

The impact of the 1997–98 East Asian economic crisis on health and health care in Indonesia

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This article identifies the effects of the 1997–98 East Asian economic crisis on health care use and health status in Indonesia. The article places the findings in the context of a framework showing the complex cause and effect relationships underlying the effects of economic downturns on health and health care. The results are based on primary analysis of Indonesian household survey data and review of a wide range of sources from the Indonesian government and international organizations. Comparisons are drawn with the effects of the crisis in Thailand.

The devaluation of the Indonesian currency, the Rupiah, led to inflation and reduced real public expenditures on health. Households' expenditures on health also decreased, both in absolute terms and as a percentage of overall spending. Self-reported morbidity increased sharply from 1997 to 1998 in both rural and urban areas of Indonesia. The crisis led to a substantial reduction in health service utilization during the same time period, as the proportion of household survey respondents reporting an illness or injury that sought care from a modern health care provider declined by 25%.

In contrast to Indonesia, health care utilization in Thailand actually increased during the crisis, corresponding to expansion in health insurance coverage. The results suggest that social protection programmes play a critical role in protecting populations against the adverse effects of economic downturns on health and health care.

Key words: economic crisis, health care, health status, economics and health, health insurance, Indonesia

Introduction

Prior to the onset of the East Asian economic crisis in late 1997, Indonesia had achieved impressive gains in health status. From 1970 to 1996, life expectancy at birth had increased from 48 to 64 years, and the infant mortality rate declined by over 50%, from 118 to 52 per 1000 live births. In the same time period, the total fertility rate decreased from 5.5 to 2.8 live births per woman.

Improvements in health status in Indonesia were closely related to the dramatic economic growth that the country experienced during this time period. There is an established and growing literature showing that health status is closely linked with economic factors. Preston (1975) documented this link across countries, showing that the simple correlation coefficient between per-capita income and life expectancy on a national level is greater than 0.85. Association is not equal to causation – Preston also found that national income growth accounts for only 10–25% of improvements in life expectancy over time. Pritchett and Summers (1993) updated Preston's results and found that differences in income growth rates over the last three decades explain 40% of cross-country differences in mortality improvements.

But what is the effect of *negative* economic growth on health status? As countries have gone through structural adjustment and have endured economic crises in the 1980s, 1990s and

into the 21st century, this question remains highly pertinent. Negative economic growth, and subsequently increased poverty, unemployment and, in some countries, famine have had deleterious effects on health care in a number of countries in sub-Saharan Africa, increasing malnutrition rates and checking or reversing improvements in infant mortality (Abel-Smith 1986). In Latin America, the economic crisis that began in 1982 led to decreased public spending on health and disproportionately affected the poorest and most vulnerable social groups (Musgrove 1987).

But the extent to which economic hardship and financial crises negatively affect health and health care is not well established. Nor is it clear *how* these negative effects take place – through what mechanisms and under what circumstances. The literature on the relationship between health status and economic growth has not yet fully identified and quantified the causal pathways through which an economic downturn might affect health.¹ Wibulpolprasert et al. (1998) advanced this literature by presenting a framework showing the causal pathways through which the 1997–98 economic crisis affected morbidity, access to health care and health status in Thailand.

This article identifies the effects of the 1997–98 East Asian economic crisis on health care use and health status in Indonesia, drawing comparisons with Thailand, another country severely affected by the crisis. The article places these

findings in the context of a framework showing the complex cause and effect relationships underlying the potential effects of economic downturns on health and health care.

Methodology and data

The article is based on a mix of primary and secondary analysis. Analysis of morbidity levels, health service use and access, and household expenditure patterns in Indonesia is based on the authors' primary analysis of the Indonesia national socioeconomic survey (SUSENAS), a nationally representative household survey conducted annually with a sample size of 870 000–880 000 individuals. The data for the 1998 SUSENAS survey were collected during the time period December 1997 – January 1998. The economic crisis had already started by this time, but had not yet reached its peak. The 1999 data collection occurred in January – February 1999, while the crisis itself was easing, but the economic and social effects were still being acutely felt.

In addition, the government of Indonesia and international organizations – including the World Bank, the Asian Development Bank, the United Nations Fund for Population Assistance and the World Health Organization – have commissioned analyses of the effects of the crisis on specific outcomes. This article reviews these analyses, as well as independent research conducted by the World Bank and the RAND Corporation using household survey data, including the Indonesia Family Life Survey (IFLS).² Reports issued by non-governmental organizations on the effects of the crisis on nutritional and educational outcomes are also assessed and incorporated into the analysis here.

Background – the evolution and economic impact of the crisis

Figure 1 presents a framework for analyzing the effects of economic crises – such as that experienced in East Asia in 1997–98 – on the economies and populations of the affected countries, and ultimately on health care utilization and health and nutritional status.³ The effects of the crisis on health and health care are complex, with several different factors acting on the same outcomes. Changes in relative prices, the availability and quality of services provided, and in households' purchasing power and demand for services were all occurring simultaneously as the crisis unrolled. All of these changes affected health care utilization.

The East Asian economic crisis began with the flight of liquidity from Thailand and the depreciation of the Thai Baht by more than 50% in the second half of 1997 (WHO 1998). Indonesia's currency, the Rupiah, quickly followed; by January 1998 it was worth only 20% of its peak value in 1997 – Point 1 in Figure 1 (UNFPA 1998). In late 1997 and through much of 1998, the economies of Indonesia, Thailand, Korea, Malaysia and the Philippines were in full-scale recession. Economic growth in 1998 was negative in Indonesia and Thailand, the two countries hardest hit by the crisis (ADB 1999). Although the effects of the crisis were worst in Indonesia and Thailand, there were also significant documented negative effects on the use of health services and health care spending in Korea (Yang et al. 2001).

In Indonesia, resulting inflation was very high, running at an annual rate of 58% for the first 8 months of 1998, and food

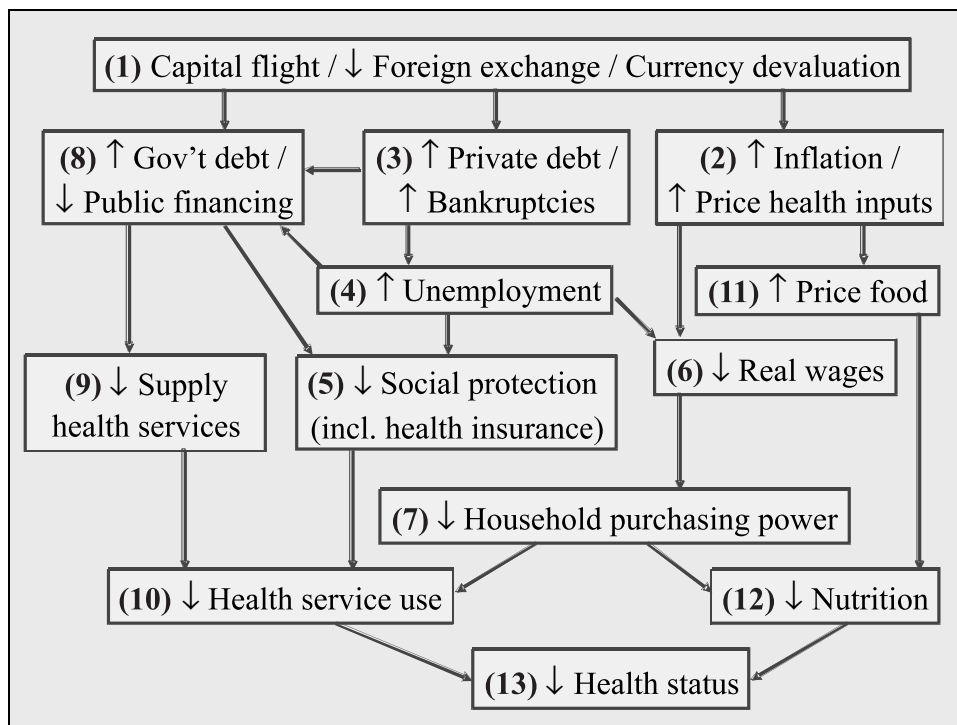


Figure 1. A framework for analyzing the effects of economic crisis on health

prices increased by an estimated 80% in 1998 (ADB 1999) – Point 2 in Figure 1. The price of rice, the most important food in the country, increased by 50% between August 1997 and February 1998. The devaluation of the Rupiah dramatically increased levels of debt faced by private companies (Point 3 in Figure 1) while at the same time restricting their access to credit. A series of bankruptcies shook the business sector in Indonesia and resulted in large-scale unemployment. An estimated 8 million workers lost their jobs in the period up to March 1998, and by mid-1998 the unemployment rate had risen to 15%.⁴ Bankruptcies of private enterprises led to a reduction in labour demand, rising unemployment (Point 4), a corresponding loss of social security coverage (Point 5) and a decline in real wages (Point 6).

The sectors of the economy most affected were construction, manufacturing, property, and banking and finance – all of which are concentrated in the Java-Bali region (SMERU 1999). But while the economic effects of the crisis were most pronounced in urban areas, there was also a decline in real agricultural wages in many of the rural provinces (World Bank 1999a). The overall poverty level, estimated to be 11.3% prior to the crisis, increased to a level of 18 to 20%.⁵

Impact on health financing

Reduced household purchasing power

The devaluation of Indonesia's currency and subsequent inflation increased prices for health care inputs, particularly for imported pharmaceuticals and medical supplies. At the onset of the crisis, an estimated 60 to 80% of pharmaceutical products and raw materials for local manufacture of drugs were imported (World Bank 2000). Despite actions taken by

the Indonesian government to freeze the exchange rate applicable to the importation of drugs and related raw materials, the price of antibiotics doubled between October 1997 and March 1998 (UNFPA 1998).⁶ The price of medical treatment at Indonesian government health centres increased by an estimated 67% during the crisis, principally due to the higher input price of drugs (Hotchkiss and Jacobalis 1999).

Households, particularly poorer households, were faced with diminished purchasing power and allocated a smaller percentage of their total budgets to health care (Point 7 in Figure 1). The SUSENAS survey shows that the share of household expenditures spent on health care decreased by 0.3 percentage points from late 1997 to early 1999 – from 1.9 to 1.6% of total household expenditures in urban areas, and from 1.6 to 1.3% in rural areas (Figure 2). The decrease was greater among wealthier Indonesians, narrowing the overall differences between economic groups in terms of budget share devoted to health.⁷

Reduced public expenditures for health

On the supply side, government tax revenues were reduced as bankruptcies mounted and household spending declined, leading to real reductions in government expenditures for health care and subsequent reductions in the public sector health care supply (Points 8 and 9 in Figure 1). In real per capita terms, total public sector health spending fell by an estimated 9% from fiscal year 1996–97 to 1997–98 and another 13% in 1998–99.⁸ As a result, there were shortages of antibiotics, iron supplements and contraceptive pills in government health facilities. The 1998 Indonesia Family Life Survey found that 25% of public facilities had experienced

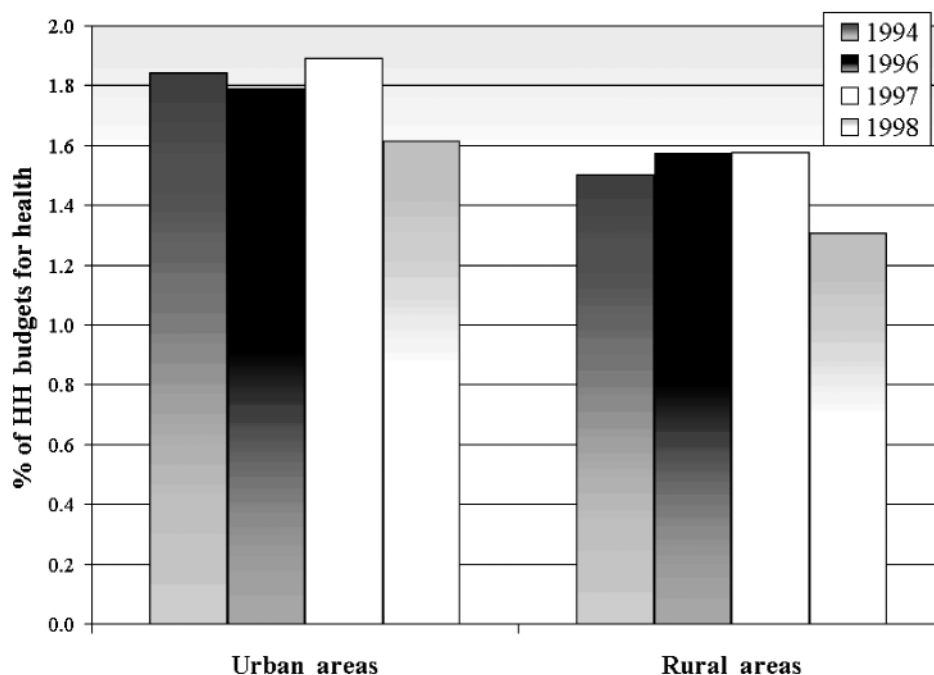


Figure 2. Health expenditures as a share of household budgets, Indonesia

stock-outs of penicillin and that 40% had been without ampicillin; there were also documented shortages of contraceptives (ADB 1999; RAND 1999).

Impact on health services utilization

Reduced supply of health services and inputs, combined with a fall in household purchasing power and reductions in health insurance and other social protection mechanisms, could clearly lead to reduced or delayed health care use or a shift to public sector use (Point 10 in Figure 1). There are two reliable data sources available to measure the impact of the economic crisis on health care service utilization and health status: the IFLS and the SUSENAS.

These two surveys show that the economic crisis in Indonesia coincided with a remarkable decrease in utilization of government-run community health centres, sub-centres and village health posts. Comparative analysis of the SUSENAS surveys shows that overall outpatient use of public sector health facilities decreased by 8.0% from 1997 to 1998, while outpatient use of private facilities declined by 3.5%. Moreover, among all individuals who reported an illness or injury during the 1-month SUSENAS survey recall period, the proportion that sought care from a modern health care

provider decreased from 53% in 1997 to 41% in 1998. This decrease was similar for males and females, and occurred at all educational levels.

Overall contact rates – the percentage of respondents visiting a modern health care provider during the recall period – decreased from 14.6 to 12.1% of respondents from 1995 to 1998. The most significant change was seen in the use of public sector facilities (Figure 3). The use of any health care by children aged 10 to 19 years was particularly affected, declining by 26.8% overall and by 33.0% for public providers between the 1997 and 1998 SUSENAS surveys (Figure 4).

Hospital use, however, does not appear to have been substantially affected by the crisis. Contact rates for public hospitals in the 1999 SUSENAS survey show little change from previous years, with 0.59% of respondents reporting a hospital visit during the survey's 1-month recall period, compared with 0.64 and 0.60% in the 1997 and 1998 surveys, respectively. Private hospital contact – measured at 0.40% in 1995 and 0.39% in the 1999 survey – also did not show a significant change.

Contact rates for posyandu – government integrated village health posts that provide care primarily to women and

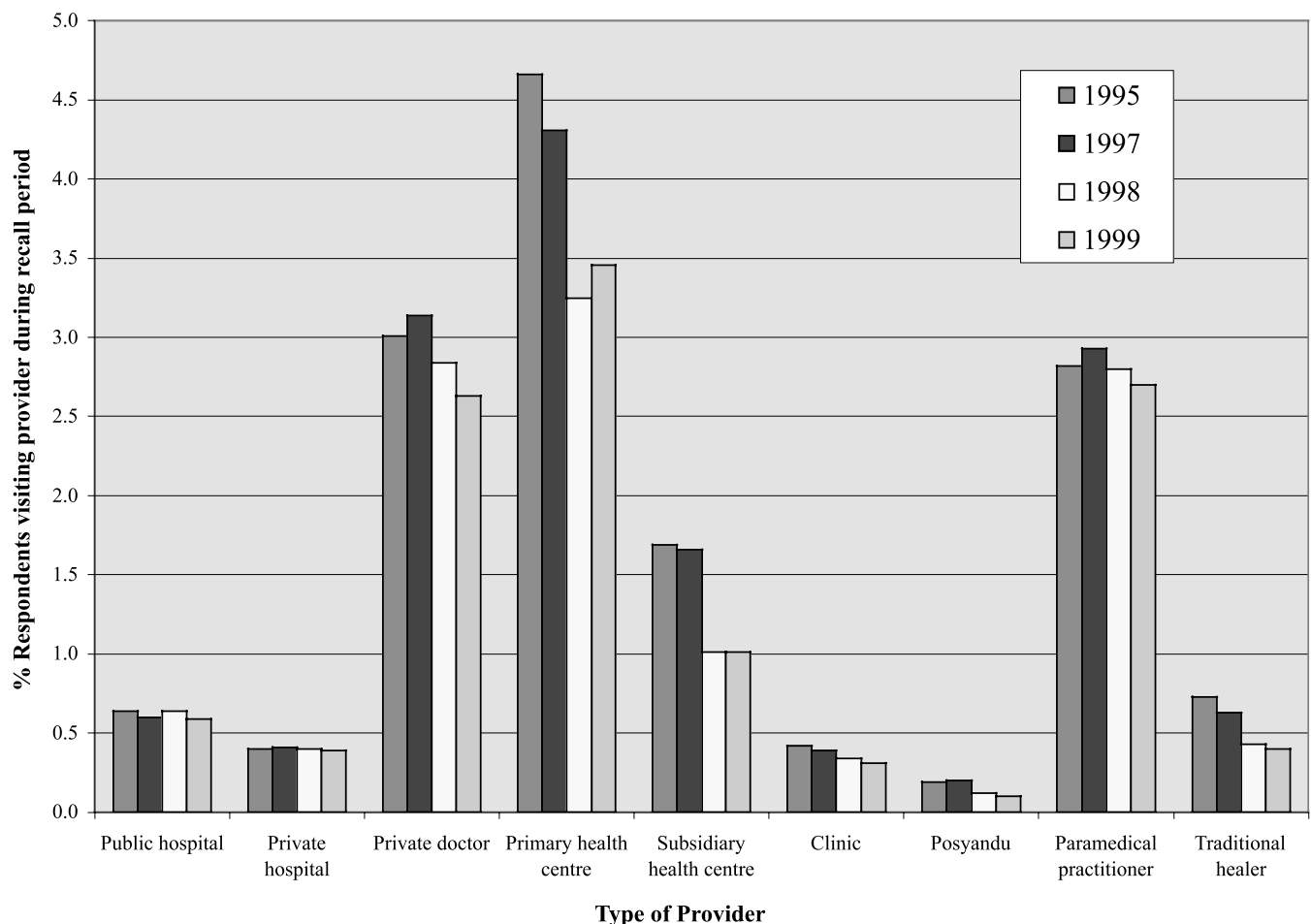


Figure 3. Contact rates, by health care provider type and survey year, SUSENAS, Indonesia

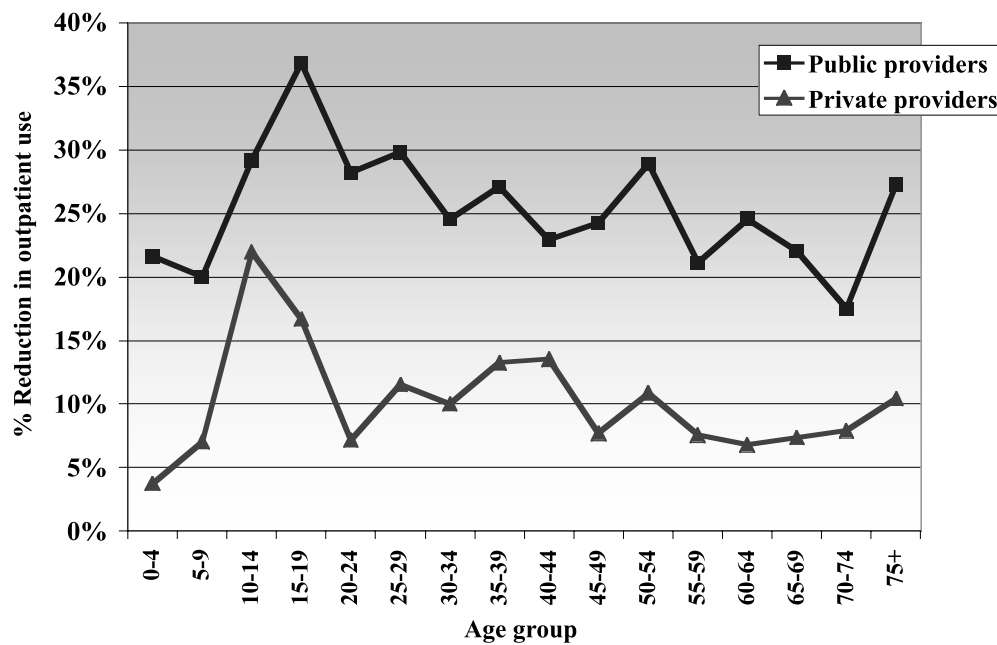


Figure 4. Percentage reduction in outpatient utilization between the 1997 and 1998 SUSENAS surveys, by age group, Indonesia

children under 5 years of age – dropped from 0.20% in the 1997 SUSENAS survey to 0.12% in the 1998 survey. However, child immunization rates, as recorded by the SUSENAS, were relatively stable during the time period of the crisis. Rates of BCG and measles coverage increased slightly, while the average number of DPT and polio immunizations per child (three of each are recommended) declined, from 1.9 to 1.8 for DPT and from 2.5 to 2.4 for polio.

The IFLS findings confirmed that the use of posyandu primary health care posts for children under the age of five declined dramatically, by 60%, from 1997 and 1998 (Thomas 2001). In general, the IFLS2+ follow-up survey found patterns similar to those in the SUSENAS – an overall decrease in health service use from 1997 to 1998, with this decrease concentrated in public sector facilities. The percentage of respondents visiting any provider during the 1-month IFLS recall period declined from 14.6% in 1997 to 13.4% in 1998; the percentage visiting a public provider decreased from 7.4 to 5.6%.

Impact on health status

There are multiple channels through which such a severe economic crisis could negatively affect health status. As described above, reductions and delays in seeking care (Point 10 in Figure 1) can cause a worsening of the health status of the population. At the same time, price increases for food (Point 11) would logically lead to lower levels of nutrition and susceptibility to communicable diseases (Point 12). Nutritional problems exacerbate infectious diseases, and malnourished children may respond poorly to vaccines. Additionally, stress and related mental health problems are all likely to increase as a result of economic problems. In the context of an economic crisis, poorer nutritional status, greater susceptibility to disease and reduced access to health

services can be expected to lead to decreases in health status (Point 13 in Figure 1).

Malnutrition levels

In 1998, Helen Keller International (HKI) issued a series of reports on the effects of the crisis on nutritional status, using data from their ongoing Nutrition Surveillance System for the time period March to May 1998. Comparing these results with similar data from 1996, HKI reported that anaemia and vitamin A deficiency were increasing among children under five and their mothers. The reports also indicated that the prevalence of wasting among mothers, measured by body mass index, was high (20%) and increasing.⁹

However, analysis of the SUSENAS and IFLS surveys shows little deterioration in nutritional status in Indonesia. The SUSENAS records children's nutrition status as measured by weight for age – an important indicator of the human effects of an economic crisis. A comparison of the 1998 and 1999 surveys reveals no measurable general effect of the crisis on child malnutrition levels. Overall levels of moderate malnutrition among children under 5 years of age in Indonesia continued their downward trend during this time period – from 32.6% in 1995 to 29.8% in 1998 to 28.5% in 1999 (Figure 5). The data for the 1999 survey were collected in January – February 1999, when although the crisis itself was easing, its effects were still being felt. However, because the SUSENAS did not include nutrition information in the 1997 survey, it is not certain that these data indicate a continuous downward trend.

The declining trend in child malnutrition levels may mask a crisis-related deterioration for specific population subgroups. From 1998 to 1999, children's nutritional status did marginally worsen among specific pockets of the population

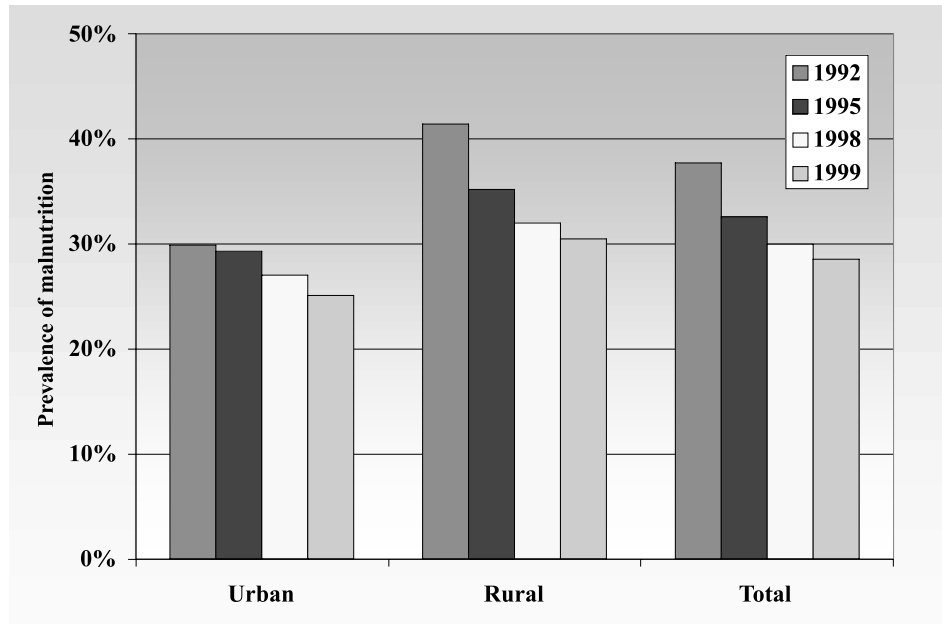


Figure 5. Prevalence of child malnutrition as measured by weight for age, SUSENAS surveys

that were adversely impacted by the crisis. Children's nutritional status worsened slightly for families gaining their living from the financial, insurance and construction industries – from 22 to 23% prevalence of moderate malnutrition for the financial and insurance industries, and from 28 to 29% prevalence for construction. These changes are not statistically significant. Average child weight for age scores worsened in the regions of Java-Bali and Sulawesi between the two surveys. The IFLS2+ survey also showed little negative impact of the crisis on child malnutrition. Child malnutrition, measured by weight for height and weight for age, improved from 1997 to 1998.

Morbidity levels

There is considerable evidence that the economic crisis led to increased morbidity levels in Indonesia. The SUSENAS shows that self-reported disruptive morbidity increased sharply from 1997 to 1998 in both rural (by 14.4%) and urban (by 21.4%) areas (Figure 6). The survey defines disruptive morbidity as an illness or injury that keeps the individual from carrying out his or her normal activities during the 1-month recall period. Other than as an effect of the crisis, there are no clear explanations for this increase. These results should be interpreted with some caution, as self-reported morbidity is a subjective measure. The rise in morbidity levels may also reflect a decrease in the general psychological well-being of the population.

Among Indonesia's regions, Java-Bali recorded the highest increases in disruptive morbidity between 1995 and 1998; a finding that coincides with the regional patterns of the economic impact of the crisis and reinforces the likelihood that the increase in morbidity is crisis-related.¹⁰ Moreover, for households whose main source of income was the financial services industry or the construction industry – sectors particularly affected by the crisis – disruptive morbidity

levels increased substantially more than for the population at large. Disruptive morbidity increased by 35.3% from 1997 to 1998 in the financial services sector and by 35.2% in the construction sector, compared with 18.7% for the country as a whole (Figure 7).

The IFLS surveys also show increases in morbidity. The percentage of children reported to be in poor health status increased from 7.0% in 1997 to 8.3% in July 1998 (Frankenburg et al. 1999).

Discussion and conclusions

Impact on health status

There is strong evidence that the economic crisis negatively affected health status in Indonesia. Levels of self-reported disruptive morbidity increased by 14.4% in rural areas and 21.4% in urban areas. While declines in health service utilization were found in all sectors of Indonesian society, the effects on health status were concentrated in sectors disproportionately affected by the crisis – urban areas, the region of Java-Bali, and the finance and construction sectors. There does not appear to have been a generalized negative effect of the crisis on nutritional status in Indonesia, although some population subgroups – including those in the finance and construction sectors – did register slight increases in child malnutrition. Malnutrition is measured here as weight for age, which is influenced by both the child's height (height for age) and weight (weight for height). Short-term changes such as the impact of an economic crisis on nutrition would primarily affect weight for height, and thus would be reflected in the weight for age scores.

A potential explanation for the fact that there is no generalized effect of the crisis on children's nutritional status is that adults – particularly mothers – sought to protect the

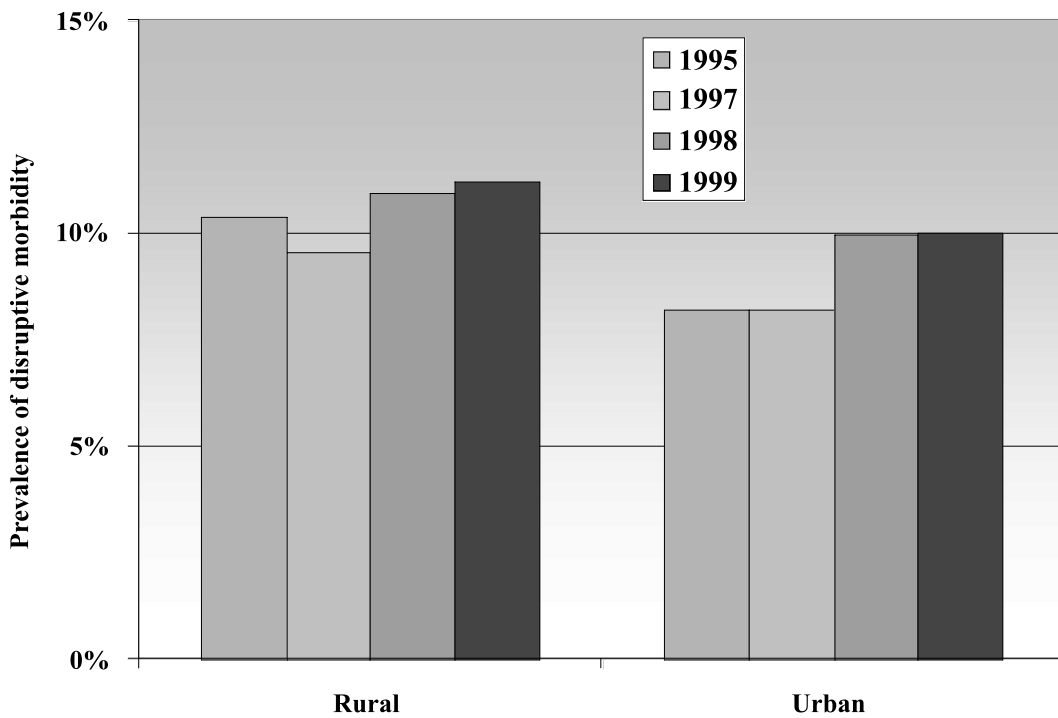


Figure 6. Prevalence of disruptive morbidity, 1995-99, SUSENAS

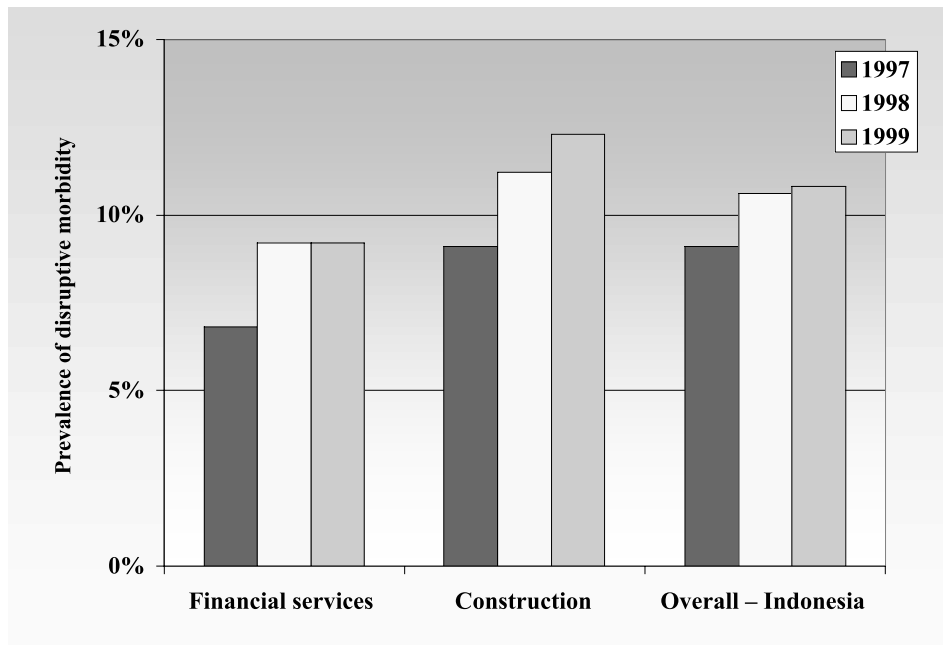


Figure 7. Prevalence of disruptive morbidity, by occupation of the household head, 1997-99, SUSENAS

nutritional status of their children at their own expense. The IFLS2+ follow-up survey showed a small increase in adult malnutrition, measured by a body mass index of less than 18, from 14.1% in 1997 to 14.7% in 1998, with poor women particularly affected (RAND 1999). Body mass index is particularly sensitive to economic changes (Cornu et al. 1995).

Impact on utilization

Although malnutrition was not a major factor mediating the effects of the crisis on health status, reduced use of health services is strongly related to the deterioration in health status in Indonesia (Points 10 and 13 in Figure 1). Figure 1

predicts that decreases in the public supply of health services, combined with restrictions on household spending, will reduce or delay health service utilization. There was a large-scale decrease in Indonesia: outpatient contact rates declined by 25.4% for public health facilities and 9.0% for private facilities from 1997 to 1998. Overall outpatient use fell by 8.0% in public facilities and 3.5% in private facilities. But Figure 1 suggests that private sector use should have been cut relatively more – that households with constrained budgets would resort to relatively cheaper public services, which was generally the case in the other countries affected by the crisis.

Why was there such a steep decline in public sector use in Indonesia? One possibility is that the crisis led to a deterioration of quality in public facilities. There is little hard evidence of such a change, although the IFLS2+ survey does document stock-outs of antibiotics and contraceptive supplies at public health facilities (RAND 1999). The crisis had a clear negative effect on public and private health expenditures. Increases in inflation, unemployment and underemployment all led to declines in household purchasing power; households' expenditures on health declined, both in absolute terms and as a percentage of overall spending. As a direct result, the demand for health services decreased.

Price increases also played an important role. As described above, the price of health services at government health centres increased by an estimated 67%, and drug prices jumped dramatically. Prices increased by similar amounts (in absolute terms) for services provided by both public and private providers, but because services in the public sector were cheaper to start with, the increases were higher in relative terms for public providers. It is most likely that the reduction in public sector utilization was caused by a combination of reduced demand – related to increased prices and lower purchasing power – and reduced supply as government health facilities were forced to cope with lower real budgets.

Comparisons with Thailand

Comparisons with the experience of Thailand during the 1997–98 East Asian economic crisis shed light on the declines in utilization in Indonesia. In Thailand, as in Indonesia, the crisis was marked by large-scale currency devaluation – the Thai Baht fell by more than 50% in the second half of 1997 – and increases in poverty. The poverty level increased from 11.4% in 1996 to an estimated 15.3% in 1998 (UNFPA 1998; WHO 1998). As a result, household spending on health declined.¹¹ Real per capita public health spending fell by close to 10% from 1997 to 1998, the same rate as in Indonesia.

However, in marked contrast with Indonesia, the use of public health services *increased* in Thailand during the crisis. From 1996 to 1998, the total number of outpatient visits to public health facilities increased by 22%. The number of inpatient days in Ministry of Public Health facilities went up by 9% during the same period. Immunization coverage rates remained stable. The use of public sector family planning services declined, but this decrease follows a previous trend

of a shift from public to private sources for contraception (World Bank 1999b).

Why did the use of public services decline in Indonesia but increase in Thailand? In both countries private health spending and the public supply of health services were negatively affected by the crisis. Increased unemployment and underemployment, combined with inflation, sharply reduced household's real purchasing power and heightened poverty levels – to approximately 20% in Indonesia and 15% in Thailand. Spending by households declined in both countries during the crisis, and expenditures on health declined even faster than overall expenditures. At the same time, inflation led to price increases for health inputs and health services in both countries, further cutting households' purchasing power for health. Prices at public health care centres in Indonesia increased by an estimated 67% during the crisis. In Thailand, overall price inflation was less acute – 8% for calendar year 1998.

At the same time that household budgets were squeezed, public health supply was also negatively affected in both countries. Real public health expenditures fell by 10% or more in both countries during the crisis. Figure 1 suggests that a combination of reduced household purchasing power (Point 7 in the Figure) and reduced supply of health services (Point 9) would lead to a decrease in health service use (Point 10). But the diagram also points to a third major influence on health services utilization – social protection programmes (Point 5). In Indonesia, social protection programmes for health are very limited, providing little protection against the negative effects of the economic crisis on access to health care. Health insurance schemes cover only civil servants and a limited group of formal sector employees.

On the other hand, the increases in public sector utilization in Thailand were closely related to the introduction and expansion of insurance schemes. Prior to the crisis, from 1993 to 1996, insurance coverage in Thailand had increased from 33 to 77%. After the onset of the crisis, two programmes were expanded: one to protect vulnerable groups (the Public Assistance programme) and another targeted to those close to poverty (the Voluntary Health Card programme). The latter programme, which has a small premium, added more than 2.5 million users from 1996 to 1998, and utilization rates increased by similar proportions (Figure 8).

In contrast to Indonesia, health care utilization in Thailand actually increased during the economic crisis, corresponding to expansion in the coverage of the Voluntary Health Card and other health insurance programmes. These results strongly suggest that social protection programmes, adapted to meet the needs of the most threatened population groups, are necessary and important tools to protect against the adverse effects of an economic crisis on health and health care.

Endnotes

¹ Musgrove (1987) describes these pathways in the context of Latin America. A study in Cameroon shows that the economic

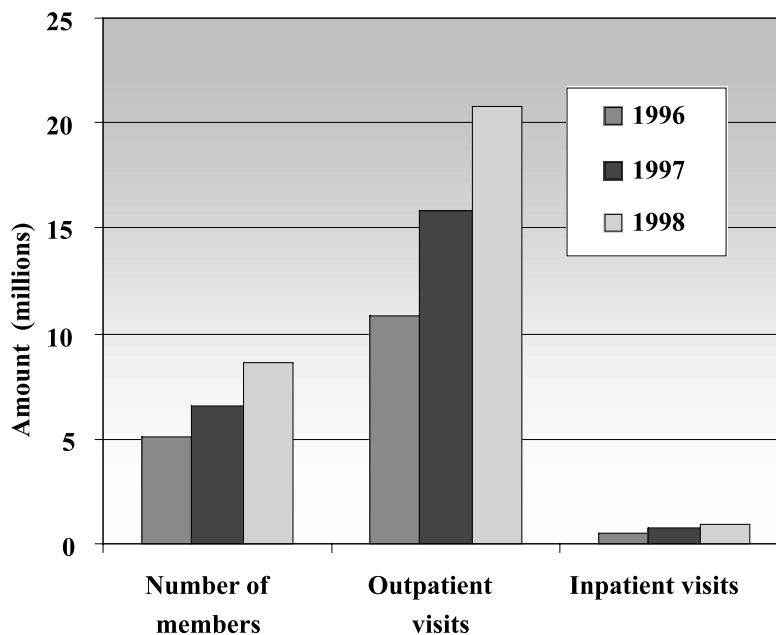


Figure 8. Thailand's Voluntary Health Card Programme, 1996–98

downturn of the early 1990s led to salary reductions for government health workers and resulting declines in both motivation and performance (Israr et al. 2000).

² The IFLS is a panel survey, measuring changes in the same households over time. The second phase of this survey, the IFLS2, was carried out in August–December 1997. In order to measure the early effects of the crisis, the IFLS2+ survey was fielded in July 1998. The IFLS2+ covers 2066 of the households in the original IFLS and IFLS2 sample – or approximately 25% of that sample – in seven of the original 13 provinces (RAND 1999).

³ The framework described here has several elements in common with another framework conceived to explain the effects of the crisis on health in Thailand (Wibulpolprasert et al. 1998). The two frameworks were developed independently.

⁴ Estimates for unemployment in Indonesia at the end of 1998 vary from 5.4 to 21.3%.

⁵ There are several different estimates of the increase in the poverty rate in Indonesia. Calculations using expenditure and inflation data from the Indonesia Family Life Survey (IFLS) show that the rate increased from 11.0% in 1997 to 19.9% in 1998 (RAND 1999). The SUSENAS survey shows an increase in the poverty headcount from 16.9% in 1997 to 18.3% in early 1998, using official inflation rates.

⁶ Another estimate suggests that the wholesale price of imported drugs had increased by 20–25% by January 1998, and that prices of locally produced drugs had increased by 15–18% (UNESCAP 1999).

⁷ Households in the highest economic quintile (the wealthiest 20% of the population) decreased their budget share going to health care from 1.7 to 1.4%. The poorest quintile decreased their share from 1.3 to 1.1%.

⁸ The decrease was partially compensated by a major increase in donor funding. Foreign funds, which accounted for 18–21% of health sector funding during the time period 1994–97, increased in importance to 24% in 1997–98 and to 45% in 1998–99 (Saadah et al. 1999).

⁹ The Helen Keller data are not nationally representative and cover only selected groups. These data are from six ecological zones, including rural South Sulawesi (1500 households included in the surveillance system), urban South Kalimantan (2100 households), East Java (adolescents only), and Central Java (7200 households).

Among the six ecological zones, only Central Java shows results that are both strongly statistically significant and independent of outside interventions (Helen Keller International 1998).

¹⁰ For analysis by region, this paper groups Indonesia's provinces into five natural regions, as follows:

Java-Bali Region: Provinces of DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, and Bali.

Sumatra: Provinces of DI Aceh, North Sumatra, West Sumatra, South Sumatra, Lampung, Riau, Jambi, and Bengkulu.

Sulawesi: North Sulawesi, South Sulawesi, Central Sulawesi, and Southeast Sulawesi.

Kalimantan: West Kalimantan, South Kalimantan, Central Kalimantan, and East Kalimantan.

Other Provinces: Provinces of West Nusa Tenggara, East Nusa Tenggara, East Timor, Maluku, and Irian Jaya.

¹¹ The Thai Socio-Economic Survey, conducted by the National Statistical Office in 1996 and 1998, showed that within the first (poorest) consumption decile, expenditures on health care represented 3.4% of all expenditures in 1996. This figure was reduced to 2.6% in 1998, as the percentage of total consumption represented by food increased from 51.4 to 55.4% (Tangcharoensathien et al. 2000).

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