Chapter 13
Economic Dynamics and Health

Economy and health are interconnected as statistics in the past have shown that the economic crises had both positive and negative impacts on people's health as well as the health-care system. This chapter aims to show the statistics during the two previous economic crises in 1997 and 2008, by presenting the impacts on health status, health service utilization and medical expenses as well as measures implemented to cope with both crises.

1. The 1997 Economic Crisis: Background and Pattern[1]

The opening of the liberal financial market through international banking facilities in 1993, while the monitoring and control system was not strong, coupled with the fixed exchange rates, was the key factor leading to the 1997 economic crisis. With the financial liberation, large mounts of low-interest foreign loans were brought in for low-return investments or speculations without any real demand such as private hospital and real property businesses. During 1995–1996, it was found that foreign loans were as high as US$ 100 billion, while the fixed exchange rates resulted in an overvalued baht currency affecting the country's competitiveness and export slowdown, resulting in the trade deficit of US$ 14.7–16.1 billion and a current account deficit at 8% of the gross domestic product (GDP).

The baht value protection measure in early through mid-1997 resulted in a large loss of foreign reserves, leading to the adoption of the managed float policy and baht devaluation on 2 July 1997. That was the beginning of the economic crisis and the rapidly rising amounts of external debts, including the large amounts of bad debts for the financial and banking institutions and bankruptcies of numerous businesses. Meanwhile, the remaining businesses had to make great efforts to restructure themselves and take cost-cutting measures. The crisis also resulted in higher unemployment rates, high inflation rates, and people's decreased incomes, leading to lower spending on consumer goods and decreased state revenue. As a result, the government budget and public services had to be decreased, which directly and indirectly affected the people.

[1] Suwit Wibulpolprasert. Chapter 9, Economic dynamics and health implications in Thailand Health Profile 2001-2004, 2005.

1.1 The 1997 Economic Crisis and Health Impact

1.1.1 Impact on Health Status

The apparent impact on health status was the nutritional conditions among the poor and unemployed; the malnutrition rates in 1997–1998 were higher than that for 1996. The prevalence of malnutrition (low weight for age) among primary schoolchildren rose from 10.5% in 1996 to 12.2% in 1997/98, the prevalence of low-birth-weight newborns (<2,500 gm) rose from 8.2% to 8.5% and 8.6%, and the prevalence of anaemia among pregnant women rose from 12.9% to 13.% and 13.9%, respectively over the same period. The child death rate (for children under 5 years of age) also rose, so did the incidence of infections diseases, but the death rates did not increase for such diseases as malaria, paediatric diarrhoea, and dengue haemorrhagic fever.

The physical health problems had an improving tendency especially those related to occupational health, road traffic accidents, there was a decline in the people's smoking rate and amounts of alcohol sales. However, the drops in smoking and alcohol consumption rates were noted for only a few years, but they rose again afterwards. Regarding mental health, the prevalence of stress and suicide ideation among the unemployed was higher than that for the general public and employed people.

1.1.2 Impact on Health-seeking Behaviour

During the 1997 crisis, Thailand had not launched the universal health-care scheme; so, 30% of Thai citizens had no health security coverage and they had to seek medical treatment with lower expenses. It was found that the proportions of people seeking self-medication and government health services were higher than before. According to a survey conducted by the National Statistical Office, the household health spending at health facilities dropped by 23%, while the self-medication spending rose by 12.2%. Other surveys revealed that the number of outpatient visits at state hospitals rose by 6–15%.

1.1.3 Impact on Health Spending and Health Budget

The health spending or expenditure actually declined; its real value dropped by 9.3% while the drug spending dropped by 17.3% and the state health spending dropped at a faster rate than that for the private sector. The MoPH budget in real value decreased from 67,574 million baht in 1997 to 61,097 million baht in 2001, a 9.6% drop, primarily for the investment budget. The proportion of investment budget dropped from 11.5% in fiscal year (FY) 2000 to 8.8% in FY 2001, to maintain the level of operating budget. However, the rate of increase in the health spending at present value was higher than that for GDP, resulting in the proportion of total health expenditure to GDP rising from 5.97% in 1998 to 6.1% in 1999.

1.1.4 Impact on Private Health Facilities

The impact on private health facilities was twofold: the increases in both expenditures and debts. A survey conducted by MoPH in December 1997 found that, overall, private hospitals' debts increased

by 10 billion baht, while their revenues dropped due to income elasticity resulting from lower household incomes and lower health-care spending at private facilities. Other surveys conducted in 1999 revealed that the numbers of outpatients at private hospitals dropped by 20–70%. As a result, private hospitals had to urgently undertake a restructuring or downsizing measures such as cutting the number of beds, reducing personnel salaries and remuneration, and/or cutting the number of personnel. In such efforts, more generic drugs had to be prescribed and hospital marketing mechanisms had to be deployed to seek new groups of clients by participating in providing medical services under the Social Security Scheme and providing health service packages and health tourism. With regard to hospital debts, there were debt restructuring measures and many foreign investors began to become major shareholders of some private hospitals.

1.2 Strategies for Resolving the Impact of the 1997 Economic Crisis

1.2.1 Strategy 1: Creating an equitable health system

The promotion of an equitable health system received more support, after the 1997 economic crisis, with the social safety net development concept. It was noted that even though the overall budget for MoPH during the crisis was reduced, the budget for the medical services for the poor programme actually increased by 25.3% in real value. But due to the problems of efficiency of services system for specific population groups which was later changed as the universal health-care system for all Thai citizens. The government launched the universal health-care scheme around the end of 2001 and got the National Health Security Act enacted in 2002. Besides, emphasis was placed on the promotion of equitable health-care financing and universal access to health services.

The increased production of physicians for rural residents project has been continuously implemented since the pre-crisis period; the project was expanded in 1999 and has helped ease the problem of physicians' inequitable distribution, although many health personnel moved from the private sector to the public sector, resulting in the drops in the proportion of personnel in the private sector. It was noted that the proportion of physicians in the private sector dropped from 23.7% in 1995 to 18.7% in 1999. However, after the economic recovery had been on a positive trend, there was a reverse brain drain of physicians from the public to the private sector, resulting in the rising proportion of physicians in the private sector after 1999 to 21% in 2002.

1.2.2 Strategy 2: Creating an efficient health system

After the economic crisis, the efficiency of the health system was enhanced in many aspects related to the system management and resources distribution as follows:

First, reforming drug management systems in all MoPH hospitals at all levels by reducing the number of drug items, giving more importance to the use of drugs on the National List of Essential Medicines, the pooled procurement of drugs at the provincial level from GMP-certified drug manufacturers, the systematic drug quality assurance, and the establishment of a drug information database with the information on the names of purchasers and drugs that can be purchased, which can be easily accessed.

Second, reforming the Civil Servant Medical Benefit Scheme (CSMBS) with particular attention on reducing the number of bed-days in hospital, limiting the use of private hospitals and using the drugs on the National List of Essential Medicines.

Third, establishing autonomous state hospitals under the supervision of the government under the Public Organization Act, B.E. 2542 (1999), focusing on enhancing flexibility, efficiency and public participation in hospital management; to date only one has been established, i.e. Banphaeo Hospital.

With regard to the enhancement of efficiency in resources distribution, more importance was given to disease prevention and health promotion in various modes. During the economic crisis, the people were encouraged to exercise regularly, eat suitable or nutritious food, quit smoking, drive motor vehicles responsibly, and practise safe sex. In late 2001, the Thai Health Promotion Foundation Act was promulgated, establishing the Health Promotion Fund with the money specially collected from 2% additional excise taxes on tobacco and alcohol sales. Besides, during such a crisis, the level of budget for disease prevention and control was still maintained.

1.2.3 Strategy 3: Developing service quality

In parallel with the service efficiency improvement, the Hospital Accreditation System was established in 1997 and implemented by the Institute of Quality Improvement and Hospital Accreditation (HA). Later on, efforts have been made to improve all hospitals under the universal health-care system to get HA certification.

1.2.4 Strategy 4: Promoting social empowerment

Under the 1997 Constitution, which was generally endorsed by the people, there were regulations and law related to health enacted, namely the Prime Minister's Office's Regulations on Health System Reform, B.E. 2543 (2000), and the National Health Act, B.E. 2550 (2007), which serves as a statute of national health containing important strategies, i.e. knowledge creation and social mobilization to establish a sustainable health system development mechanism in the future through the participation of all sectors in society.

2. The 2008 Economic Crisis: Background and pattern

The global economic crisis in 2008–2009 originated in the USA, in a similar manner as what happened in Thailand in 1997, because large amounts of loans were taken for speculative purposes in the real property sector, regarded as subprime, or low-quality loans. The inefficient examination of financial institutions and innovative financing mechanisms had transformed such subprime loans into various forms of financial products. So, when the returns on investments were not as expected, such loans became bad debts, leading to the financial institution and economic crisis in the USA as well as other countries all over the world.

For Thailand, the economic crisis was clearly apparent in the second half of 2008 until the third quarter of 2009, causing a negative economic growth for five trimesters. The GDP growth for 2008 was very low and contracted to –2.2% in 2009.

The GDP per capita dropped from 143,568 baht in 2008 to 142,625.5 baht in 2009. Thailand's financial sector was slightly affected by the US financial crisis as the Thai financial status was in a much better condition than that during the 1997 crisis. But the export-dependent manufacturing sector was directly affected due to the slowdown of consumption and imports in the USA and other European countries. So, it was a problem for related industries and they had to take several adjustment measures such as decreasing working hours. In this connection, the unemployment rate was rising, leading to reduced consumption and investments, which were the prime movers for the economy, resulting in the negative growth in 2009.

2.1 The 2008/09 Economic Crisis and Health Impact

2.1.1 Impact on Health

1) Physical health

Statistics from the Bureau of Registration Administration, Ministry of Interior, showed that there were fewer births over a period of several years. In 2009, the number of births was approximately 780,000 and the proportions of low-birth-weigh (<2,500 gm) newborns were 8.2%, 8.6% and 8.3% in 1996, 2008 and 2009, respectively, while the proportions of childbirths among teenage mothers (aged 11–19) had a rising trend from 12.5% before 1996 to 16.08% in 2009. In certain parts of country, such problems had been quite serious and chronic for a long time, but in some localities the problems became more serious over the past one or two years (Report on economic crisis and health system in Thailand, Office of the International Health Policy Program – Thailand, 2010).

Besides, epidemiological data for Thailand showed that the HIV infection rate was not declining in 2009; most of the newly infected cases were youths, resulting from factors related to changes in social values and lifestyles. The infection rates were high among vulnerable groups, especially injecting drug users with the rate of 34.98% in 2009. Over the past several years, the government has given more importance to prevention and medical care for HIV-infected persons, primarily with in-country funding and resources. The economic crisis had no impact on the national budget for AIDS as the budget level was not so high; the AIDS-care spending was not higher than 2% of the national health expenditure. As for the antiretroviral therapy project, for 2009 the budget rose by 54%, compared with that for 2008, due to the greater number of HIV/AIDS patients receiving the second drug regimen.

2) Mental health

Overall, the mental health status of Thai people did not deteriorate after the 2008 economic crisis. A mental health survey among Thais revealed that their mental status during the second half of 2009 was better than that for October 2008 (Table 13.1). It was found that the proportion of respondents with mental health risks dropped from 17.8% to 14.7%, except for those in Bangkok, whose mental health was worse. An in-depth analysis found that, in addition to informal indebtedness, job and income security was an important factor affecting their mental health especially during the economic crisis, while farmers gave more importance to the possession of farmland. Besides, after the economic crisis, there was no increase in the

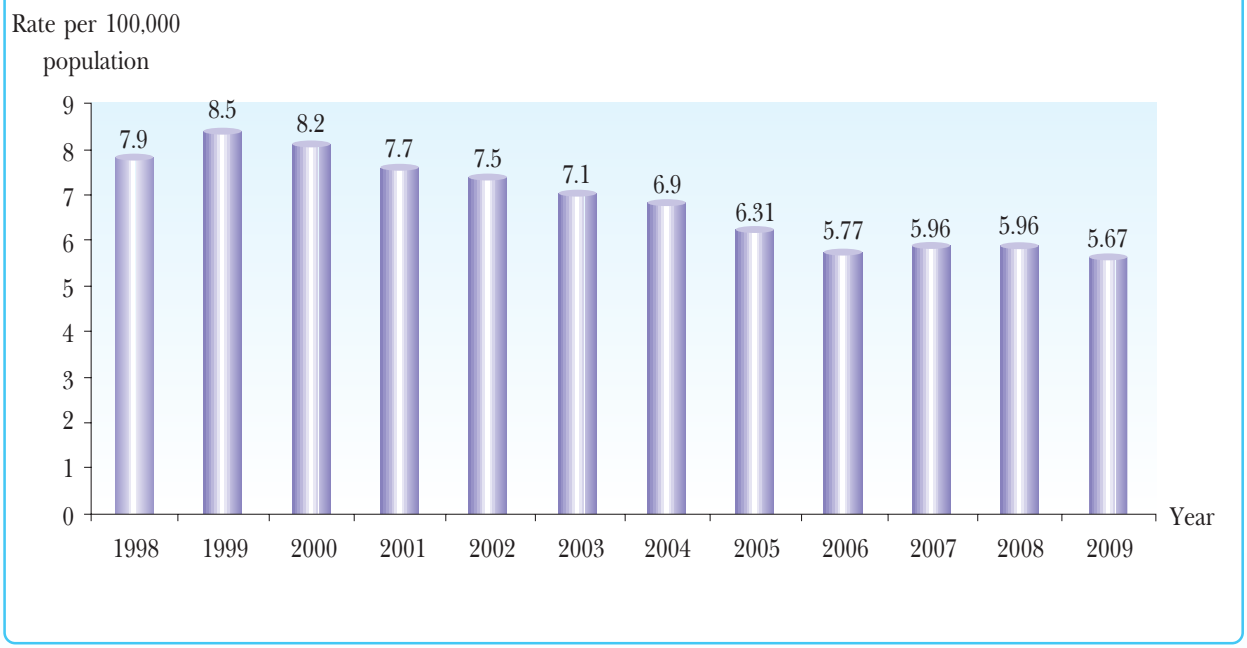
suicide rate. According to the death certificate data of the civil registration system, the suicide rate per 100,000 population was 5.96 and 5.67 in 2008 and 2009, respectively (Figure 13.1). The non-increase in suicide rate for 2009 might be the result of pro-active vulnerable case detection and suicide prevention compaigns in communities, based on the lessons learned from the previous economic crisis, which recorded a higher rate probably as a result of a timing factor. Statistics in the past showed that more suicides would be committed 1 or 2 years after the crisis. So, the suicide surveillance together with proactive measures has to be intensively continued.

Table 13.1 Comparison of mental health scores, 2008 and 2009

Item	Question	Score, %	
		2008	2009
	First dimension: Mental status		
1	You are satisfied with life	64.3	64.9
2	You feel happy	64.8	63.5
3	You feel bored/disheartened with daily life	18.9	18.5
4	You feel disappointed with yourself	12.6	12.2
5	You feel that your life has a lot of sufferings	13.5	14.6
	Second dimension: Mental capacity		
6	You are able to accept and ready to solve difficult problems (if any)	56.7	60.2
7	You are confident that you can control your emotion in critical situations	58.7	61.0
8	You are confident that you can encounter the serious situation that has happened in your life	59.3	61.5
	Third dimension: Mental quality		
9	You feel sympathetic with other people's suffering	63.5	68.4
10	You feel happy to have helped resolve other people's problems	68.1	70.2
11	You have helped others whenever you have a chance	61.7	67.0
12	You are proud of yourself	68.2	70.5
	Fourth dimension: Supportive factors		
13	You feel secure when living with the family	78.6	82.1
14	If you are seriously ill, you believe that your family will take good care of you	79.9	82.8
15	Your family members love and care for each other	81.4	84.3

Source: Report on Economic Crisis Impact on Health System in Thailand, International Health Policy Programme – Thailand, 2010.

Figure 13.1 Suicide rate per 100,000 population, Thailand, 1998–2009



Source: Bureau of Policy and Strategy, MoPH.

2.1.2 Impact on Health-care Utilization

1) Utilization of medical services

According to the health and welfare surveys conducted by the National Statistical Office, the number of outpatient visits (visits/person/year) at health facilities rose from 3.2 in 2005 to 3.8 in 2009, especially at state health facilities (community and regional/general hospitals), while the number dropped slightly for private hospitals (Table 13.2). For inpatient services, based on the same dataset on household survey, the hospitalization or hospital admission rate (admissions/person/year) dropped from 0.091 in 2005 to 0.065 in 2009 for all categories of hospitals. However, changes were made in the method of asking for such information for the 2006/07 survey; so, there was limitation in the comparison of the results with those from other survey periods; and the interpretation should be carefully made.

Table 13.2 Rates of outpatient and inpatient services at various levels of hospitals, 2004–2009

Year	Average outpatient visits (visits/person/yr)				
	Health centres	Community hospitals	Regional/general hospitals	Private health facilities	Total
2004	1.12	0.85	0.45	0.96	3.38
2005	1.07	0.79	0.45	0.89	3.20
2006	0.51	0.58	0.35	0.80	2.24
2007	0.50	0.49	0.35	0.79	2.14
2009	1.05	1.06	0.89	0.80	3.80
Year	**Average hospitalization rate (admissions/person/yr)**				
	Health centres	**Community hospitals**	**Regional/general hospitals**	**Private health facilities**	**Total**
2004	n/a	0.040	0.040	0.013	0.094
2005	n/a	0.038	0.039	0.013	0.091
2006	n/a	0.036	0.035	0.012	0.083
2007	n/a	0.036	0.036	0.013	0.086
2009	n/a	0.025	0.031	0.009	0.065

Source: Report on Economic Crisis Impact on Health System in Thailand, International Health Policy Programme – Thailand, 2010.

Meanwhile, the health service statistics collected from health facilities under the MoPH's Office of the Permanent Secretary between 2005 and 2009 (79% of all hospitals) (Table 13.3) showed that the number of outpatient visits rose on average by 4.5–6.1%, or 5% for the 2007/2008 period.

Table 13.3 Volumes and averages of health services at hospitals under MoPH's Office of the Permanent Secretary, fiscal years 2005–2009

Health services	Number of services				
	2005	2006	2007	2008	2009
Outpatient (visits)	70,136,878	69,124,701	73,319,828	76,593,156	80,601,118
Inpatient (visits)	4,593,268	4,678,082	4,783,887	4,879,483	4,854,181
Total bed-days (days)	18,087,910	18,494,357	18,718,540	18,936,090	18,629,036
Health promotion and disease prevention (visits)	2,461,738	17,897,699	18,427,570	18,973,942	19,188,128
Average outpatient visits per hospital (visits)	107,407	105,857	112,282	117,294	123,432
Average inpatients per hospital (admissions)	7,034	7,164	7,326	7,472	7,434
Average bed-days per hospital (days)	27,700	28,322	28,665	28,999	28,528

Source: Report on Economic Crisis Impact on Health System in Thailand, International Health Policy Programme – Thailand, 2010.

Note: *Analysis of data from 653 hospitals with complete datasets.

2) Medical care expenditure

During the economic crisis in 2008, Thailand had implemented the universal health-care scheme since 2002, which was regarded as a safety net for the people to access health services. The quarterly statistics from the household socio-economic surveys conducted by the National Statistical Office for 2009 compared with those for 2008 revealed an increase in the overall household expenditure of 1.59%, while the food and medical expenditures rose by 2.31% and 12.33%, respectively, but the educational expenditure dropped by 4.05%; the expenditure for alcohol dropped by 5.79% and for tobacco rose by 2.44% due to the tobacco tax hike (Table 13.4).

Table 13.4 Changes in household income, debt/income ratio, and expenditures by quarter, 2007 and 2009

Income & expenditure	Percentage of change				
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average
Comparison between 2007 and 2009 income and debt					
Income	13.68	1.47	5.24	10.89	7.82
Debt/income ratio	6.04	5.28	-4.99	3.47	2.45
Comparison between 2007 and 2009 expenditures					
Total expenditure	0.07	2.05	1.76	2.47	1.59
Food expenditure	4.73	1.86	1.62	1.03	2.31
Health expenditure	15.81	9.23	19.89	4.40	12.33
Educational expenditure	-1.99	-7.80	-5.41	-0.99	-4.05
Alcohol expenditure	-14.82	0.39	-6.80	-1.94	-5.79
Tobacco expenditure	-4.88	0.17	7.40	7.09	2.44

Source: Report on Economic Crisis Impact on Health System in Thailand, International Health Policy Programme – Thailand, 2010.

In considering the economic status of this matter, it was found that the health spending increased the most for the rich and the richest groups by more than 20%, while the educational spending dropped a lot for the poorest, the middle income and the rich groups by more than 10%, while the tobacco spending rose the greatest in the poorest group at 12.8%, and the alcohol spending dropped in all income groups, except for the poorest group whose spending on this item remained unchanged between 2008 and 2009.

When considering the ratio of household health spending to income, it was found that the richest group (decile 1) had such a ratio lower than that for the poorest group (decile 10). Besides, between 1992 and 2009, such a ratio had a declining trend for most groups, but for the period 2006–2009, the ratio for 2009 was lower than that for 2006 except for the rich group whose health spending for 2009 was higher than that for 2006 (Figure 6.85).

Regarding the proportion of household catastrophic health spending (health spending at 10% or more of all household spending), overall, the proportion had a declining trend, dropping from 3.85% in 2006 to 3.29% in 2009, but for the richest group, their proportion rose from 4.95% in 2008 to 5.41% in 2009 (Figure 6.86).

2.2 Measures for Dealing with the 2008/09 Economic Crisis

2.2.1 Government Measures

Faced with the problems of oil price hike and rising cost of living, on 15 July 2008, the government issued six measures for easing the hardship, namely cutting oil excise taxes, delaying the cooking gas (LPG) price increase, providing a certain amount of free water supply and electricity for domestic use, and providing some free bus and train services for six months beginning on 1 August 2551, except for the oil tax cut which was effective on 25 July 2008. Later on, when the economic crisis became apparent, the following government continued such measures with some modifications.

Later on, in January 2009, the government issued an economic stimulus policy to minimize the impact of the global economic crisis for the general public and the private sector in two phases as follows:

1) Economic Stimulus Package 1 (SP1)

This package includes four programmes, namely:

(1) Restoring and boosting economic confidence

(2) Generating income and developing the quality of life and social security

(3) Managing emergency or necessary situation

(4) Repaying the treasury reserve

The 4 programmes were divided into 18 sub-programmes with the budget of 116.7 billion baht plus an agricultural product price guarantee scheme with a budget of 123.6 billion baht and the tax measures policy for 40 billion baht, totalling 280.3 billion baht. All the above-mentioned programmes aimed to drive the economy in four aspects, namely internal consumption, public sector spending and investments, private sector investment, exports and tourism. Regarding public health, there were two programmes, i.e. proactive support for 830,000 village health volunteers (VHVs) by giving monthly allowance/remuneration and the upgrading of 2,609 health centres across the country as subdistrict or tambon health promotion hospitals.

2) Economic Stimulus Package 2 (SP2)

Even though the government had launched the SP1 to minimize the impact of the global economic crisis on Thailand, the Thai economy began to have signs of recovery but not so strong. In April 2009, the government initiated additional measures on a medium- and long-term basis, commonly known as "Thailand: Invest for Strength to Strength 2010–2012, or Thai Khem Khaeng Project". The measures were approved on 6 May 2009 with a budget of 1,431.3 billion baht including the government budget of 1,110.2 billion baht and state enterprises' investment funds of 321.2 billion baht, with the achievement indicators in the following seven programmes:

(1) Creating food and energy security, conserving the environment, and enhancing the efficiency of the agricultural and industrial sectors.

(2) Improving basic public services to raise the quality of life and business capability.

(3) Improving the educational quality.

(4) Reforming public health system standards.

(5) Building the potential of tourism.

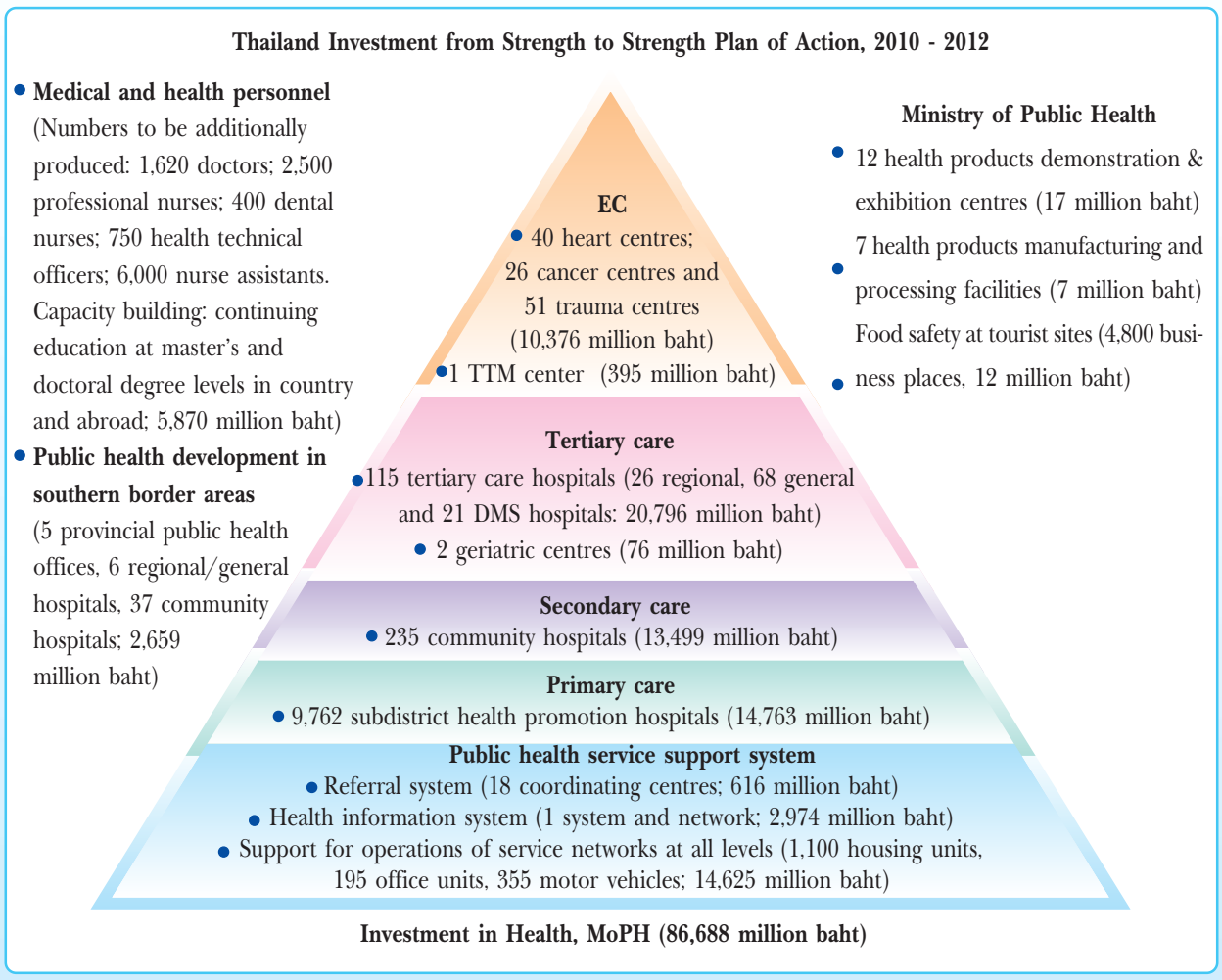
(6) Generating new income from creative economy.

(7) Creating occupations for the better quality of life at the community level.

Under this scheme (2010–2012), MoPH was allocated a budget of 86,688 million baht for 14 projects with the objectives of investing in health-care system development, improving the health-care structure, especially durable articles, land and construction (due to the continuous budget decrease after the 1997 economic crisis, despite the implementation of the universal health-care scheme), developing human workforce and service networks, and developing health conditions in specific localities (such as southern border areas) and other relevant issues, such as food safety (Figure 13.2).

At present, MoPH has received 11,508.67 million baht under the SP2, and the rest will be included in the budget request for FY 2011, under which MoPH has been allocated an investment budget of 13,943.62 million baht (totaling 23,798 million baht if the FY 2012–2013 commitment is included; Bureau of Policy and Strategy, MoPH).

Figure 13.2 Targets of investment on public health service system development



Source: Report on projects under the Thailand Investment from Strength to Strength 2012 (SP2), Bureau of Policy and Strategy, MoPH, 24 September 2009.

2.2.2 Measures Undertaken by Non-MoPH Agencies

In implementing public health activities, non-MoPH agencies involved are the following:

1) The First National Health Assembly passed resolution 1.14 on economic crisis and Thais' well-being protection on 26 December 2008, essentially requesting that:

(1) The government implement social protection measures by providing adequate budget for the universal health-care scheme and others.

(2) Relevant agencies, particularly the Ministry of Public Health, the Health Systems Research Institute, the Thai Health Promotion Foundation, the National Health Security Office, and the Social Security Office undertake the following:

- jointly implement social protection measures;
- improve and develop the health information system;
- improve the efficiency of the health service system especially at the primary care level;
- develop policies and measures to deal with risky behaviours leading to poverty;
- improve the collaborative working process between the National Health Security Office and the Social Security Office.

(3) The Secretary-General of the NHCO support the establishment of a unit for monitoring health consequences during economic crisis and report the results to the Second National Health Assembly in 2009.

In this connection, on 17 June 2009, the Cabinet endorsed the NHA's resolution and assigned relevant agencies to take further action. It was noted that, **while the overall budget for 2010 dropped by 12%, the universal health-care budget rose by 9%**.

2) The MoPH appoint the Committee on Monitoring Health Consequences during Economic Crisis on 19 January 2009.

3) On 27 March 2009, the Thai Health Promotion Foundation established a Subcommittee on Monitoring the Operations Related to Health Consequences during Economic Crisis using six strategies as follows:

- Managing knowledge and information
- Creating skills for coping with the crisis
- Improving the quality of life
- Strengthening the capacity of business enterprises and communities
- Resolving serious social impacts
- Making commitment towards sustainable development

3. Conclusions

The context of economic crisis is important particularly during the past three or four years as Thailand has encountered a number of major events such as social, political, and environmental crises, series of protests by various groups with different opinions, the energy crisis between 2004 and 2008 resulting in the high prices of agricultural products, and the spread of pandemic influenza H1N1 2009. The consequences of such events and crises could not be isolated from the 2008/09 economic crisis. Besides, the data obtained were the aggregate results of the crisis and the impact resolution efforts. Thus, it is difficult to clearly point out what the direct impacts of the economic crisis are.

Overall, the data have shown that the 2008/09 economic crisis caused a less severe impact on Thailand than the one in 1997 due to differences in the causes and natures. With the country's strong financial status during 2008–2009, the government could allocate adequate budget for the universal health-care scheme, implement six economic stimulus measures during the first phase, including free public utilities and increasing people's income with some living allowance. Subsequently, the government adopted the SP2 policy, giving more importance to investments on infrastructure and public health, especially the capacity building for all health facilities from the primary to tertiary levels, in terms of physical structure and human resources.

In addition to the aforementioned government measures, in 2009, there were several mechanisms for easing the impacts of the crisis, which have been implemental since 1997. For example, the universal health-care scheme, which has been carried out for over half a decade, has served as a social safety net by greatly reducing the financial risk related to people's illnesses as they could have access to essential health services. The National Health Assembly is a participatory mechanism with the involvement of various sectors; and the Thai Health Promotion Foundation has got a flexible process for formulating strategies for relieving health and social impacts resulting from the crisis together with various civil society organizations; all such efforts are supplementary measures for preventing the impact on the public's health and the health system.

The existing secondary data do not indicate a clear impact of the economic crisis on health and the health system. Certain health problems such as low birth weight, teenage pregnancy, and HIV infection are those that had occurred before the 2008/09 economic crisis, partly due to social and behavioural changes. Regarding the data per se, somes are lacking such as those on people's health and child malnutrition. Some of the collected data are process indicators such as health-care utilization, medical expenses; such data may not reflect the health outcomes. Therefore, the development of data or information to reflect the health status of Thai people has to be supported continuously for the data to be available as a long series of dataset during both normal and crisis situations. Such a health dataset that is linked to the socio-economic status should also be developed and supported so as to identify the problem for each economic status that will also provide better data on equity.