Education is an important predictor of poverty. In Thailand with enormous expansion in education, poverty level decreased rapidly.

The regional dimension of poverty in Thailand is extremely strong. Northeast has been the poorest region with 48% people living below poverty line in 1988, while in South there were 33%, in the North there were 32% and in the Central 27%. The incidence of poverty was lowest in Bangkok where 6% were below poverty line in 1988 that reduced to 1% during 1996. While the head count in Northeast, South, North and Central during 1996 were 19, 12, 11 and 6% respectively. That shows the decline in poverty in much pronounced in the better-off regions. The dimension of rural poverty is quite severe in Thailand. In 1988, 40% people in the rural area live below poverty line while the corresponding figure for Sanitary and Municipal areas were respectively 22 and 8%. Rural poverty decreased to 15% in 1996, while only 6 and 2 out of 100 in Sanitary and Municipal areas respectively lived below poverty line (World Bank, 2001). To investigate the reason for the poverty the World Bank (2001) identified a strong positive correlation between incidence of poverty and household

[5] Drop-out rates for primary school aged children fell from 10.3% to 2.3% between 1992 and 1997 (Study by National Economic and Social Development Board, NESDB, 1999, supported by ADB).

[6] Reported in NESDB/ADB Newsletter, April, 1999.

[7] These figures are different from the above Table 1 because of different definition of the poverty line. Ahuja et al considered $1 poverty line of 1993 PPP-adjusted terms. Thailand's official poverty line was equivalent to the 1993 PPP $1.60.

size and the relationship was found to become stronger over time. In the 1990s it was found that the incidence of poverty is highest among farm workers, then come Farm operators (including tenants), General workers, Production and construction workers. The lowest level of poverty was found in Professionals, technical and managers. Slightly higher incidence of poverty is there among Clerical, sales and service workers and Entrepreneur, trade and industry people.[8]

Let us now provide a brief account of the pattern of the government expenditure on social and community services. There are two types of Government expenditure in Singapore: (a) Operating Expenditure: this is larger and refers to expenditure on manpower etc and (b) Developing Expenditure: this is smaller and excludes loan to statutory boards, industrial and commercial enterprises. The maximum portion of the operating expenditure is spent in education[9] and health, while most of the development expenditure goes to education and housing. In Singapore, only the destitute, disabled, or chronically ill and those with no independent means of financial support are entitled to welfare assistance (Lim and Tay, 1991). The Central Provident Fund (CPF) is regarded as an effective means to look after the poor and the retired.

Table 2
Government Expenditure on Social and Community Services: Singapore and Thailand

Thailand: Central Government's Expenditure by Functions (Year ending 31 December) (%)						
Year/Period	Total	General Public Services[a]	Education	Health	Social Security and Welfare	Housing and community amenities[b]
1995	38.28	8.38	16.91	5.57	3.05	4.37
1996	47.21	10.53	20.12	6.66	3.84	6.06
1997	52.92	10.85	22.78	8.01	3.93	7.35
1998	54.14	10.57	25.42	7.70	4.75	5.70
1999	53.11	10.65	24.96	7.18	4.89	5.43
2000	54.89	11.15	25.19	7.39	6.01	5.15

[8] For other poverty studies in Thailand see Booth (1990), Rigg (1998), Kakwani and Krongkaew (2000).

[9] For detailed discussion of the education expenditure etc in Singapore see Low et al (1991) and Low (2000).

Singapore Government's share of Operating Expenditure in Social and Community Services (%)						
	Total	Education	Health	Environment	Public Housing	Others
1995	37.85	24.60	6.29	2.52	1.51	2.93
1996	35.81	23.25	5.73	2.36	1.22	3.25
1997	34.75	22.12	6.46	2.00	1.28	2.89
1998	36.84	23.33	6.55	2.24	1.17	3.56
1999	34.94	21.34	6.29	2.31	1.22	3.79
2000	32.00	20.65	5.24	1.89	0.98	3.24
Singapore Government's share of Development Expenditure in Social and Community Services (%)						
	Total	Education	Health	Environment	Public Housing	Others
1995	43.77	16.69	7.00	6.05	10.66	3.37
1996	45.30	9.34	5.14	7.52	14.76	8.54
1997	26.37	8.49	2.49	6.06	6.70	2.62
1998	40.45	13.04	2.19	8.59	13.97	2.65
1999	47.08	13.63	1.02	9.48	20.64	2.32
2000	42.16	16.92	1.36	6.36	15.02	2.51

a: includes Public Order and Safety; b: includes recreation, culture and religious
Source: for Thailand computed from ADB, *Key Indicators of Developing Asian & Pacific Countries*; For Singapore, computed from *Yearbook of Statistics*, Government of Singapore

The public budget of Thailand was large[10] and the government paid a great deal of attention to the social sector, increasing the Ministry of Public Health (MoPH) budget by over 10% annually for many years. In 1990s, the MoPH budget increased more than four fold, in real terms. The proportion of health budget in overall government budget increased from 4.2% in 1989 to 7.7% in 1998. However, a huge amount of budget was earmarked for investment activities, eg, new buildings and sophisticated medical equipments. The MoPH capital expense category went up to 38.7% in 1997, the highest in the last 35 years.[11]

[10] The conditions attached to the World Bank's structural adjustment loans in the wake of oil crises, and to IMF programs for relieving debt crises, were criticised for creating shocks which were felt most heavily on the poor. In 1990, UNDP advocated a social approach to development broader than the narrow focus of the World Bank and IMF on economic stability and growth. By the mid 1990s, the World Bank and the IMF adopted the social policy. It can be observed that Thailand's social expenditure starts increasing in 1996 and as World Bank appreciated the dynamics of economic change, social policies and crises more fund went for this sector during the crises period.

[11] See Jitapunkul et al (1999), Reisman (1999), Tangcharoensathien et al (2000) for further discussion of Thai health care system.

3. Effect of Crisis on Income Distribution and Poverty

3.1 The case of Singapore

DOS (2000) noted that while the Gini of household income for Singapore in 1990 was 0.436 it increased to 0.444 in 1997, slightly up in 1998 and as an effect of crisis became 0.467 in 1999.[12] Gini accounts the normalised aggregate of relative deprivation (which is measured by the difference of incomes) of the people in the state. This deprivation (consequently the Gini) might increase due to several reasons. Two factors were noticed for the increase in inequality in Singapore during 1999.

Firstly, the number of lower income households increased: the households with monthly income below $3000 increased to 42 per cent in 1999, from 40 per cent in 1998 (DOS, 2000).[13] Secondly, there was a decline in the income of all the households (except the top 10%) and the lower income classes were worst hit.

Table 3
Average Household income from Work by Decile

	1990	1998	1999	Annual change (%)	
				1998	1999
Total	3076	4822	4691	1.6	-2.7
Bottom 10%	370	258	133	-21.1	-48.4
Next 10%	934	1332	1172	-1.5	-12.0
Next 10%	1321	2005	1853	0.1	-7.6
Next 10%	1686	2647	2470	1.3	-6.7
Next 10%	2075	3305	3137	1.6	-5.1
Next 10%	2541	4097	3900	1.9	-4.8
Next 10%	3116	5034	4828	1.9	-4.1
Next 10%	3897	6271	6023	2.9	-4.0
Next 10%	5151	8221	7937	3.2	-3.5
Top 10%	9669	15053	15451	1.1	2.6

Source: DOS (2000)

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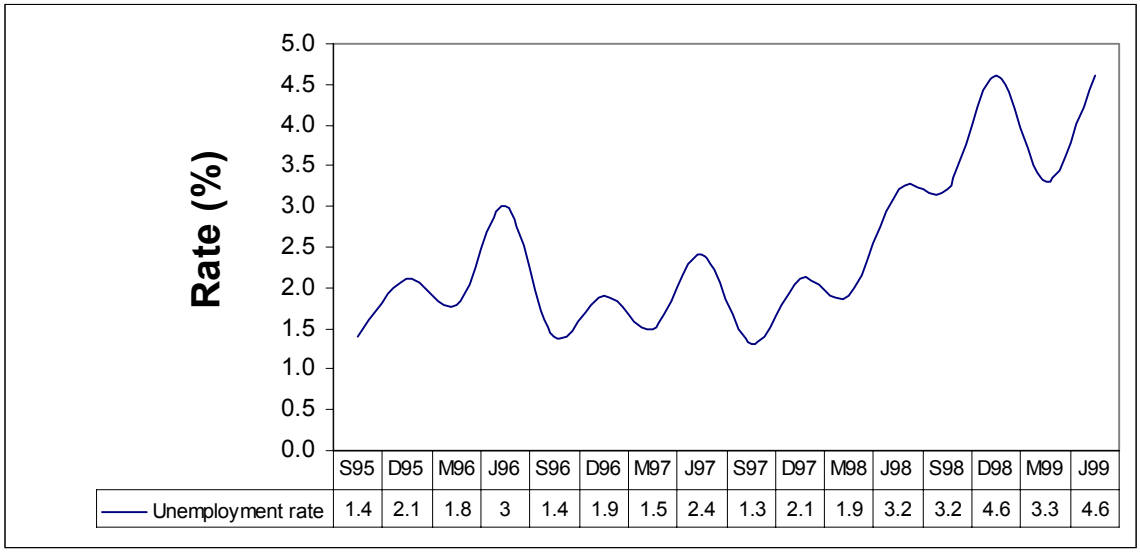
[12] Mukhopadhaya (forthcoming, 2003) indicated various problems related to income data of Singapore and calculations of DOS (2000).

[13] This observation is to be considered with proper care. With the economic downturn, unemployment has been tending upwards since the second half of 1997. As at June 1998, the overall unemployment rate (non-seasonally adjusted) was 3.2% compared with 2.4% in June 1997. And in June 1999 the rate was 4.6%. It is to note that workers aged 50 and above leave their jobs due to retrenchment or business closures are ceased to be counted as unemployed and under labour force. Thus, because of their absence in the data set the inequality figure has a downward bias.

Table 3 shows that during 1998-99 the average household income of the bottom decile decreased by 48.4%, while this decrease for total households is only 2.7%. Figure 1 shows the trend in unemployment rate: note that unemployment rate started rising from June 1998.[14] During this time the unemployment rate was 3.2% which reached a peak at December 1998 to 4.6%, came down to 3.8% in March 1999 and again went up in June 1999 to 4.6%.

Figure 1

Unemployment rate in Singapore (unadjusted): 1995-1999



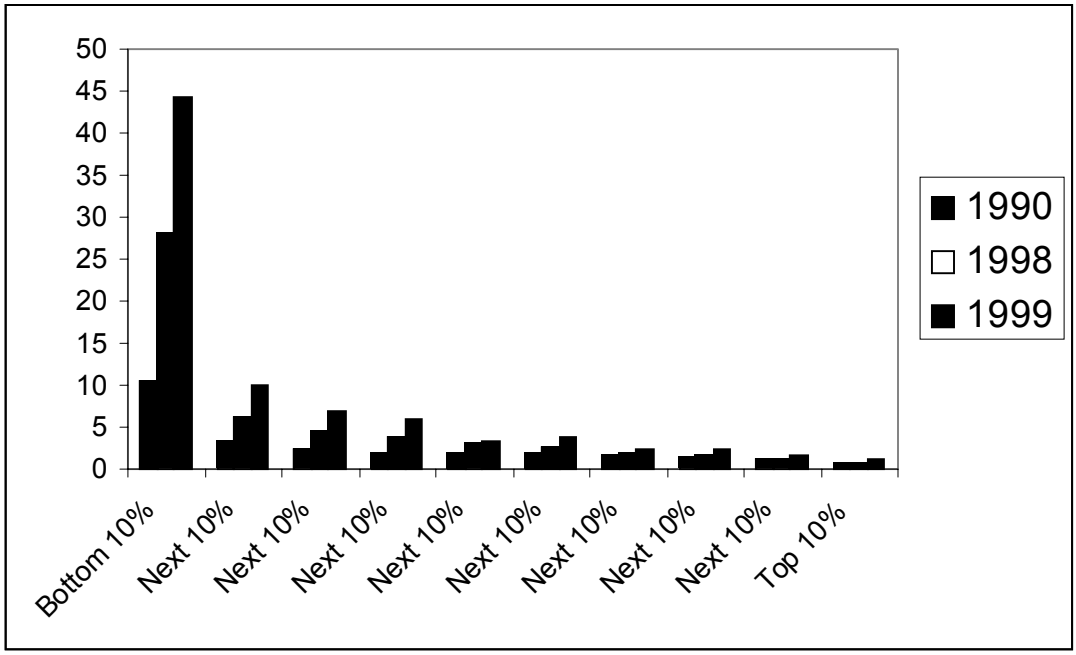
	S95	D95	M96	J96	S96	D96	M97	J97	S97	D97	M98	J98	S98	D98	M99	J99
Unemployment rate	1.4	2.1	1.8	3	1.4	1.9	1.5	2.4	1.3	2.1	1.9	3.2	3.2	4.6	3.3	4.6

Source: *Reports on the Labour Force Survey of Singapore* (1999), Government of Singapore; Note: S: September; D: December; M March; J: July for various years.

Figure 2 shows that in general the unemployment rate is very high among the bottom 10% residents and the rate increased from 28.2% in 1998 to 44% in 1999 (an increase of about 56%) while for the total labour force the increase was of 42%

Figure 2
Unemployment rate per person aged 15 years and over in resident private household (%): various deciles

[14] According to the Ministry of Manpower, Singapore 7131, 7309, 6633 and 8013 people were retrenched in the four quarters of 1998. During 1999 number of retrenched people decreased: 3402 in quarter 1, 3350 in quarter 2, 3395 in quarter 3 and 4475 in quarter 4..



Source: DOS (2000)

Along with job loss all the top five occupation at the bottom decile experienced a pay cut of 13 to 34 per cent (Table 4).

Table 4

Average income of Five Top Occupation at the Top and Bottom Deciles

Occupation	Average income		Average annual change
	1998	1999	
Top five occupation at the top decile			
Specialised Managers	7643	8374	9.6
Statistical, Administrative and Related Professionals	5011	5353	6.8
Company Directors	12118	12527	3.4
Finance and Sales Associate Professionals	6581	7566	15.0
Architects, Engineers and Related Professionals	6750	6097	-9.7
Top Five Occupations at the bottom Deciles			
Helpers & Cleaners in Offices, Hotels and other establishments	655	573	-12.5
Housekeeping & Catering Service workers	625	503	-19.5
Stall and Market Sales Workers	620	461	-25.7
Shop Sales Workers and Demonstrators	746	492	-34.0
Personal Care & Household Service workers	494	418	-15.4

Source: DOS (2000)

Thus the increase in inequality in Singapore during crisis is an effect of unemployment (which is more prominent at the lower decile: who are generally less

well-skilled/educated) and wage cut at the lower decile and wage increase in the upper decile. It is quite perplexing to note that during the crisis most of the top occupations in the top decile experienced salary increase (Table 4). This is mainly due to the fact that Singapore economy is quite dependent on the foreign expatriate labour. At the phase of financial crisis when Singapore dollar depreciated vis a vis US Dollar, to stop foreign talents from leaving Singapore a more attractive salary package was offered.

The skill-labour shortage is the reason for the high inequality in Singapore and during crisis the labour-short economy acted in a way to restore the skill labour which has its adverse impact on inequality. No data set is available for Singapore to assess the impact of crisis on the most vulnerable old people and the low-educated female.

3.2 The case of Thailand

The Thai Government decided to open its financial market in 1993. From that point huge amounts of foreign currencies were brought in for non-productive investment, particularly in the oil refinery, auto-mobile, real estate and private hospital industries. The overvalued currency reduced its competitiveness and slowed down exports, resulting in the large current account deficit. Attacks on the local currency in early and mid-1997 resulted in great loss in foreign reserve and rapid devaluation after the introduction of the 'managed float' policy of the Central Bank of Thailand on July 2, 1997. The major outcomes were bankruptcy of industries and businesses. In the construction 0.9 million less people was employed in February 1998 compared to one year back. 25,000 people lost their jobs due to the collapse of the finance companies and several more were retrenched from real estate and other finance related businesses.[15] The Board of Investment on July 1998 reported that 82,000 had been laid off from promoted companies in food, textiles, plastics, automotive and service industries. The Labour Ministry reported that 330,000 had been laid off from industrial jobs between January and July 1998. The main employment impact came from the smaller farms (Kakwani, 1998). "By a conservative estimate, the total

[15] Phongpaichit and Baker (2000).

number of lay-offs in Urban Thailand between the float and the end of 1998 was 2 million and may have been higher" (Phongpaichit and Baker, 2000: 86).

As a strategy of survival a big number of laid-off workers accepted whatever employment they could find even at a considerable loss of wage, some of the retrenched people decided to live on their past savings and some started their own business (Sauwalak and Chettha, 2000 referred in Phongpaichit and Baker, 2000). These own businesses created a big informal sector, however due to lack of demand for the goods of this informal sector these did not sustain for long. Moreover, the vending and petty services were cleaned up by official measure due to the staging of the Asian Games, 1998.

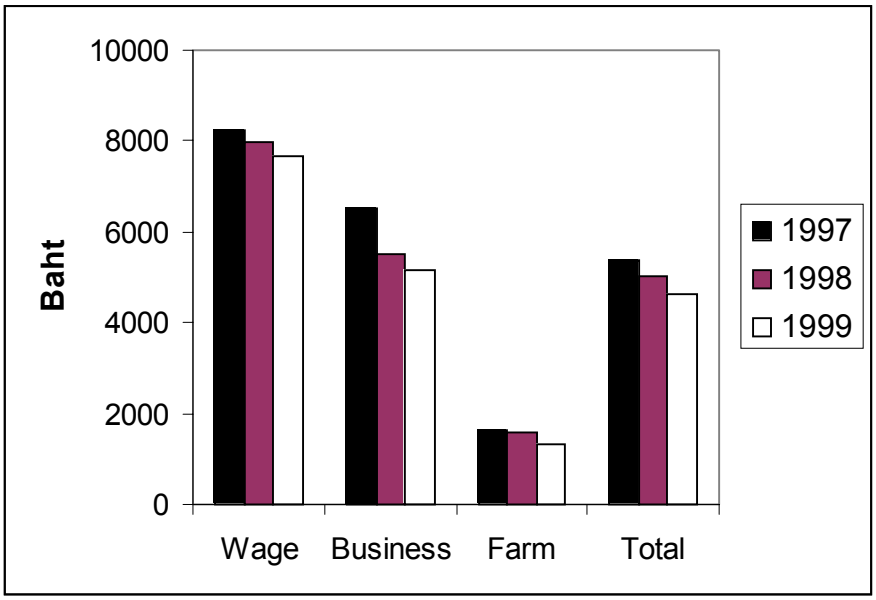
In stead of retrenching, some of the farm in Thailand reduced the number of working hours and lower the wage amount. World Bank Thailand (2000) found that in February, 1998 the number of people working less than 20 hours was almost doubled compared to the figure of one year back. In Bangkok alone the number of underemployed rose 10 times, and this was evidenced at all the urban places.

Along with job loss, the average real earnings of the Thai people decreased during the crisis period.[16] Real wages in all the sectors- commerce, manufacturing, service and constructions – dropped during 1997-1999 period. The drop is most severe in commerce; manufacturing and service could recover slightly from the end of 1998. The drop from business earning was more severe than the wage cut (Figure 3), while business earnings dropped by 15.5% in 1997-98 wage decrease was by 3.1%. In the next year the corresponding figures are 6.4 % and 3.8% respectively. The huge drop in income in the farm sector during 1998-99 can be attributed to the reverse migration of the retrenched urban worker to villages. The problem has been exacerbated by the severe long drought: as of December 1997, a total of 12,831 villages, involving 7.7 million people had been affected by the drought (WHO, 1998). This shows the effect

[16] In a recession period real wage typically declines due to a combined effect of reduced demand for labour and changes in labour supply. There was a large increase in labour force in the first and second quarters of 1999 when economy started recovering from the crises. Thus although GDP starts increasing, real wages decrease. There was a huge increase in migrant workers (particularly Burmese) at the post crises period as well. The supply of these migrant workers typically at the lowest paid job created downward pressure on the real wage.

of crisis which was mainly concentrated to the urban areas later spread to the rural parts of the country.

Figure 3
Real incomes by Origin: 1997-1999



Source: NESDB, Indicators, 3(3), 1999

Besides changes in the demand and supply in the labour market, real earning decreased due to the high inflation rate caused by the crisis.[17]

3.2.1 Changes in Income Inequality

The situation in the labour market explains the increase in income disparity in Thailand during and after the crises.

Table 5

Current Income Share Of Households By Quintile Groups Of Households And The Gini Coefficient

Quintile Group	1994	1996	1998	1999*

[17] *Key Statistics of Thailand* (various issues, *Yearbook* 2000, National Statistical Office) indicates that the increase in food price is quite substantial. Food being the necessary item the increase in price quite adversely affected the people with low income. Prices of medical care and transport also increased to a large extent.

1	5.6	5.7	5.9	5.3
10%	(2.3)	(2.3)	(2.4)	(2.1)
10%	(3.3)	(3.4)	(3.5)	(3.2)
2	9.1	9.2	9.6	8.9
3	13.6	13.5	13.7	13.3
4	21.3	21.5	21.0	20.9
5	50.4	50.1	49.8	51.6
10%	(16.0)	(15.4)	(16.0)	(16.0)
10%	(34.4)	(34.7)	(33.8)	(35.6)
Total	100.0	100.0	100.0	100.0
Gini Coefficient	0.431	0.429	0.421	0.444
Per Capita Current Income (Baht/Month)	2,166	2,890	3,283	3,389

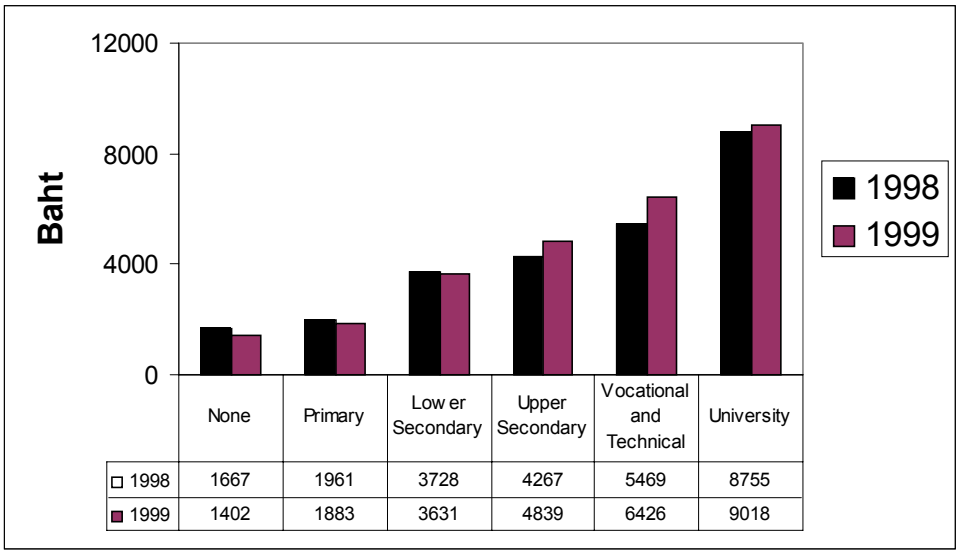
* Data collection period was from June - September 1999
Sources : The 1994 1996 1998 1999and 2000 *Household Socio-economic Survey*, National Statistical office

From the Table 5 it is observed that the Gini increased during 1998-99 and this happens mainly due to the increase in income share at the top quintile.[18] We have mentioned previously that Thai income inequality is best explained by the education disparity. To explain further the increase in inequality during 1998-99 we present Figure 4. The figure shows that lower qualification attracts not only lower salary, they are the most hardly hit due to the crisis. People in the labour force with no education experienced a 16 per cent drop in wage during 1998-99, while there was an increase in wage for the people who have an upper secondary and higher degree. The maximum increase in salary was found for the people with vocational and technical background, who experienced a 17.5% increase in salary.

Figure 4

Income at various education level: Thailand

[18] Isra's (1999) calculation, however, shows a much higher Gini in the 1990s.



Source: World Bank (2001)

3.2.2 Changes in Poverty

During the crisis period the incidence of poverty increased quite sharply in the Northeast region. The Southern and Central part also experienced some increase while in Bangkok poverty decreased (Table 6).

Table 6
Head-count Ratio of Income Poverty by region

Year	Northeast	South	North	Central	Bangkok
1996	19	12	11	6	1
1999	31	16	11	8	0

Source: World Bank (2001).

The regional disparity of incidence of poverty, what we indicated before, is quite pronounced as an effect of the crisis. It is noted that maximum people of the Northeast region are Farm operators (32.4%) and more than 15% people in that region depend upon transfer earnings. The poverty rate among farm operators (including tenants) increased very rapidly during the crisis. Figure 3 indicates the decrease in rural income at the farm level. Thus although the economic crisis originated at the financial sector of Bangkok the adverse impact of the crisis was transmitted to the Northeast regions to the greatest. Some other factors added fuel to this increase:

(a) As an effect of financial shock, firms reduced wages paid to the employees. Earning of the self-employed also decreased. Thus remittances back to the rural sector decreased.

(b) Because of the crisis the out-migration to the cities, particularly to Bangkok stopped and this has adversely affected the household income in the rural sectors of Northeast, South and Central.

Thailand evidenced increase in both income inequality and poverty during the crisis. Crisis creates a huge job loss and the real wage decreased due to adverse labour market situation and the hike in the inflation rate. Better educated people who are generally at the higher end of the income ladder were not that badly affected. The incidence of poverty most seriously affects the less developed regions. One question yet remained to address that whether the increase in poverty is due to a decrease in growth rate, or due to the adverse distribution of income. Kakwani (2001) developed a methodology to estimate the effect of inequality and that of growth on the change of poverty. Using 1998 household survey data he found that Thailand has a 4.1 inequality-growth trade-off index. That means the income inequality has a 4.1 times greater influence on poverty compared to the rate of growth.[19]

A World Bank (2001) calculation suggests that had the distribution of income remained neutral between 1998 and 1999 the incidence of poverty would have fallen by a modest 0.5% points. However, this period witnessed a 3% point increase in poverty. Furthermore, in absolute terms, the worsening of inequality resulted in an additional 2.1 million persons becoming poor between 1998 and 1999.

4. Effect on the Education Sector

It is seen that due to the financial shock the unemployment rate increased, prices rose, private income decreased and with these because of decrease in National Income government budgets were sliced. In such a situation a net change in the demand for education is also expected due to the following reasons:

(1) With decline in the household income the income elasticity of demand for education is expected to decline. If households expect that crisis is a short term phenomenon they might use their past savings for higher education. Thus the

[19] See Warr (2000) also in this respect.

expectation regarding the longevity of the crisis is the determinant of the usage of savings on education.

(2) The opportunity cost of seeking education declines with the widespread unemployment of educated people. If the direct cost of education is reduced, demand for post secondary education might increase.

(3) If Government intervenes by providing short-term scholarships and bursaries demand might increase.

(4) The expected future earning of the individuals also has its effect on the demand for education (particularly higher education).

(5) A large number of students from this region usually go to the US, UK and Australia for higher education. A reduction in the household income (due both to loss of job and decline in exchange rate) has its effect on the demand for this overseas higher education and the demand for higher education in the home country is just a substitute of that.

4.1 Case of Singapore

Singapore typifies the expansion of the education system from basic through higher education, including technical and vocational since 1959. The Government has taken full responsibility for education policy, financing and system development in the entire education system. The recent economic crisis in East Asia might have prompted shifts on education (and other) social sectors. We will investigate that first and then will try to explore any change in enrolment etc attributable to the financial crisis.

Government Budget

Table 7 presents Singapore's expenditure on education in real terms. Government total expenditure on education is increasing over time: during the crisis period the increase rates are 18%, 9% and 18% in the years 1996-97, 1997-98 and 1998-99 respectively. However, a 5% decrease in the recurrent expenditure is noticed in 1997-98. it is worth noting that during that period the development expenditure increased by 53%.

Table 7

Singapore Government's Real Expenditure on Education: 1995-1999

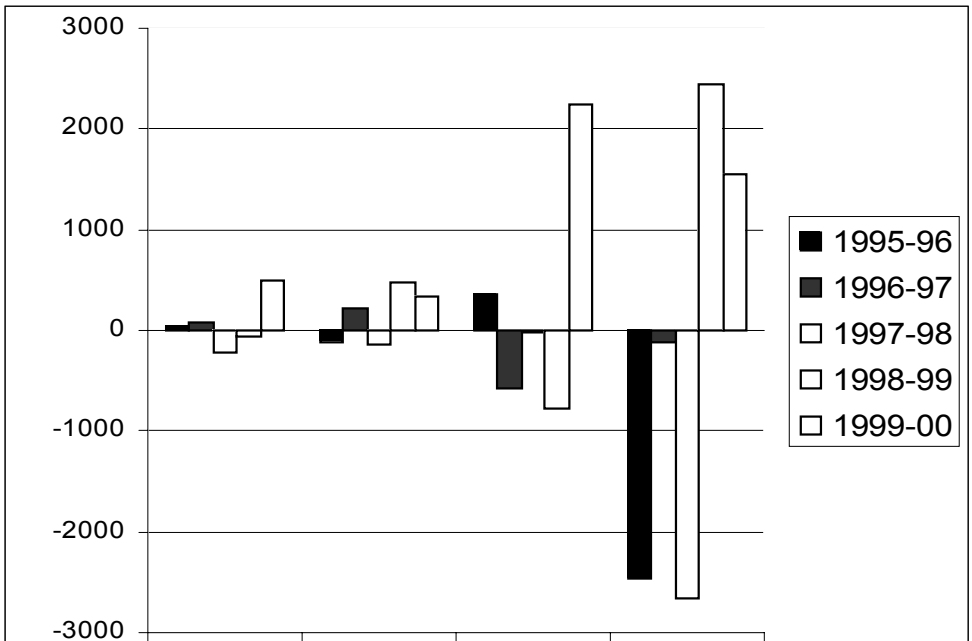
	1995	1996	1997	1998	1999
Total	35613	39007	46016	50187	59135
Recurrent Expenditure	27740	30994	34620	32755	35289
Primary Schools	6719	7901	8582	8466	8600
Secondary Schools and Junior Colleges	8598	9765	10540	10063	10906
ITE	1134	1168	1286	1246	1146
Tertiary	9309	10335	11727	10455	11482
Polytechnics	3505	4071	4439	4340	4198
Development Expenditure	7874	8012	11396	17432	23846

Source: *The Budget*, Republic of Singapore, Various Issues and own calculation

In the 1990s the average Government recurrent expenditure per student (in real terms) at the primary level is $2424, while these at secondary, polytechnic and university levels are respectively $3755, $6906 and $14681. This expenditure per student increased at a rate of 3.8% at primary level, 8.3% at the secondary level, 2.1% at the polytechnic level and 11.2% at the university level during 1990-1999 (Mukhopadhaya and Shantakumar, 2000).

Figure 5

Changes in Government Real Recurrent Expenditure per Student (S$): 1995-1999



	Primary	Secondary	polytechnic	university
1995-96	42	-110	360	-2457
1996-97	71	225	-578	-127
1997-98	-222	-135	-21	-2654
1998-99	-55	467	-772	2447
1999-00	496	328	2248	1552

Source: *Yearbook of Statistics*, Government of Singapore, Various Years

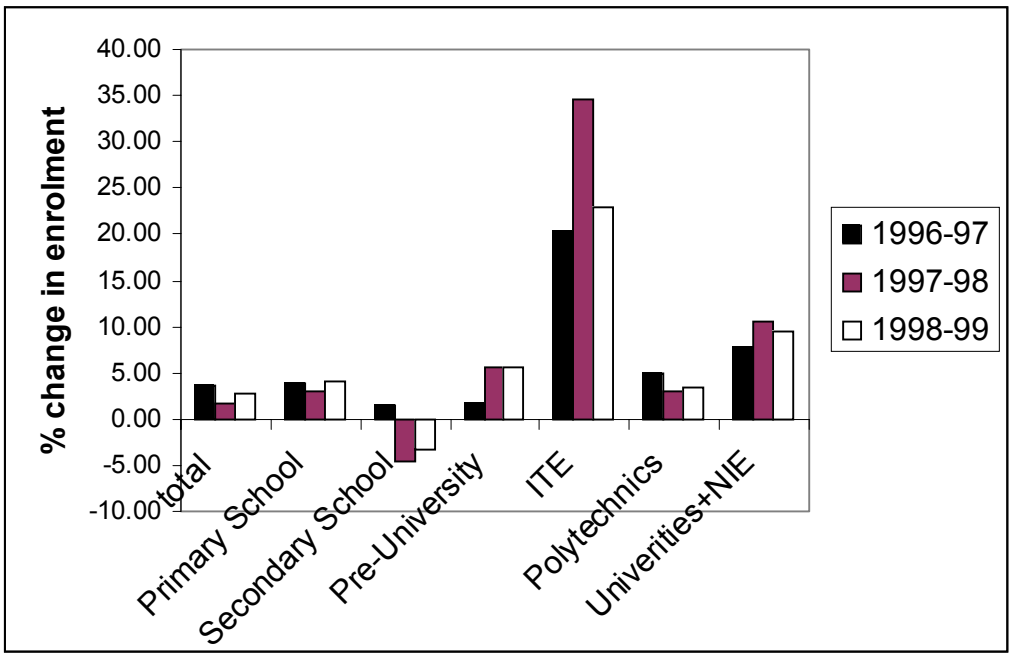
Figure 5 shows that when the country was hardest hit by the crisis (that is in 1998) at all levels the real recurrent expenditure per student decreased. However, to note that during 1995-96, when there was no crisis, the real recurrent expenditure per student at the university level decreased by $2457 and at secondary level the decrease was of $110. Polytechnic students experienced a continuous decrease in recurrent expenditure in 1996-1999. Thus it cannot be said, with certainty, that the decrease in government recurrent expenditure on education during 1997-98 is an effect of crisis.

Enrolment

With the structural change started from mid 1980s Singapore economy needs skilled manpower and Singaporeans realised the existence of skill-premium in terms of salaries. With this Government's initiative on the expansion of education creates an upward trend in enrolment rates at all levels of education.[20]

Figure 6

Changes in Enrolment at various Educational Levels in Singapore: 1996-999



Source: Same as Figure 4

The total change in enrolment (Figure 6) during 1997-98 is slightly lower than the

[20] There are various government scholarships to expand education (see Mukhopadhaya, forthcoming, 2002).

previous and next years due to a decrease in enrolment at the secondary level. At the secondary level enrolment decreased by 4.3% and 3.3% during 1997-98 and 1998-99 respectively. The university enrolment has increased, without any doubt, during the period 1996 onwards. The increase in university enrolment is due to the expansionary government policies which have started from early 1999. Some regional students who due to adverse currency situation might not be able to go to US, UK or Australia took admission in Singapore. However, unlike Malaysia, there is no evidence in Singapore that students enrolled in overseas universities came back to home universities due to financial crisis.

The increase in enrolment at the Institute of Technical Education (ITE)[21] is spectacular. Singaporeans expected that the crisis is a short-lived phenomenon and utilised the crisis period (when opportunity cost of skill development was low) to gather some extra skills from the technical institutes. Government also took some initiative at the phase of massive retrenchment to re-skill the adult workforce. From early 1999 the $15 million skill development Centre started with the aim to provide maximum opportunities to the Singaporeans to re-skill and upgrade themselves.[22] The funding came from the $20 million grant provided by the government to expand training places under the skill redevelopment program.

The decrease in secondary enrolment started from 1998, is not an effect of crisis – rather due to the decrease of the cohort size. With expansion of education and more female in the labour force fertility rate decreased[23] and its effect is observed in the enrolment rate.

Household Budget

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[21] In Singapore there are 11 vocational training centres run by ITE.

[22] *The Straits Times*, Singapore, December 8, 1998.

[23] Other relevant factors are unavailability of enough child care facility, part time job opportunity for the females etc. See Mukhopadhaya (2001a) for further details.

The loss of employment of the household has both income and substitution effects on the demand for the consumption basket. The immediate income effect reduces the quantity demanded for the same consumption basket and households might reallocate the consumption basket and go for the item of primary importance (substitution). If higher education belongs to an item of priority consumption/investment, the households are expected to readjust the budget to protect expenditure on education. Empirical evidence shows that the reaction of households depends upon the country-specific situation.[24] Also there could be variation within the country.[25]

Education is a highly subsidised sector in Singapore. Also people of Singapore expected the crisis as an extremely short-lived phenomenon. The average household incomes of Singaporeans are also quite high compared to other South East Asian countries. Table 8 indicates that the loss of income as a result of crisis hardly has any effect on the education expenditures of the Singaporeans.[26]

Table 8
Average Share of Monthly Expenditure per household by type of goods and services (%)

Type of Goods and Services	1993	1998
Total	100.0	100.0
Food	26.4	23.7
Clothing	5.8	4.1
Housing	21.9	21.6
Transport and Communication	20.2	22.8
Education	5.7	6.9
Health	2.6	3.3

[24] The poor households in Indonesia reduced their spending on education while no such trend is observed for those in Korea (Hyunsook, 2000).

[25] For example, the non-poor households in Indonesia readjusted their budgets by reducing spending on non-essential items (eg, recreation, household items etc). In Thailand households moved from full-priced private provision to subsidised public provision (Mehrotra, 1998). A similar trend is also noticed in the case of the Philippines (Reyes *et al*., 2000).

[26] As mentioned previously, the loss of income can be compensated by previous savings which minimise the effect on education sector. In Thailand, it is observed that, households finance their education from past savings while in Korea this sort of behaviour is absent (Pronchulee, 2000 and Hyunsook, 2000).

Miscellaneous	16.7	16.9
Non-Assignable	0.8	0.7

Source: *Report of Household Expenditure Survey*, 1997/98, Singapore Department of Statistics

4.2 The Thailand case

There has been a substantial gain made in the Thai education system. Enrolment at most general education levels and in vocational and technical training has grown rapidly. Education has been made compulsory through grade nine. The literacy rate for all age groups is estimated at 90%.[27] Let us now examine the effect of crisis on the Thai education system.

Government Expenditure

The Thai government kept public expenditure on education at a constant level during the crisis. The nominal planned education spending in fiscal year 1998 stood at 207 billion Baht, making a 24.9% of the total budget – up from 21.9% share in the previous year. 1999 fiscal year budget allocated 207.3 billion Baht (Table 9).

Table 9
Education Expenditure of Thailand (various years)

	1995	1996	1997	1998	1999
Education Budget	135308	164560	202864	206944	207316
Nominal Actual Spending	129496	157866	201625	218211	
Real Actual Spending	122420	141015	170536	170771	

World Bank (1999). In million Baht.

At the micro level government expanded the scholarships[28] and loan programs[29] with special emphasis on the needs of unemployed parents. At the school level

[27] NESDB/ADB Newsletter, April, 1999.

[28] The government allocated US $25 million from budget support provided by the ADB under its Social Sector Program Loan to provide grant to students in primary and secondary schools who were unable to continue their education. According to ONEC report in early June 1999, over 328,000 students had received approximately 835 million Baht.

[29] The number of recipients of Student Loan Program increased from 148444 to 675614 between 1996 to 1998 (Ziderman, 1999).

anticipating the increase in unemployment rate, parents are allowed to pay tuition fees in installments and schools are permitted to waive tuition fees on a case by case basis. Also private schools are encouraged to extend payment dead-lines and prohibited them from increasing tuition fees. Government also provided vouchers to private school children in the Bangkok metropolitan area to allow them to continue at those schools and encouraged local and international schools to accommodate students returning from overseas.

Enrolment

The demand for education, thus, increased because of various government programs. The decrease in real income has an opposite effect. Table 10 concludes that crisis has a very limited negative impact on overall enrolment. The table also shows that there was a marginal decrease in number of students at the pre-elementary and the lower secondary level. A comprehensive study by ADB[30] notes a high drop in enrolment ratios from Grade 1 to Grade 2 – 9.4% from 1996-97 to 1997-98 and 8.2% from 1997-98 to 1998-99. An upward movement in the Elementary and upper Secondary education levels is observed in Table 10. At the phase of unemployment, the drop in vocational enrolment is quite high. This might be due to the increase in uncertainty of the future job prospect and duration of the crisis. This is at a stark contrast with the Singapore situation.

Table 10

Number of Students by Level of Education: Academic Years: 1995-1998

Level of Education	Age Group	Academic year 1995	Academic year 1996	Academic year 1997	Academic year 1998	Academic year 1999
Total	3-21	12788577	13194805	13123450	13014431	13087622
Pre-Elementary	3-5	1919639	2025747	2341285	2157725	2162988
Elementary	6-11	5962613	5909402	5926843	5935577	5959336
Secondary Education	12-17	3684008	3926889	4089899	4098577	4100074
Lower Secondary	12-14	2363447	2445261	2462185	2420713	2371475

[30] Conducted on June, 1999. This study is based on three major monitoring and tackling activities supported by the ADB. These include various field surveys, a Brooker group survey and a participatory evaluation exercise conducted by the Chulalongkorn University.

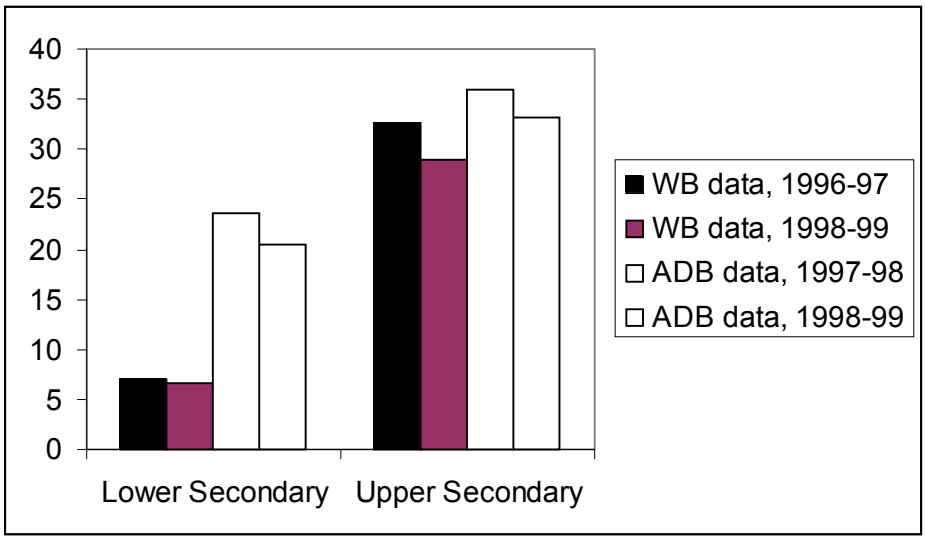
Upper Secondary	15-17	1320561	1481628	1627714	1677844	1728599
General Education	15-17	-	-	881281	961815	1037584
Vocational Education	15-17	-	-	746433	716029	691015
Higher Education	18-21	-	-	765423	822572	865224

Source: *Quarterly Bulletin of Statistics*, various issues, National Statistical Office

Drop-outs

With rising unemployment and prices which reduces the household incomes, a natural expectation is an increase in dropout rates. To analyze the case of Thailand two studies are available: the World Bank study using SES, 1996 and 1998 and the ADB sample survey on 220 schools.

Figure 7
Change in drop-out ratios in Secondary Schools



The ADB-cited survey reports the highest rise in school leavers in the school year (SY) 1997-98: 23.6% for lower secondary and 35.9% for upper secondary. During SY 1998-99, there was a decrease in the drop-out rate: 20.5% in lower secondary and 33.1% in the upper secondary. The World Bank finds that the ratio of children not attending lower secondary school declined from 7% in SY 1996-97 to 6.7% in 1998-99. From SES, 1998 it was observed that the largest decline in the drop-outs occurred in the pre-school age group (3-5 years) and at the primary level drop-out rate declined by 2%. For the upper secondary the drop-out was 32.7 % in 1996 and declined to 29% in 1998. The drop-out rates between 1996 and 1998 declined in both rural and

urban areas, which implies that the adverse effect of crisis on education was not pronounced. Drop-out rates decreased at all education levels in all regions of the country with only one exception: in Central region at the lower secondary level drop-out rates increased slightly, while there is a significant increase at the Bangkok and its neighbourhood. This is perhaps because parents who lost jobs moved with their children to other regions from the Metropolitan Bangkok.

A further analysis of the SES data by World Bank reveals that although there was an overall improvement in school attendance, poor households remain disadvantaged. At the primary age group the drop-out rate among the poor is almost twice that among the non-poor. At a higher age the divergence is much higher.

Office of the National Education Commission also collects data on drop-out. They define dropouts as the number of students who does not advance from one grade to the next grade each year plus those enrolled in the final year but do not graduate. With this definition it was found that, as a percentage of school age population, dropouts increased from 5.5% in SY 1997-98 to 6.7% in 1998-99.

Thus from the above observations, we are unable to make a conclusive view on the change in drop-out rate during crisis. It is expected that, with loss of job and decrease in income, poor parents would withdraw children from school in order to supplement family income. The Labour Force Survey of Thailand (1998, 1999) reveals that there was no increase in the child labour (children aged 13-17, not attending school as they are in the workforce or working at home) during crisis. Moreover, the unemployment rate of the children aged 13-17 increased substantially during the crisis period which worked as a disincentive to the parents to withdraw children from schools.

Household budget

With rising inflation, declining in income and loss of job, people irrespective of level of income made similar changes to their expenditure patterns. The largest increase in real spending was found in education, while households decreased significantly their expenditure on alcohol and tobacco, food beverages, apparel - foot ware, transport communication and recreation (see Table 11).

Table 11
Percentage of Average Monthly Expenditure of Household By Expenditure Group

Expenditure Group	1994	1996	1998	1999*	2000
(Value : Baht)	7,567	9,190	10,389	10,238	9,848
Total Expenditures	100.0	100.0	100.0	100.0	100.0
Food and Beverages	33.7	32.2	35.1	33.3	32.2
Alcoholic Beverages 1/	1.6	2.5	1.5	1.7	2.0
Tobacco Products	1.2	1.5	1.2	1.3	1.2
Apparel and Footwear	5.4	4.8	3.5	3.9	3.8
Housing	21.9	20.3	21.4	22.2	22.2
Medical Care	3.5	3.7	2.8	2.7	2.7
Personal Care	2.5	2.4	2.3	2.6	2.7
Transportation and Communications	14.8	15.4	13.3	13.8	14.9
Recreation and Reading	2.2	2.2	1.7	1.7	1.8
Education	1.8	1.8	2.3	2.7	2.5
Miscellaneous	1.1	1.0	1.2	1.1	0.9
Non-Consumption Expenditures 2/	10.3	12.2	13.7	13.0	13.1

1/ Included alcoholic drinks away from home
2/ Such as taxes, gifts and contributions, insurance premiums, lottery tickets, interest on debts and other similar expenses
* Data collection period was from June - September 1999
Sources : The 1975-1976 1981 1986 1988 1990 1992 1994 1996 1998 1999 and 2000 *Household Socio-economic Survey*, National Statistical office

At the level below tertiary, the expenditure per child attending school increased from 262 Baht per month in 1996 to 297 Baht per month in 1998. While the average monthly expenditure per child attending public school decreased[31] from 67 Baht to 59 Baht during the same period (World Bank, 1999). As a result enrolment rate in the public schools increased.

[31] As a result of Government's policy to waive tuition fee for the needy.

Thus two effects of the decrease in household income has been identified: firstly, households changed their consumption basket by spending more on highly preferred good, education, cutting budget on various conspicuous consumption and to some extent food and medical.[32] And second a substitution was made on the same good for a cheaper quality: by transferring children from private to low-cost public schools.[33]

5. Health Sector

We have seen over the last 25 years both Singapore and Thailand had achieved spectacular progress in terms of health. It is feared that effectiveness, affordability and equity of health care supply were likely to be affected by the increase in cost of drugs and other imported inputs and the decrease of funding in the public health care services. However, governments of both Singapore and Thailand were quite conscious about the health provision provided to the people of their country.

Table 12
Government Budget for the Health Sector Thailand and Singapore: 1995-1999

	Thailand (baht)	Singapore ($ million)
1995	400,000,100	13.558
1996	500,000,000	11.439
1997	555,750,000	12.141
1998	475,000,000	12.334
1999	na	11.397

Source: World Bank (1999) and computed from *The Budget*, Republic of Singapore, various issues.

5.1 Thailand

In Thailand the cuts in public health expenditure is limited in comparison with the previous years in real terms, the revised FY 1998 budget was 17% lower than the health budget of 1997 and 5% lower than the budget of 1996.[34] The adjustment in

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[32] This has a strong implication on the social sector. Poor nutritional intakes by children weak immunity to diseases and impaired the ability to concentrate and learn.

[33] An interesting discussion of the Thai education policies after crisis will be found in Whitte (2000).

[34] In this respect it is to note that the MoPH cut its AIDS budget by 24.7% in 1998 compared to 5.5% cut for the non-AIDS budget (UNFPA, 1999).

1998 was effected in the following way: in nominal terms the budget for capital investment decreased by 38.5% between 1996 and 1998, while the budget for salaries and for operating expenses both increased by 9% and 8.3% respectively (Mokoro, 1999).

Because of unavailability of data it is not possible to judge the effect on the poorest people and the bottom decile people in the country. However, from Table 12 it can be seen that the portion on medical expenditure of household budget decreased during 1997-1998. Data from National Statistics Office of Thailand (Statistical Data Bank and Information Dissemination Division) reveals that the rate of live births per 1000 population decreased.[35]

In Thailand, 80% people are covered by the health insurance scheme (Wibulpolprasert, 1999), which means the 20% low and middle income (mostly self-employed) are uninsured. During the crisis this percentage increased. The crisis witnessed the expansion of the publicly subidised voluntary health card scheme and the social welfare health insurance scheme. The coverage of social welfare scheme increased from 43.9% in 1996 to 45.1% in 1998 and the health card scheme increased from 7.8% in 1995 to 13.9% in 1998 (Wibulpolprasert and Pengpaiboon, 2001). Despite the decrease in overall MoPH budget during the crisis, the budget for social welfare health insurance increased from 25.6% in real terms from 1997 to 1999 (Wibulpolprasert, 1999). In 1995, in Thailand a project for the production of doctors for the rural people was launched. After the crisis the number of students in this program increased. In 1998 the MoPH had a net loss of doctors of only 3.6% of the new recruits as compared to 30.2% in 1997 (Wongwatcharapaiboon et al, 1999) and the doctor-to-bed ratio decreased from 1: 15.3 in 1998 to 1: 14.6 in 1999 (Phokpermdee et al, 1999). To reform the drug management a collective provincial procurement system for all districts and provincial hospitals was implemented nationwide (Na Songkhla et al, 1999). In 1999 a 27.7% saving was achieved with Baht 336 million saved from drug purchases. This saving occurred inspite of the fact

[35] The figure for 1996 was 15.8, while those for 1997, 1998 and 1998 are 14.8, 14.7, 12.3 respectively.

that drug prices increased from 1997 to 1999 by 22.85% for imported products and 20.63% for locally produced products (Wibulpolprasert, 1999).

Most of the private hospitals in Bangkok had substantial foreign currency loans and to confront serious repayment problems in the wake of a steep devaluation of Baht. The newly opened private hospitals suffered most. WHO (1998) reports that about 33% of the private facilities were expected to be closed in the next 2-3 years.

5.2 Singapore

In Singapore the health, social security for the aged and housing are managed through the Central Provident Fund (CPF) scheme. The CPF contribution rates were 40 percent (20 percent for the employer and 20 percent for the employee) in July 1992, with a maximum monthly contribution of $2,400. The rate was reduced to 30 percent in January 1999 to cope with the 1997 economic crisis, with a monthly maximization of $1,800.

Table 13

CPF Contribution in Singapore: 1988-2000

Starting	Employee's age	Contribution rate		Ordinary account (%)	Special Account (%)	Medisave Account (%)	Total (%)
		By employer (%)	By employee (%)				
July 1993	35 years and below	18.5	21.5	30	4	6	40
	Above 35-45	18.5	21.5	29	4	7	40
	Above 45-55	18.5	21.5	28	4	8	40
	Above 55-60	7.5	12.5	12	-	8	20
	Above 60-65	7.5	7.5	7	-	8	15
	Above 65	5	5	2	-	8	10
July 1994 to 31, Dec, 1998	35 years and below	20	20	30	4	6	40
	Above 35-45	20	20	29	4	7	40

	Above 45-55	20	20	28	4	8	40
	Above 55-60	7.5	12.5	12	-	8	20
	Above 60-65	7.5	7.5	7	-	8	15
	Above 65	5	5	2	-	8	10
Jan 1999 to 31 March 2000	35 years and below	10	20	24	0	6	30
	Above 35-45	10	20	23	0	7	30
	Above 45-55	10	20	22	0	8	30
	Above 55-60	4	12.5	8.5	-	8	16.5
	Above 60-65	2	7.5	1.5	-	8	9.5
	Above 65	2	5	-	-	7	7

Source: *CPF Board Annual Reports*, Various Years

People in the labour force above 55 years of age receive a lower rate of contribution since July 1988. This is designed to partly de-link wages from seniority, and to reduce the cost of hiring the elderly workers. The above table (Table 13) shows the rate of CPF provided at various ages over the years. The CPF contributions are channelled into three separate accounts:

*Ordinary Account***:** For those below 55 years, between 72.2% and 61.1% of the contributions is channelled into this account depending on age, with the proportion decreasing with age. Balances in this account can be used for housing, pre- retirement investments and other purposes.

*Special Account***:** For those less than 55 years, between 11.1% and 16.7% of the contributions are channelled in to this account, with the proportion increasing with age. However, none of the contributions are channelled into this account for those aged over 55 years. Although, balances in this account are for retirement purposes, recent reforms have permitted them to be used for certain *safe* investments. This is to note that government has given proper attention to create this special account, such that people at their old age after retirement would have sufficient money to look after themselves.

Medisave Account: This account can be used to pay for hospital and selected outpatient services; and for catastrophic health care insurance premium under the

Medishield[36] (and Medishield plus[37]) Scheme. Unlike for the other two accounts, the self-employed must contribute to this account. The contributions are channelled into Medisave with the proportion increasing with age. For those below 55 years, between 16.7 percent and 22.2 percent are channelled into this account but for those above 55 years these proportions vary from 43.2 percent to 100.0 percent. The amount in this account cannot be withdrawn until death, when it goes to the nominee(s) of the member. This forced saving ensure that Singapore people even after retirement will be able to finance themselves for their medical care.

However, to note that the health insurance schemes (Medishield and Medishield Plus) have inadequate coverage (more than a third of the population is not covered), narrow scope (many illnesses, including pre-existing illnesses are not covered), and pay only a small proportion of the total hospital bill (typically between 25% and 40%). Rapid accumulation of Medishield balances suggests that the premiums are levied on the basis of over-conservative assumptions in relation to the benefits actually paid (Asher and Karunarathne, 2000). Thus in 1999, the insurance premiums under the Medishield were $95 million while the payments were only $47 million.[38] Nevertheless, Singapore has integrated health care finance with the retirement finance.

While the gross contribution to the CPF have been impressive, existence of a large number of pre-retirement withdrawals, particularly for housing, has meant that net contributions has been rather low. Thus, during the 1987-99 period, about 70 percent of contributions were withdrawn during the year. Such high level of withdrawals for non-retirement purposes, particularly for housing, has adversely

[36] It is a low-cost catastrophic medical insurance scheme that covers hospitalisation expenses, and certain outpatient treatments such as kidney dialysis, chemotherapy and radiotherapy for cancer. The yearly premium is deducted automatically from the member's medisave account, unless he/she decides not to insure.

[37] This is similar to medishield but the benefits and the premiums are higher. It allows the member to stay in a more expensive wards.

[38] For the October-December 2000 period, average payment per claim under the Basic Medishield was $635, and under the Medishield Plus was $1283. These payments are quite low for catastrophic illnesses requiring hospitalization.

affected accumulation of balances. Thus in Singapore, in spite of high contribution rates and rapid economic growth, the retirement balances are inadequate.[39]

Thus it is observed that the health sector of Thailand experienced budget cut and due to loss of demand and currency devaluation private hospitals closed down. However, some of the government programs were able to bring some equity in health system during crisis. On the contrary, the budget cut in health provision for Singapore is marginal and government did not take any specific measure to protect the vulnerable, as the poorest section are mostly protected by a well designed system of wages.

6. Government's Action to Protect the Vulnerable

It has been observed that due to the crisis generated job loss and decrease in real wage, income distribution worsened for both Singapore and in Thailand and the number of people below the poverty line increased. Crisis had mainly affected those who are very prone to the risk (even in Singapore): the aged, the unskilled/less-well-educated and the women.

6.1 Singapore

It has been observed that due to factors related to reduced growth rate, income distribution of Singapore went worse during the crisis. In the National Wage Council (NWC) Guidelines of 1998 companies are asked to cut down the wage cost using the flexible wage system. As we have seen the employers' contribution to the CPF also reduced: from 20 to 10% for people below 55 years and from 7.5% to 4% for the age group 55 to 60, from 7.5% to 2% for people 60-65 years of age, and from 5% to 2% for those above 65. This reduction does show a great amount of inequity towards the older people. However, to note that there was no change in the medisave contribution for the elderly workers.

[39] In Singapore, CPF contributions are exempted from the income tax. The value of the deduction to the CPF contributor depends on the marginal income tax rate applicable. Those outside the individual income tax net, thus, do not get any benefits from tax deductibility of CPF. For others, the value of the benefit from tax deductibility rises with the marginal income tax rate. The tax deductibility feature therefore reduces the degree of progressivity of the income tax.

During the crisis, the government had implemented various measures to help individuals and households to combat the difficult situation. One of those is the personal tax rebate. A one-off tax rebate of 5% has been granted for all resident tax payers for the year 1998 and 1999. A tax relief (effective from YA 1998) for children who live with their aged parents in the same household raised from $3500 to $4500. This is with the intention that the working children will look after their parents.

On 24th November, 1998 a $134 million package of rebates on Housing Development Board (HDB) rents, service and conservancy charges, utilities and public transport was announced to help the poor people to cope with reductions in CPF accounts and bonuses.[40]

(a) Rebate on services and conservancy charges and HDB rents were introduced in 1994 to help lower-income families to offset the impact of GST, these were expiring on March 1999. However, looking at the effect of the crisis on the lower deciles Government of Singapore has extended them for two more years, at a cost of $22 million.

(b) HDB residents living in 4-room flats and smaller units have been given utility rebates for two years, to offset the increase in water and electricity tariffs. Those living 3-room or smaller flats received $100 grants, while 4-roomers received $50. Grants for service and conservancy charges were also given for 4-room and smaller HDB flats. To note that those are the people living in 3 or less room HDB flats are lower income group people. Thus this grant is mostly aimed at the poorer section of the society.[41]

(c) Government announced a year-long rebates and discount for public transport for the year 1999.[42]

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[40] *The Straits Times*, Singapore, 11 November, 1998.

[41] This grant is for 2 years, costs government $72 million a year.

[42] It costs $40 million.

(d) Hospital bills were trimmed by 5 and 10 per cent for class B2 and C patients respectively from January 1999. The class C patients were also allowed to apply help from Medifund, if they were unable to pay their bills.

(e) We have mentioned that a large portion of CPF of the Singaporeans go on home mortgages. After the CPF cuts, 18% of the members did not have enough in monthly contributions to their ordinary accounts to pay their housing installments. They were allowed to use funds from Special Account to meet the shortfall.[43]

To note that these sort of measures are not direct attempt to protect the risk-prone people who are the most vulnerable during the economic downturn. A simulation analysis by DOS (2000) showed that the tax relief measures could only able to reduce the inequality to a very little extent. The government of Singapore believes on a more pragmatic approach than a welfare state with properly developed social safety-net. No specific effort was made for those who are aged and/or less educated affected first by the economic setback. No such effort was also identified for the females, who are generally the hardest hit by the crisis.

6.2 Thailand

The crisis is featured to provide importance of the social safety net. To the world organizations Thailand became the arena where the new social strategies are implemented. In this section we will discuss, in brief, various social programs implemented during the crisis and their effectiveness. The information is gathered from SES, 1999. This is a special survey, thus it is not possible to compare the results with previous years, however, an examination of the programs in terms of reaching the target group is done.[44]

[43] Those who have depleted the funds in both these accounts can apply to the Bridging Loan Scheme, which gives loans at a concessionary interest rate pegged at the CPF interest rate plus 0.1%.

[44] a different type of discussion can be found in Tangcharoensathien et al (1999).

Low-income health card

Low income health card (which is issued for 3 years) is a means-tested program[45] entails poor[46] within 13-59 age group to free health care at hospital and public health centers. Under this program 273 Baht per head is provided. During crisis period this program is extended to the unemployed if they are registered at the Ministry of Labour and Social Welfare.

Table 14 shows that 19% of the bottom quintile received the low income health card. SES, 1999 notes that only 10% of the population had low income health card and 38% of all beneficiaries were from the bottom quintile, while top quintile's share is 3%. This shows that the program could have been better targeted. The data on regional distribution of the low income health card shows that the poorest region (that the Northeast) received half of the total distributed cards.

Voluntary Health Card

The voluntary health card covers a wider population as it serves those population who are near poverty and those who do not have any mandatory health insurance. Under this system the card holders can receive free medical care for an annual contribution of 500 Baht.

Table 14 shows that 50% of the poorest quintile is covered by the voluntary health card program. One possible explanation (provided by World Bank, 2001) is that the people do not have much reliance on the quality of the free service and thus very little people opted for the low income health card program.

From the Table 14 it is also to note that 48% people from the top two quintiles received the benefit if voluntary health card, which is actually meant for the disadvantageous group. Thus here again, targeting is not appropriate.

[45] The income ceiling is 2000 Baht for a single person and 2800 for a family.

[46] The identification of poor is quite arbitrary, it is done by the community head.

Social Pension Program

The social pension program of the Department of Public Welfare and of the Ministry of Labour and Social Welfare targets the people who are 60 years and above, who are alone, economically inactive and residing in a village having Village Welfare Assistance Centre. In 1997, the coverage of this scheme was 56,534 villages while the number increased to 66, 409 villages in 1998. The program pays 300 Baht per month during crisis period (prior to crisis it was 200 Baht), which is far less than 700 Baht - the NESDB poverty line for the elderly.

Table 14 shows only 13% people from the bottom quintile received this benefit. World Bank, 2001 shows that only 1 or less than that per cent people in Thailand are under poverty and more than 60 years of age residing alone. Thus the program itself by definition is not meant to reach the most disadvantageous elderly.

Social Security cards

Social security card is available to those who are working in the formal sector. Table 14 shows that this program is disproportionately biased to the richest quintile. Recently Thai government has planned to expand this program to cover smaller companies (having 10 or less workers).

Public Employment Program

The Social Investment project starts from late 1998 with the funds from Thai Government and the World Bank, JBIC-Japan, UNDP and AusAID.[47] Most of the package created jobs through implementation of small scale civil works. The SES, 1999 reveals that 1.1 million households were employed on these schemes. Table 14 indicates that the program was quite well targeted to the poor quintile: 42% of the

[47] Miyazawa fiscal stimulus package starts from April, 1999 which creates employment for low skilled workers in the rural areas, and to some extent for the skilled workers in the computer related fields. In total the package provides employment to 88, 967 high skill employees and on average 18 days to 3.5 million unskilled labours (World Bank, 2001).

total beneficiaries are from the lowest quintile and only 2% of the richest quintile received the benefit.

Free School Lunch Program and Supplementary Food Programs

To avoid the adverse effect of crisis (decrease in the school enrolment) Ministry of Education has some education assistance programs. School lunch program is one of those which applies to the children in primary school, and the supplementary food (milk) program is open to pre-primary and primary students up to third grade. Primarily the idea was to provide food to the under-nourished poor school kids (at primary and pre-primary levels), however, later extended to all primary and pre-primary poor students.[48] To note that the cost of each meal under this program is pegged at 5 Baht, which is very low an amount for a nutritious meal.

SES 1999 reveals that 29% of all children aged 6-11 (primary school going) benefit from the school lunch program, while 47% of children aged 3-8 received benefit from the supplementary food program. Table 14 notes that 45% kids from the bottom quintile receive free school lunch benefit and 54% of the total beneficiaries come form the poorest quintile. As far as the supplementary food program is concerned 59% children are from the families who belong to the poorest quintile. Although the program could target the poorer section quite well, the arbitrariness of the choice of the poor families did affect on the loss of efficiency by supporting the richest quintile to some extent.

Student Loan program

The Education loan fund was established on 1996. Target was the students at upper secondary and tertiary level with income less than 12,500 Baht per month. SES 1999, notes that the program supports 26% upper secondary school goers, 17% university students and 50% vocational and technical education students; it also notes that the average age of the recipients are 19 years and 57% were females. Table 14 notes that the scheme was unable to reach the poorest quintile efficiently. Only 16% of the total

[48] Teachers in the school determine who should get this benefit.

beneficiaries are from the lowest quintile and only 9% of the bottom 40% received the benefit.

Government Scholarship Program

Table 14 shows that only 25% of the total beneficiaries are from the poorest quintile and 51% of all scholarship winners come from the top three quintiles. We have mentioned that the prime determinant of inequality in Thailand is the unequal distribution of education: 90% university students in Thailand are from the richest quintile. Thus it is observed that both the Student Loan Program and the Government Scholarship Program are ill-directed.

Table 14
Incidence of Various Government Programs

Real Per capita Consumption Quintile	Health Program		Social Security and Social Pensions		Public Employment Generation Scheme	School Nutrition Program		Educational Assistance Program	
	Low Income Health Card	Voluntary Health Card	Social Pension for Elderly (60+)	Social Security Card		School Lunch Program	Supplementary Food program	Government Scholarship Program (upper and post secondary)	Student Loan Program
Percentage of Population Receiving the Benefit									
1	19	50	13	3	18	45	59	3	4
2	14	48	8	9	8	28	52	5	5
3	12	43	9	17	7	21	44	6	5
4	4	34	6	23	4	18	35	5	6
5	1	14	3	30	2	9	22	4	3
Percentage Share of All beneficiaries of Programs									
1	38	27	39	4	42	54	45	25	16
2	27	25	21	11	22	21	24	24	16
3	24	23	22	21	19	13	16	25	25
4	8	18	13	28	13	8	10	16	24
5	3	8	5	36	5	4	5	11	19

Source: World Bank (2001)

7. Conclusion

The economic crisis has created huge job losses, particularly in urban areas due to closures of banking and financial activities, while the repercussion reached the rural sectors as well. The nominal wage cut and the inflation rate lead to a deterioration of the livelihood of the low income groups in particular. Income inequality has increased to some extent, hiking the poverty level as well. In Thailand, income disparity is best explained by the education disparity. The effect of the crisis was worse on the low-skilled/educated people. Regions where a higher share of the population was lower-educated were affected badly by the crisis. The impact of income inequality was four times higher than the impact of reduced growth rate on poverty.

Income inequality increased in Singapore as well, as a result of increased unemployment and a decrease in wage rates (stoppage of bonus and reduction in CPF contribution, for example). However, at the richest (topmost) quintile, an increase in salaries was due to a policy to encourage higher-skilled expatriate foreign workers (mainly professionals) to remain and contribute to the local economy.

Thailand had maintained a constant education budget during the crisis, while in Singapore some budget cuts were observed in recurrent expenditure on education. The crises have not affected the enrolment rate in both countries. With respect to the dropout rates (which were expected to increase in Thailand), no conclusive result could be inferred from the available sources of information. It would seem that neither Singapore nor Thailand households had actually decreased their education budgets. However, substitution by public educational institutions for private institutes had occurred in Thailand.

The health sector suffered a budget cut both in Singapore and Thailand. The latter experienced closures of several private hospitals while the government managed to halt any increases in prices of medicines and drugs. In Singapore the wage system ensures savings for medical purposes and there was no change in such savings during the crisis.

The concept of social safety nets has been a part of the World Bank discussions since the late 1980s. In the early 1980s, the liberalization programs administered by the World Bank and IMF were criticized for placing burden on the low income groups. A prominent feature of the Asian financial crisis is the increasing importance of the concept of social safety nets. In Thailand, it became an important issue, because a very strong local lobby was demanding protective social action during the crisis. Also, Thailand has provided a platform to experiment such social programs. We have analyzed various schemes on health, social security and pensions, public employment generation, school nutrition programs and education assistance; it is concluded that the targeting was not sufficient in several cases. The identification of the deprived population was arbitrary. To note that the administrative cost involved in identification and better targeting could be very high. However, it is a topic of future research to investigate whether proper identification is efficient or not.

In Singapore ad-hoc policies of income tax rebates on income taxes, public utilities, housing rents etc., did not impact on the income distribution scenario. The Government made huge investments on re-skilling programs for adult workers, benefiting those who had lost jobs during the crisis. Although there is no absolute poverty, the job-seekers, the old and women in particular, were relatively deprived. Relative deprivation will be higher when they observe wealthy people (who did not have a wage cut or were not retrenched) in their near vicinity. Wage difference due to skill differences is perfectly understandable, but the income difference from lost jobs is an external shock that makes people distressed and envious. This might have its effect on the political scenario as well. The Singapore government, thus, might consider the concept of social safety nets, at least during the period of economic downturns that are created by exogenous factors. The latest Parliamentary debates seem to indicate the *status quo*. There is much ground to be traversed towards a Welfare State, an idea which is anathema to the governing polity.

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