EFFECT OF GLOBALISATION ON PUBLIC HEALTH: A CROSS COUNTRY ANALYSIS OF THE CORRELATION BETWEEN HEALTH INDICATORS AND HEALTH EXPENDITURE

Dissertation submitted to the Jawaharlal Nehru University in partial fulfillment of the requirement for the award of the degree of

MASTER OF PHILOSOPHY

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CERTIFICATE

Certified that the dissertation entitled **"Effect of globalization on public health: A cross country analysis of the correlation between health indicators and health expenditure"** by **Lalit Kumar**, in partial fulfillment of the requirements for the **Degree of Master of Philosophy**, is his original work. It has not been submitted in part or in full, for any other degree or diploma of this or any other university, to the best of our knowledge and may be placed before the examiners for evaluation.

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DECLARATION

I, **Lalit Kumar,** do hereby declare that the dissertation entitled **"Effect of globalization on public health: A cross country analysis of the correlation between health indicators and health expenditure"** submitted by me for the award of the degree of **Master of Philosophy** of **Jawaharlal Nehru University** is my original work and has not been submitted by me or by anyone else for any other degree or diploma of this or any other university.

(LALIT KUMAR)

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CHAPTER 1

INTRODUCTION

1.1 Historical overview of the problem of public health and its policies

Globalization can be a major force for prosperity but only if it is backed by adequate national policies and favourable social and economic environment. Development models inappropriate for the situation in developing countries do not deliver desired outcomes and sometimes set in negative trends as well. Frustration at this distorted outcome is reflected every year in WTO meets and in bilateral trade agreements. Every country is endowed with different sets of resources and has different demands; hence, different policy frameworks are required for their development. This blind race for liberalisation has produced drastic results in the last decade. To note a few, Human Development Report 1999 shows the following trends

About 80 countries still have real per capita income less than what they had a decade ago; this clearly indicates that there has been negative growth in these countries. The income gap between the world richest fifth and poorest fifth has more than doubled to 74 to 1 over the past three decades. Inequality has been rising in many countries since early 1980s. Debt services for 41 poorest countries amounted to $11.1 billion in 1996. About 1.3 billion people live on income of less than US $ 1 a day. Public services have deteriorated as a result of economic stagnation.

By the 1980's the global economy was in deep recession. To counter the problem UK and US took the lead in economic reforms

and in restructuring their societies. A political consensus ended the Cold War. From here the concept of free market got new life. The new concept was based on the following assumptions: More rational and efficient allocation of resources requires less government intervention; economic globalisation will lead to growth, efficiency and increased competition. Hence countries need to become competitive and switch from domestic production for self sufficiency. Under the impact of this new thinking governments privatised state enterprises such as industries, banks, hospitals; public utility services like water, sanitation, railways, roads etc were sold to private players to promote efficiency. Government spending on social service was cut down. The changing political situation in the late 1980's and an economic slowdown led to a large cut in development aid given to developing countries. This intensified the debt crisis and consequently many countries defaulted on their debts. The World Bank stepped in and implemented the structural adjustment programmes (SAP). These included massive deregulation, privatisation, currency devaluation, and cuts in social spending, lower corporate taxes, export-driven growth strategies (i.e. export of agricultural products and natural resources) and removal of restrictions on foreign investment. The debt crisis undermined growth, health and education. Loans that were given by World Bank to overcome this debt crisis were based on strict conditionalities. Countries would often use them for importing consumer goods, luxuries and food stuff but not for investment in agriculture.

Countries had to export raw materials for foreign currency to repay their debts. One of the important points to note is that while IMF and World Bank through SAP asked to cut back on social spending but never on military spending which in third world was many times higher than their previous years, as US is the biggest arm dealer around the globe[1]. Reductions in social spending were often accompanied by increase in military spending including spending on arms imports from developed countries.

SAP reforms in developing economies often increased poverty, corruption and social unrest. Chossudovsky, (1997), finds that from 1980s to 1990s poverty has increased in both rural and urban areas; real salaries have gone down by more than 60% in many countries. To give an example, in Peru after IMF- World Bank reforms oil prices shot up 31 times, price of bread went up 12 times and real minimum wages gone down by 90%[2].

All these developments often led to the deterioration of public health. Health indicators become worse and the World Bank was criticized for its role. As a result the World Bank released an agenda of reforms: financing health services in developing countries in 1987. In the World Development Report of 1993, it outlined its agenda for health reforms. The report recognised poverty as a threat to health

[1] Evelyne Hong, Globalisation and impact on health-a third world review, the peoples health assembly, December 2000, Saver, Bangladesh

[2] Chossudovsky, Michel, The Globalisation of Poverty: Impacts of IMF and World Bank Reforms, Penang: Third World Network. 1997.

but did not address the issue of economic inequality and poor health. Its view of economic growth as a condition for good health is objectionable on many grounds. The report also evaluated health in terms of global burden of disease measured in disability-adjusted life years (DALYs). Banks assign different values to years of life. Values ranges from zero at birth to peak at 25 and then again decline to zero. This clearly reduces the importance of the young and elderly people in health care. The role of private sector was encouraged in providing health care. This outlook encouraged privatisation in the health sector and often led to escalation of medical cost in Third World Countries. For example in Malaysia in 1996, the Health Ministry privatized the five hospital support services at the University Hospital, namely cleaning, laundry, clinical wastes, maintenance of biomedical equipment and emergency power supply. Since then, costs have increased by 250 percent (*Malaysian Medical Association*: April 2000). The privatisation of the University Hospital again in March 2000, further increased charges by over 100 percent for many essential lifesaving treatments like the electrocardiogram (ECG).[3]

After the formation of World Trade Organization (WTO) on 1st January 1995 the policies and rules of the trade become more formalized and institutionalised, now violations of rules invited heavy fines from trading partners. The WTO covers not only areas pertaining to trade in goods but includes trade in services and ideas and knowledge systems. It is headed by its highest authority, the

[3] Malaysian Medical Association: April 2000

ministerial conference comprising member states and meets at least every two years. It enforces more than 20 international trade agreements which affect all facets of life...economic, social, political, environmental and cultural. Although it is an inter-governmental body comprising member states, it is the TNCs that sit on the important advisory committees which decide policy and set the agenda. In the case of the US, members of the Advisory Committee for Trade Policy and Negotiations include IBM, AT&T, Bethlehem Steel, Time Warner, Corning, Bank of America, American Express, Dow Chemical, Scott Paper, Boeing, Mobil Oil, Amoco, Pfizer, Eastman Kodak, Hewlett-Packard, Weyhauser and General Motors (Clarke 1996: 301-02)[4]. This has invited the charge that, it is a body which serves the corporate rather than nation's interest. Control of the WTO is vested in the dispute settlement body; it serves as a powerful instrument to pressurize governments to fall in line. This body is highly biased in giving its decisions in flavor of developed nations. However in health, social and environmental concerns it has the record of ruling against them. For example, in 1997 the WTO dispute settlement panel sided with the US in its challenge to a European Union (EU) ban on beef treated with growth hormones that have been scientifically linked to cancer and other serious diseases. In a January 1998 appeal the WTO upheld its decision ruling that the EU law violated WTO rules. In July 1999, the US imposed WTO

[4] Clarke, Tony, 'Mechanisms of Corporate Rule' in Jerry Mander & Edward Goldsmith (eds),

approved retaliatory sanctions on the EU for its refusal to accept US hormone – treated beef, slapping 100 percent tariffs on $116.8 million worth of European imports including fruit juices, mustard, pork, truffles and Roquefort cheese (Brown *et al* 2000a: 192).[5]

The WTO has included many issues not pertaining to trade but which are crucial to the economic interests of the developed countries; they are-the Agreement on Agriculture (AOA); Trade Related Intellectual property Rights (TRIPS); the General Agreement on Trade in Services (GATs); and the Agreement on Technical Barriers to Trade (TBT); Agreement on the Application of Sanitary and Pytosanitary Measures (SPS). These agreements have important implications for public health and safety.

The SPS Agreement has particular relevance to the trade in food: it deals with issues related to food safety and animal and plant health laws. The Agreement recognizes the rights of Governments to protect human, animal or plant life or health based on sound principles and scientific evidence and not as a pretext for erecting technical barriers to protect domestic markets. The Agreement states that members must base their SPS measures on international standards, guidelines and recommendations if they exist [6](Hong, 2000, 34). The international standards used in WTO disputes and as the basis of international standards in food matters are the Codex Alimentarius

[5] Brown, Lester R. et al, State of the World 2000. New York: World watch Institute and W. W. Norton 2000a.

[6] Evelyne Hong, Globalisation and impact on health-a third world review, the peoples health assembly, December 2000, Saver, Bangladesh

(CA). The CA is defined by the Food and Agriculture Organization (FAO) and the WHO and has acquired new importance with trade liberalization under the WTO regime. However there are concerns that the CA has been dominated by commercial interest. During since 1989-91, 96 percent of the non-governmental participants or national delegations represented industry and Nestle sent 38 representatives to Codex committee meetings, which is more than most countries. In the committee on pesticide residue levels, 33 percent of participants came from agro chemical and food corporations. This raises questions concerning the objectivity and impartiality of the Codex in scientific assessment (Koivusalo: 1999).[7] In 1990 codex allowed residues of DDT on numerous food stuffs.[8] In hormone treated beef case, the EU challenged the CA standard as EU ban on import of hormone treated beef was called inconsistent by US because of non fulfillment of the criteria that no evidence of its effect has been produced. The TBT Agreement also has a bearing on the production, labeling, packaging and quality standards of pharmaceuticals, biological foodstuffs and other technology assessments (Koivusalo 1999). Since TBT covers a wide range of products which standards should be applied is a puzzle, in disputes it may be WHO or other standardizing body, Hence it is a source of conflict.

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[7] Koivusalo, Meri, 'World Trade Organization and Trade Creep in Health and Social Policies', June 1999, www.stakes.fi/gaspp/docs/ocpap4.docs.

[8] Goldman, Patti and J.M. Wagner, 'Trading away Public Health: WTO Obstacles to Effective Toxics Controls', Multinational Monitor, October/November 1999, pp 21-25, 30.

Agreement on trade related intellectual property rights (TRIPs) comes into effect in 1995. TRIPs came into effect in 1995. It imposes minimum standards in seven areas of intellectual property i.e. patents, copyright, trademarks, geographical indication, industrial design, and undisclosed information (trade secrets) and covers diverse areas as computer programming and circuit design, pharmaceuticals and transgenic crops.[9] It ignores the difference in economic and technological capabilities of developed and developing countries resulting in technological protectionism. It is a move by US corporate interest to establish global rule to counter their declining competitive market edge in world markets (Correa2000:5)[10] TRIPs will affect the Third World by increasing the knowledge gap; and by shifting bargaining power towards the producers of knowledge most of whom are in the industrialized countries (Koivusalo 1999). This will be most strongly felt in the area of patents and its effects on the prices of medicines. Although the positive effects of TRIPs as told are technology transfer, FDI, and research and development innovation, but there is still not a single instance of this. In terms of domestic

[9] UNCTAD, The TRIPs Agreement and Developing Countries New York & Geneva 1996

[10] Correa, Carlos M, Intellectual Property Rights, the WTO and Developing Countries: The TRIPs Agreement and Policy Options. Penang: Third World Network 2000.

innovation, most of the Third World countries (with the exception of the East Asian 'Tigers', India and Brazil which have built up their R&D) are not likely to improve their innovative performance on the basis of a stronger and expanded IPRs regime: Third World countries share in world R&D expenditure is negligible declining from some six percent in 1980 to about four percent in 1990, they are thus overwhelmingly dependent upon innovations made in the developed countries (Correa 2000:33). Developed countries dominance of intellectual property can be seen from the following data: 97 percent of all patents worldwide is concentrated in a handful of countries; in 1993, ten countries accounted for 84 percent of global R&D; 95 percent of patents granted in the US over the past two decades were conferred on applications from ten countries which captured more than 90 percent of cross-border royalties and licensing fees; 70 percent of global royalty and licensing fee payments were between parent and affiliate in TNCs; and more than 80 percent of the patents that have been granted in the Third World Countries belong to residents of industrial nations. (UNDP 1999:68) The TRIPs Agreement represented a major victory for the North and their industrial lobbies. It provides an enabling environment for the TNCs to tighten their dominance over the ownership and control of technology and impede and increase the cost of transfer to the Third World (Correa 2000:21; UNDP 1999:34).This privatisation of medical knowledge, restricting its access and flow will further create blockage in

delivering health care throughout masses. Same is the case of trademarks and other agreements.

This was the brief introduction to the area of my work from where few important points can be traced out which affects public health directly or indirectly. Mergers and acquisitions are concentrating power in mega corporations. Transnational corporations dominate global markets. Capital is becoming concentrated in few hands leaving others with fewer resources to compete in the world. Increased monopoly in the market is reducing welfare in the society. New patent laws reduce the accessibility of drugs in most of developing countries and among poor in developed countries. SAP is leaving a very minimal role for government to do in health sector Above all already existing slums in third world are increasing diseases in developing countries. Recent data of many countries shows that there has been reemergence of diseases. This clearly shows lack of due health care provision to the masses.

1.2 Problem of research-

The purpose of my study is to discuss the potential impact of globalization on public health through a cross country analysis of the correlation between health indicators and health expenditure indicators in the period 1995 to 2000.

The countries under study are selected on the basis of declining budget deficit as % of GDP. Correlation coefficient between different

health expenditure variables and health indicator variables is found for all countries by taking out average of each indicator over the years 1995 to 2000. Correlation coefficient is also found for each country and between each set of variables separately. The results of correlation are analyzed. Few policy measures linking globalization are also studied to see their effects on public health. A detailed methodology is provided in next chapter.

1.3 General introduction to the chapters

In the above context, we have already discussed the related literature. The second chapter will include a discussion of methodology and related useful definition and terms. Working on data and establishing relationship between different indicators through correlation will be part of third chapter. An analysis of the result will also be discussed in this chapter. Some policy measures linking globalization to public health are discussed in chapter four. Finally, the last chapter will include summary of results and conclusion.

CHAPTER 2

DEFINITIONS AND RESEARCH METHODOLOGY

In this chapter we will discuss some useful definitions which are used in analysis. This chapter will also discuss the methodology used throughout this work. Though there are different definitions provided by different organisations which serve their purpose, we have used definitions provided by World Health Organisation.

2.1 Definitions of variables used in analysis

2.1.1 Life expectancy at birth (years)

Average number of years that a newborn is expected to live if current mortality rates continue to apply. Life expectancy at birth reflects the overall mortality level of a population. It summarizes the mortality pattern that prevails across all age groups - children and adolescents, adults and the elderly.

2.1.2 Infant mortality rate

Infant mortality rate is the probability of a child born in a specific year or period dying before reaching the age of one, if subject to age-specific mortality rates of that period.

2.1.3 Probability of dying aged < 5 years per 1000 live births (under-five Mortality rate)

Under-five mortality rate is the probability of a child born in a specific year or period dying before reaching the age of five, if subject to age-specific mortality rates of that period

Under-five mortality rate and infant mortality rate are leading indicators of the level of child health and overall development in countries. They are also MDG indicators. Under-five mortality rate and Infant mortality rate are strictly speaking, not rates (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as rate per 1000 live births.

2.1.4 Prevalence of tuberculosis (per 100,000 population)

The number of cases of TB (all forms) in a population at a given point in time (sometimes referred to as "point prevalence"). Expressed in this database as number of cases per 100,000 population. Estimates include cases of TB in people with HIV. Prevalence and mortality are direct indicators of the burden of TB, indicating the number of people suffering from the disease at a given point in time, and the number dying each year. Furthermore, prevalence and mortality respond quickly to improvements in control, as timely and effective treatment reduce the average duration of disease (thus decreasing prevalence) and the likelihood of dying from the disease (thus reducing disease-specific mortality).

2.1.5 Total expenditure on health

Though in all countries the total health expenditure is made up of both public and private expenditure, there are wide variations across the countries in terms of the share of the public and the private sector. Here all types of health

expenditures are defined in accordance with the National Health Accounts (NHA) data prepared by World Health Organization (WHO).

Total public health expenditure on health is divided in two categories- **Government Health Expenditure** and **Social System Health Expenditure**. General government expenditure (GGE) includes consolidated direct outlays and indirect outlays (e.g. subsidies to producers, transfers to households), including capital outlays of all levels of government, social security institutions, autonomous bodies, and other extra budgetary funds.

General government expenditure on health (GGHE) comprises the direct outlays earmarked for the enhancement of the health status of the population and/or the distribution of medical-care goods and services in the population by the following financing agents: central/federal, state/provincial/regional, and local/municipal authorities; extra budgetary agencies, social security schemes. All can be financed through domestic funds or through external resources.

Social security expenditure on health (SSHE) includes outlays for purchases of health goods and services by schemes that are mandatory and controlled by government. Such social-security schemes that apply only to a selected group of the population, such as public sector employees only, are also included here.

Private health expenditure is defined as the sum of expenditures on health by the following entities:

Prepaid plans and risk-pooling arrangements

The outlays of private insurance schemes and private social insurance schemes (with no government control over payment rates and participating providers but with broad guidelines from government)

Firms' expenditure on health

The outlays by private enterprises for medical care and health-enhancing benefits other than payment to social security or other pre-paid schemes.

Non-profit institutions serving mainly households (NGOs)

Outlays of those entities whose status do not permit them to be a source of financial gain for the units that establish, control or finance them. This includes funding from internal and external sources.

Household out-of-pocket spending

The direct outlays of households, including gratuities and in-kind payments made to health practitioners and to suppliers of pharmaceuticals, therapeutic appliances and other goods and services. This includes household direct payments to public and private providers of health-care services, non-profit institutions, and non-reimbursable cost-sharing, such as deductibles, co-payments and fees for services.

Among the above mentioned different component of the total health expenditure of a country, the government health expenditure and household out of pocket spending have the major role for shaping the health policy of a country.

2.1.6 Average exchange rate (US$)

Exchange rate: the annual average or year-end number of units at which a currency is traded in the banking system

2.1.7 International dollars

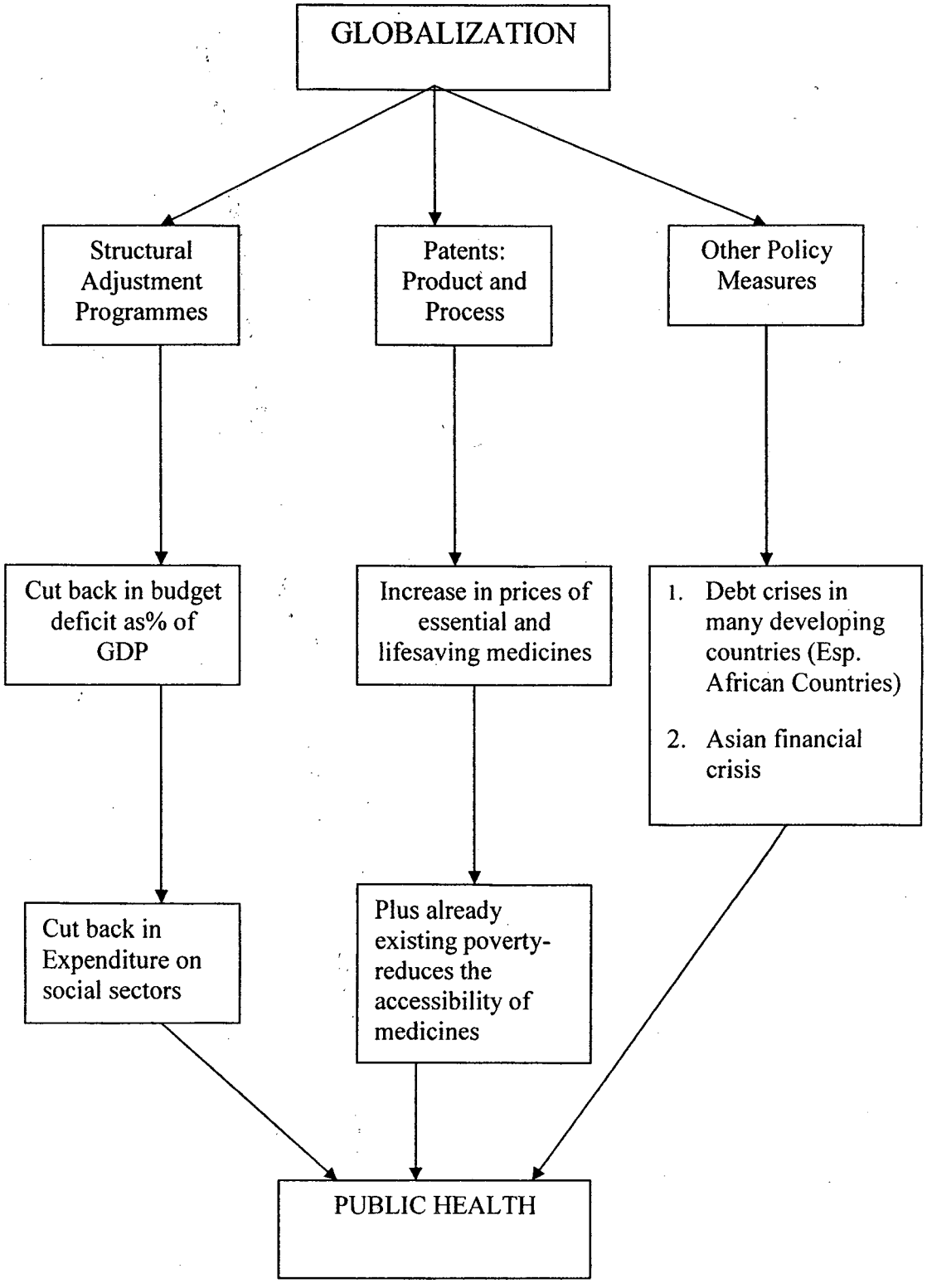
Derived by dividing local currency units by an estimate of their purchasing power parity (PPP) compared with the US dollar, i.e. the measure that minimizes the consequences of differences in prices between countries.

2.2 Methodology

The purpose of my study is to discuss the potential impact of globalization on public health through a cross-country comparison between health indicators and health expenditure indicators in the period 1995 to 2000. The study will show overall effect of globalizations on public health through the implications of three important sets of policy measures Structural adjustment Programmes (SAP), PATENTS and Other policy measures. Under other policy measures we will discuss effects of Asian financial crisis on public health and effect of African debt crises on AIDS.

Chart 1 is showing how effect of globalization will be analyzed throughout this study.

CHART 1 EFFECT OF GLOBALISATION ON FUBLIC HEALTH



First of all effect of SAP will be analyzed which forced countries to cut back their budget deficits as percentage of GDP. This budget cut is also responsible for the cut in social spending. This will be analyzed through establishing correlation between health status indicators and health expenditure indicators.

- This study is based on the secondary data source of World Health Organization, World Bank, IMF, UN, and its agencies. (Copy of the data is in Appendix 1)
- 1990 to 2005 is the period for which the data is being taken and analyzed.
- 146 countries are taken in to account for calculating budget deficit as % of GDP. Out of them countries which are showing declining budget deficit as % of GDP during the period are selected for the analysis.
- Data on two sets of indicators is being taken. Correlation is established between two indicators one from each set for every selected country, and then on means (mean of each indicator over the period for each country) of each indicator from each set to establish relationship between indicators of different sets.

Two indicator sets are

Health status-

1. Life expectancy at birth (years)
2. Probability of dying aged < 5 years per 1,000 live births (under-five mortality rate)
3. Infant mortality rate
4. Prevalence of tuberculosis (per 100,000 population)

Health Expenditure

1. Per capita total expenditure on health in international $
2. Per capita government expenditure on health at average exchange rate (US$)
3. Out of pocket expenditure as % of total expenditure on health
4. Out of pocket expenditure as % of private expenditure
5. Private expenditure as % of total expenditure

2.3 Patents- Product and Process

Effect of patents will be analyzed on the basis of past studies and facts. We will try to set up a link between patents and prices of medicines and then to its availability to the masses. However the other effects of patents on public health are also analyzed.

2.4 Other policy measures

It will include a discussion on the Asian financial crisis and debt crisis in African countries. A link will be established between debt crisis in African countries and AIDS. A case study of Malawi will also be discussed. Analysis will be based on past studies and facts.

CHAPTER 3

CORRELATIONS BETWEEN HEALTH EXPENDITURES AND HEALTH INDICATORS: MEAUREMENT AND ANALYSIS

In this chapter, we will work on data. Firstly, budget deficit as percentage of GDP is calculated. Then countries based on declining trend in budget deficit as percentage of GDP are selected for establishing correlation between different variables. Analyzing coefficients will show the effect of SAP on public health. In this chapter we will also look at the effects of patents, Asian financial crisis and debt crisis of African countries.

There may be numerous other ways in which SAP affects public health but we will only look at it from the angle where it forces the countries to cut down its budget deficits as a percentage of GDP. Whether Budget deficit is good for developing countries or bad is the ongoing debate between economists, but we consider it a necessity for developing countries as developing countries need it to finance their large current expenditure in different sectors for their overall development. Most of the sectors depend on the mercy of government finance for their running. As countries are still developing, infrastructure is not properly developed to cater the needs of the country, so they need special care from the government. Infrastructure in social sector is very poorly developed and hence government control is very important in this sector. All these needs make budget deficit a necessity for developing countries.

Budget cuts in many countries resulted in cuts in social spending. Illiteracy, poverty and low level of health decreases the efficiency of

resources of a country resulting in low level of economic consequently overall development of a country.

3.1 Calculating budget deficit as percentage of GDP

With the available data from United Nations Statistical Division (UN Estimates) on GDP per capita at market price (current prices, national currency) and budget deficit (in national currency), the budget deficit as % of GDP is calculated.

The formula for calculating budget deficit as % of GDP is –

$$= \frac{BudgetDeficit}{GDP} * 100$$

Calculated values of budget deficit for all countries are provided in the appendix A.

The selected countries on the basis of declining budget deficit as % of GDP are tabulated on next page with their HDI ranking and region.

Most of the countries listed in Table 17 are developing, as they need to maintain high budget deficits to finance their economic and social needs. Their HDI ranking is also low so budget cuts in social sectors will have negative impact on their social indicators and in the long run this will also affect their economic indicators.

TABLE 1- Countries having a decline in their budget deficits as % of GDP during 1990 to 2005, with their HDI ranking and region.

HDI Ranking	Country Name	Region	HDI Ranking	Country Name	Region
73	Albania	Europe	61	Malaysia	Asia
102	Algeria	Africa	98	Maldives	Asia
3	Australia	Rest	175	Mali	Africa
14	Austria	Europe	153	Mauritania	Africa
67	Belarus	Europe	116	Mongolia	Rest
13	Belgium	Europe	125	Namibia	Africa
95	Belize	America	138	Nepal	Asia
69	Brazil	America	177	Niger	Africa
54	Bulgaria	Europe	1	Norway	Europe
169	Burundi	Africa	56	Oman	Asia
144	Cameroon	Africa	134	Pakistan	Asia
6	Canada	America	139	Papua New Guinea	Rest
171	Chad	Africa	82	Peru	America
140	Congo	Africa	114	Republic of Moldova	Europe
48	Costa Rica	America	65	Russian Federation	Europe
164	Côte d'Ivoire	Africa	158	Rwanda	Africa
15	Denmark	Europe	47	Seychelles	Africa
111	Egypt	Asia	42	Slovakia	Europe
40	Estonia	Europe	128	Solomon	Rest

				Islands	
16	France	Europe	121	South Africa	Africa
155	Gambia	Africa	146	Swaziland	Africa
21	Germany	Europe	5	Sweden	Europe
85	Grenada	America	55	Tonga	Rest
173	Guinea-Bissau	Africa	87	Tunisia	Asia
103	Guyana	America	145	Uganda	Africa
154	Haiti	America	18	UK	Europe
126	India	Asia	8	USA	America
23	Israel	Asia	109	Viet Nam	Asia
79	Kazakhstan	Europe	150	Yemen	Asia
110	Kyrgyzstan	Europe	151	Zimbabwe	Africa
78	Lebanon	Asia			

3.2 Methodology for calculating correlation- Karl Pearson's correlation coefficient (r) is calculated between variable x and variable y.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}}$$

n = no of observations.

TABLE 2- Notation for variables used in analysis

x = health expenditure variables	y = health indicators variables
Per capita government expenditure on health at average exchange rate (US$) ($x_1$)	Life expectancy at birth(years) (y_1)
Per capita total expenditure on health in international $ (x_2)	Infant mortality rate(per 1,000 live births) (y_2)
Out of pocket expenditure as % of total expenditure on health (x_3)	Under 5 mortality rate(per 1,000 live births) (y_3)
Out of pocket expenditure as % of private expenditure (x_4)	Prevalence of tuberculosis (per 100,000 population) (y_4)

Correlation coefficient is found between each x variable and each y variable for each country. Because of the data unavailability, each correlation coefficient is found during 1995-2000 within the period of study i.e. 1990-2005. The values of r for each country are given in appendix. The correlation coefficient is also found between the mean values of pairs of variable for each country in the given period to find the overall relationship between the variables.

The coefficient values are listed in TABLE 3

Table 3 Coefficient values between average values of variables

average of [Life expectancy at birth(years) (y1)], correlation with

	r
average of x1 (95-00)	0.554
average of x2 (95-00)	0.660
average of x3 (95-00)	-0.353
average of x4 (95-03)	-0.035

average of [Infant mortality rate(per 1000 live births) (y2)],correlation with

	r
average of x1 (95-00)	-0.517
average of x2 (95-00)	-0.640
average of x3 (95-00)	0.447
average of x4 (95-00)	0.0426

average of [Under 5 mortality rate(per 1000 live births) (y3)],correlation with

	r
average of x1 (95-00)	-0.489
average of x2 (95-00)	-0.600
average of x3 (95-00)	0.425
average of x4 (95-00)	0.692

average of [Prevalence of tuberculosis (per 100 000 population) (y4)],correlation with

	r
average of x1 (95-00)	-0.347
average of x2 (95-00)	-0.473
average of x3 (95-00)	0.196
average of x4 (95-00)	-0.007

3.3 Analysis of results

Firstly, the results of table 3 will be discussed, as these results will describe the overall picture of relationship between different variables and for all countries. After that we will discuss each variable separately. We will consider value of correlation coefficient significant only if it lies between 0.40 to 1 or -0.4 to -1.

3.3.1 Analysis of results of Table 3

For all Countries life expectancy at birth and per capita government expenditure on health at average exchange rate (US$) shows a significant positive correlation as r value is 0.55. This means that as per capita government expenditure on health increases life expectancy and vice versa. There is much higher value of coefficient between life expectancy and per capita total expenditure on health in international $, r value of 0.66 states that life expectancy depends more on per capita total expenditure on health than on per capita government expenditure on health. However per capita government expenditure on health become important because life expectancy does not depend much on out of pocket expenditure as % of total expenditure

on health (as r value of -0.35 shows a weak negative correlation between them) and out of pocket expenditure as % of private expenditure on health (as r value of -0.035 shows an insignificant correlation between them). As out of pocket expenditure on health is the main constituent of private spending on health, only high government spending on health can improve the life expectancy. Low government spending on health, which is caused by large cuts in social spending, will affect the life expectancy negatively.

Infant morality shows a significant negative correlation with per capita government expenditure on health ($r = -0.517$), per capita total expenditure on health ($r \approx -0.64$) and positive correlation with out of pocket expenditure as % of total expenditure on health ($r \approx 0.447$). Out of pocket expenditure as % of private expenditure on health does not show significant coefficient value ($r \approx 0.042$); therefore infant mortality does not depend on this variable. As per capita government expenditure on health and per capita total expenditure on health increases, infant mortality decreases and vice versa. But, when out of pocket expenditure as % of total expenditure on health increases infant mortality also increases. This shows that improvement in infant mortality depends primarily on the per capita government expenditure on health.

Under five mortality rate shows significant value of correlation coefficient with each expenditure variable. A very high positive coefficient with out of pocket expenditure as % of private expenditure on health ($r = 0.69$) clearly indicates that as out of pocket expenditure increases under five mortality will also increase. As most of the countries have very high out of pocket

expenditure as percentage of private expenditure on health and shows increasing trends in under five mortality these countries will be worst affected. Government expenditure should increase and out of pocket expenditure on health should decrease to see a positive effect on this indicator.

Prevalence of tuberculosis shows insignificant coefficient value with Out of pocket expenditures on health. It also shows a negative weak correlation with per capita government expenditure on health(r = -0.34). Per capita total expenditure on health shows a significant value of r (-0.47). All four coefficient values show that prevalence of TB depends entirely on per capita government expenditure on health and per capita total expenditure on health. So the increase in prevalence of TB can be attributed to low per capita expenditure on health.

For all countries whatever be the coefficient value between variables, but when we analyze the value of coefficients between different variables for each country the value of coefficients show great differences. Now we will analyze each health indicator separately. As we are looking at the effect of budget cut caused by SAP, we will analyze mainly the effect of per capita government expenditure on health. However the effect of other expenditure indicators will be analyzed in combination with per capita government expenditure on health.

3.3.2 Analysis of life expectancy at birth

Values of correlation coefficients between life expectancy at birth and y_1, y_2, y_3 and y_4 for all countries are given in appendix. A frequency distribution table is constructed of the correlation coefficient between variables by countries.

For all countries the coefficient between life expectancy and per capita government expenditure shows a positive value of 0.55 but when we see the coefficient values for every country, 34 countries have negative coefficients. The frequency distribution is given in table 4.

Table 4 Frequency distribution of correlation coefficients between y_1 and x_1 by countries

r	No. of countries
-1.0 to -0.75	12
-0.75 to -0.50	7
-0.50 to -0.25	10
-0.25 to 0	5
0 to 0.25	4
0.25 to 0.50	10
0.50 to 0.75	4
0.75 to 1	4
Total	56

Table 5 Countries showing trends in life expectancy arranged with coefficient values and expenditure.

Countries showing decline in life expectancy arranged with coefficient values

	1995	1996	1997	1998	1999	2000	$r(x_1y_1)$
countries having negative coefficients							
Niger	48	48	49	48	40	43	-0.9594
Belize	74	74	75	74	72	71	-0.87425
Albania	72	73	71	73	69	69	-0.56672
Haiti	58	58	54	53	53	52	-0.44962
Swaziland	59	59	60	60	47	45	-0.42139
countries having positive coefficients							
Rwanda	47	47	42	40	41	39	0.387202
Zimbabwe	52	52	49	45	40	45	0.428296
Côte d'Ivoire	50	50	51	47	48	47	0.458993
Burundi	51	51	47	42	43	41	0.563636
Kazakhstan	78	71	68	68	64	63	0.603259
Cameroon	57	58	56	54	51	50	0.65
Namibia	60	61	56	52	43	43	0.863779
Kyrgyzstan	70	70	68	68	65	64	0.983407

Per capita government expenditure on health at average exchange rate US$

	1995	1996	1997	1998	1999	2000
Niger	1	1	1	1	2	2
Belize	47	44	50	58	66	72
Albania	20	21	15	21	26	26
Haiti	10	10	10	11	12	10
Swaziland	36	41	36	37	38	40
Rwanda	8	8	9	8	8	6
Zimbabwe	22	30	40	33	17	18
Côte d'Ivoire	9	9	8	9	7	6
Burundi	3	2	2	2	2	2
Kazakhstan	51	55	62	47	32	32

Cameroon	6	6	6	6	6	5.99
Namibia	372	389	380	324	335	310
Kyrgyzstan	23	21	19	17	11	10

Countries showing increase in life expectancy arranged with coefficient values

	1995	1996	1997	1998	1999	2000	$r(x_1y_1)$
Gambia	46	46	47	47	57	57	-0.86326
Mongolia	65	65	66	71	70	71	-0.90868
Yemen	51	52	58	57	58	60	-0.5

Per capita government expenditure on health at average exchange rate US$

	1995	1996	1997	1998	1999	2000
Gambia	11	10	10	11	9	9
Mongolia	16	17	16	15	15	15
Yemen	9	6	6	6	6	7

Per capita total expenditure on health in int.$

	1995	1996	1997	1998	1999	2000	$r(x_1y_2)$
Gambia	36	34	34	39	45	46	0.944627
Mongolia	63	80	83	105	109	120	0.92792
Yemen	62	54	60	69	68	70	0.709253

Countries which have registered a significant decline in life expectancy are listed in Table 5 with their correlation coefficients between life expectancy and per capita government expenditure. These countries show significant coefficient values.

The countries, which have negative coefficients and have registered a decline in life expectancy, are the one whose per capita government expenditure on health have increased. Logically an increase in per capita government expenditure on health should be accompanied by an increase in life expectancy. Since per capita total expenditure on health has also increased in these countries (this also shows significant negative coefficients for each country) and out of pocket expenditures remain almost constant, the decline

in life expectancy in these countries may be caused by some other factors affecting life expectancy at birth (because there is a decline in total health expenditure). These countries are Niger, Belize, Albania, Haiti and Swaziland.

The countries which have positive coefficients and have registered a decline in life expectancy are the one whose life expectancy has declined with decline in per capita government expenditure on health. These countries show a significant value of coefficient and thus indicate that, the budget cuts have affected life expectancy in these countries. Countries are listed in Table 5.

The countries showing significant rise in life expectancy also shows a significant negative coefficient between life expectancy and per capita government expenditure on health. The negative value of coefficient is because of decline in per capita government health expenditure. So the increase in life expectancy can be attributed to increase in per capita total expenditure on health. These countries show significant positive coefficients with per capita total expenditure on health. The countries are listed in table 5.

From the above analysis we can conclude few points-

- All countries which show significant decline or increase in life expectancy are developing countries.

- Thirteen countries shows significant decline while only 3 countries shows a significant rise in life expectancy.

- Out of pocket expenditure as % of total expenditure and out of pocket expenditure as % of private expenditure remains almost constant for countries.
- For countries, which shows negative coefficient with per capita government expenditure and increase in life expectancy, this increase can be explained by increase in per capita total expenditure on health.

- For countries, which shows negative coefficient with per capita government expenditure and decline in life expectancy, this decline can be explained by decline in population or some other factors affecting life expectancy.

- Developed countries did not show significant rise or fall in life expectancy. However there is little fall in per capita government expenditure for some countries.

3.3.3 Analysis of infant mortality

For all countries infant mortality shows a significant value of coefficients with per capita government expenditure on health (r = -0.517), per capita total expenditure on health(r = -0.640) and out of pocket expenditure as % of total expenditure on health(r = .447). But individually the countries show large variation in coefficient values. Table 6 shows this.

Table 6 Frequency distribution of correlation coefficients between y_2 and x_1

r	No. of countries
-1.0 to -0.75	10
-0.75 to -0.50	6
-0.50 to -0.25	5
-0.25 to 0	5
0 to 0.25	6(two value=0)
0.25 to 0.50	7
0.50 to 0.75	11
0.75 to 1	6
Total	56

We can see that 25 countries have shown the positive coefficients. Logically as per capita government expenditure on health decrease IMR should rise and vice versa. The countries which are showing positive coefficient value will have either IMR falling with a falling per capita government expenditure on health or IMR increasing with an increase in per capita government

expenditure on health. For these countries some other expenditure variable will describe them more appropriately. We will discuss them below.

The Table 7 shows the countries, which registered significant decline or increase in IMR over the period. Countries are arranged with the coefficient values of r (x_2y_1) and per capita government expenditure on health.

Table 7 Countries showing trends in infant mortality arranged with coefficient values and expenditure

Countries showing increase in infant mortality arranged with coefficient values							
	1995	1996	1997	1998	1999	2000	$r(x_2y_1)$
countries having negative coefficients							
Kyrgyzstan	33	33	40	40	46	52	-0.94803
Côte d'Ivoire	90	89	87	87	100	113	-0.93743
Cameroon	59	57	59	74	82	91	-0.84166
Papua New Guinea	65	64	62	61	68	75	-0.82358
Burundi	99	98	116	119	117	116	-0.41293
Kazakhstan	27	28	35	35	34	33	-0.2877
countries having positive coefficients							
Soloman is.	25	24	27	33	44	65	0.203251
Swaziland	70	68	66	65	75	86	0.477281
Mauritania	96	94	93	92	98	105	0.488729
Per capita government expenditure on health at average exchange rate US$							
Kyrgyzstan	23	21	19	17	11	10	-0.94803
Côte d'Ivoire	9	9	8	9	7	6	-0.93743
Cameroon	6	6	6	6	6	5.99	-0.84166
Papua New Guinea	40	50	47	45	45	43	-0.82358
Burundi	3	2	2	2	2	2	-0.41293
Kazakhstan	51	55	62	47	32	32	-0.2877
Soloman is.	35	37	41	36	38	36	0.203251

Swaziland	36	41	36	37	38	40	0.477281
Mauritania	11	11	10	10	11	11	0.488729

Countries showing decrease in infant mortality arranged with coefficient values

	1995	1996	1997	1998	1999	2000	$r(x_2y_1)$
countries having negative coefficients							
Brazil	56	55	43	42	39	37	-0.95441
Albania	28	27	32	30	26	23	-0.89305
Oman	27	26	25	25	20	15	-0.35783
Egypt	61	58	56	51	44	38	-0.30342
Peru	61	60	46	45	38	32	-0.08369
countries having positive coefficients							
Malaysia	12	12	11	11	9	8	0.133203
Viet Nam	40	39	38	38	34	31	0.246641
Yemen	114	112	109	80	83	86	0.29997
Gambia	127	125	123	112	96	81	0.402812
Belarus	17	17	15	23	16	10	0.501545
Guinea-Bissau	207	132	133	130	129	128	0.872053

Per capita government expenditure on health at average exchange rate US$

	1995	1996	1997	1998	1999	2000	$r(x_2y_1)$
Brazil	136	143	159	154	106	109	-0.95441
Albania	20	21	15	21	26	26	-0.89305
Oman	228	228	202	195	199	245	-0.35783
Egypt	16	18	21	22	24	24	-0.30342
Peru	15	17	18	14	17	15	-0.08369
Malaysia	55	67	63	48	54	60	0.133203
Viet Nam	5	5	5	5	5	4.99	0.246641
Yemen	9	6	6	6	6	7	0.29997
Gambia	11	10	10	11	9	9	0.402812
Belarus	49	66	74	68	56	47	0.501545
Guinea-Bissau	10	8	6	6	7	6	0.872053

Coefficient values

	$r(x_2y_2)$	$r(x_2y_3)$	$r(x_2y_4)$
Malaysia	-0.90404	0.725312	0.759123
Viet Nam	-0.92094	-0.83286	-0.5599
Yemen	-0.87968	0.791384	-0.69056
Gambia	-0.96009	0.836871	0.783298
Belarus	-0.4655	-0.33056	0.742391
Guinea-Bissau	-0.07305	0.856102	-0.36265

Countries showing increase in IMR are categorized according to the positive and negative coefficient values. All the countries which registered an increase in IMR and have negative coefficients show a decline in per capita government expenditure on health except Haiti for which expenditure remains constant at 10.

Again, the countries which are showing increase in IMR and have positive coefficients also shows an increase in per capita government expenditure on health. These countries shows a positive coefficient with per capita total expenditure (per capita total expenditure also increases for these countries), out of pocket expenditures both as % of total and as % of private remains constant for these countries. Hence the increase in IMR can be ascribed to decline in social security health expenditure or any other variable which affects health. Countries are listed in Table 7.

Countries showing decrease in IMR and having negative coefficient value with per capita government expenditure indicates the increase in per capita government expenditure on health. This is true for Brazil and Egypt. Peru shows a very weak coefficient value with per capita government expenditure on health but a strong coefficient value of -0.968 with per capita total expenditure on health. A large increase in per capita total expenditure on

health in Peru can be responsible for the decrease in IMR. Countries which have positive coefficients with decrease in IMR do not have significant coefficient values with per capita government expenditure but these countries have very strong coefficient values with per capita total expenditure on health. The countries are shown in Table 7.

From the above analysis we can conclude few points-

- All countries which show considerable decline or increase in IMR are developing countries.

- Twenty countries show a significant increase in IMR and only six countries show decline.

- Some countries which have considerable trend in IMR have very weak coefficient with per capita government expenditure but have very strong coefficient with per capita total expenditure hence can be explained by it.

3.3.4 Analysis of under five mortality rate

When correlation is calculated taking average values for all countries, under 5 mortality rate shows almost similar coefficient values as other indicators except when it is correlated with out of pocket expenditure as % of private expenditure. With under 5 mortality the later shows the value of 0.69 while with IMR, .053. Why this variable shows such a high significance with under 5 mortality Will be discussed later in detail.

Table 8 shows the variation in coefficient values of individual countries.

Table 8 Frequency distribution of correlation coefficients between y_3 and x_1

r	No. of countries
-1.0 to -0.75	11
-0.75 to -0.50	7
-0.50 to -0.25	4
-0.25 to 0	4
0 to 0.25	3
0.25 to 0.50	8
0.50 to 0.75	12
0.75 to 1	7
Total	56

As per capita government expenditure decreases or increases, under five mortality should respectively increase or decrease. This means we should have only negative coefficients but as we can see from the Table 8. A total of

30 countries have positive coefficients. Table 9 shows the countries with significant increase or decrease in under 5 mortality rate with coefficient values and per capita government expenditure on health.

Table 9 Countries showing trends in under 5 mortality arranged with coefficient values and expenditures.

Countries showing increase in under 5 mortality arranged with coefficient values

	1995	1996	1997	1998	1999	2000	$r(x_3y_1)$	
countries having negative coefficients								
Kyrgyzstan	40	39	46	58	64	70	-0.9636	
Kazakhstan	31	31	39	56	65	73	-0.86914	
Côte d'Ivoire	138	137	128	158	173	188	-0.7816	
Chad	175	172	167	183	191	200	-0.70262	
Burundi	146	143	167	178	184	190	-0.54631	
Soloman is.	30	29	27	43	52	60	-0.30004	
countries having positive coefficients								$r(x_3y_2)$
Swaziland	103	99	95	118	130	142	0.336713	0.451171
Cameroon	113	109	104	127	139	151	0.40393	-0.95223
Mali	188	184	178	201	212	224	0.51743	0.381342
Rwanda	162	161	197	200	201	203	0.858065	-0.71406
Niger	186	182	176	223	246	270	0.88518	-0.8137

Per capita government expenditure on health at average exchange rate US$

	1995	1996	1997	1998	1999	2000	$r(x_3y_1)$
Kyrgyzstan	23	21	19	17	11	10	-0.9636
Kazakhstan	51	55	62	47	32	32	-0.86914
Côte d'Ivoire	9	9	8	9	7	6	-0.7816
Chad	5	6	5	5	5	4	-0.70262
Burundi	3	2	2	2	2	2	-0.54631
Soloman is.	35	37	41	36	38	36	-0.30004
Swaziland	36	41	36	37	38	40	0.336713

Cameroon	6	6	6	6	6	5.99	0.40393
Mali	4	4	5	5	5	5	0.51743
Rwanda	8	8	9	8	8	6	0.858065
Niger	1	1	1	1	2	2	0.88518

Countries which show an increase in under 5 mortality and negative coefficient with per capita government expenditure on health show a decline in their expenditure. As can be seen from the Table 9, but countries which show an increase in under 5 mortality and positive coefficient with per capita government expenditure on health shows per capita expenditure on health cannot explain this increase. This increase is explained by per capita total expenditure on health for only Cameroon, Rwanda and Niger as they have high negative coefficient with it but cannot explain increase in Mali and Swaziland. Since out of pocket expenditures are constant for Mali and Swaziland their increase in mortality has to be explained by some other variables which affect health.

Table 9 continued...

Countries showing decrease in under 5 mortality arranged with coefficient values

	1995	1996	1997	1998	1999	2000	$r(x_3y_1)$
countries having negative coefficients							
Albania	39	38	49	37	31	25	-0.9711
Viet Nam	59	56	51	40	35	30	-0.41792
countries having positive coefficients							
Uganda	174	172	180	162	154	145	0.135733
Peru	58	61	62	62	60	59	0.20518
Malaysia	23	22	21	17	16	14	0.342531

Estonia	19	19	18	14	13	11	0.486421
Belarus	19	19	19	15	14	12	0.496909
Oman	228	228	202	195	199	245	0.524142
Algeria	56	54	56	50	47	44	0.576034
Yemen	159	155	81	99	108	117	0.607339
Gambia	193	190	185	156	142	128	0.645865
Namibia	372	389	380	324	335	310	0.648051
Congo	134	133	129	118	113	108	0.737547
Nepal	3	3	4	4	3	4	0.88004

Per capita government expenditure on health at average exchange rate US$

	1995	1996	1997	1998	1999	2000	$r(x_3y_1)$	$r(x_3y_2)$
Albania	20	21	15	21	26	26	-0.9711	
Viet Nam	5	5	5	5	5	4.99	-0.41792	
Uganda	4	4	5	4	5	4	0.135733	-0.9093
Peru	15	17	18	14	17	15	0.20518	-0.98179
Malaysia	55	67	63	48	54	60	0.342531	-0.89374
Estonia	188	193	179	188	192	167	0.486421	-0.64229
Belarus	49	66	74	68	56	47	0.496909	-0.82522
Oman	5	4	4	4	4	4	0.524142	-0.54234
Algeria	58	59	55	58	56	53	0.576034	0.039211
Yemen	9	6	6	6	6	7	0.607339	-0.45307
Gambia	11	10	10	11	9	9	0.645865	0.674775
Namibia	372	389	380	324	335	310	0.648051	-0.08272
Congo	18	18	15	14	15	15	0.737547	0.463644
Nepal	1600	1451	1341	1381	1370	1283	0.88004	-0.99309

Countries, which show decrease in under 5 mortality and have negative coefficient show an increase in per capita government expenditure on health. There are only two such countries Albania and Vietnam. However countries which have positive coefficient cannot be explained with per capita government expenditure on health as there is a decline in this expenditure

and logically it should relate to increasing mortality rather than declining mortality. Per capita total expenditure on health shows negative coefficients with above countries hence the increase in per capita total expenditure on health is responsible for the fall in under 5 mortality but one point to note is that the increase in per capita total expenditure on health is not that significant to explain this decrease in mortality hence some other variables are working to influence this indicator to a great extent.

From the above analysis we can conclude few points

- Again all countries which fall under study are developing.

- Eleven countries show significant increase and again 11 countries shows significant decline in under 5 mortality rate.

- Expenditure variables under study do not explain this variable much. It means under 5 mortality depends on some other variables which are not under study.

- Large number of countries shows improvement in this indicator.

3.3.5 Analysis of tuberculosis

The values of correlation coefficient are not significant of this variable with any of the expenditure variable except per capita total expenditure on health. Hence it will be analyzed according to per capita total expenditure on health. But when we see the coefficient values in countries having increase in prevalence of tuberculosis, large number of countries show positive coefficient i.e. increase in prevalence of TB with increase in per capita total expenditure on health. This is then explained with the decline in per capita government expenditure on health. However the countries Belarus, Swaziland, Cameroon, Zimbabwe and Guyana cannot be explained with any of them.

While the countries which show decline in prevalence of TB show negative coefficients with per capita total expenditure on health. The countries which have negative coefficients are due to increase in per capita total expenditure on health. However Haiti is explained by increase in per capita government expenditure accurately but Guinea Bissau and Namibia can not be explained by any of the expenditure variable. The countries are listed in Table 10 with their coefficient values.

Few points can be concluded from the above analysis

All countries, which show significant increase or decrease in prevalence of TB, are developing. 14 countries shows increase and 13 shows decrease in prevalence. TB depends on per capita expenditure on health, so to see a large improvement in this indicator per capita government expenditure and per capita total expenditure on health should be increased.

Table 10 Countries showing trends in prevalence of tuberculosis arranged with coefficient values

Countries showing increase in prevalence of tuberculosis arranged with coefficient values

							$r(x_4y_2)$	$r(x_4y_1)$
Côte d'Ivoire	423	451.6	484.5	514.2	546.9	600.6	-0.87741	0.935383
Gambia	344.6	327.9	325.4	313.7	500.4	505.4	-0.85463	0.918123
Burundi	387.6	415.8	422.5	510.1	471.6	499	-0.62741	-0.12565
Kyrgyzstan	118.1	142.1	165.9	148.3	146.8	156.9	-0.52067	-0.09545
Russian fed.	132.7	152.8	164.4	180.6	182.7	190.2	-0.45717	0.696206
Kazakhstan	94.8	110.9	137.4	166.4	138.9	145.2	-0.34266	-0.60422
Chad	339.4	394.2	458.6	483.7	423.9	443.4	-0.303	0.636857
Bulgaria	57.4	59.2	65	68	67.8	64.2	-0.03717	-0.63038
Belarus	82.6	91.7	99.3	110.8	114.5	111.2	0.020941	0.881312
Swaziland	610.3	688.1	787.6	887.6	1036	1191.5	0.333496	0.909762
Cameroon	240	251.5	270.7	275.6	277.3	277.9	0.362962	0.816048
Zimbabwe	571.7	676.6	770.1	572.8	599.9	648.8	0.589726	-0.00398
Guyana	98.7	106.8	113.8	126.4	137.4	147.1	0.683825	0.952574
Rwanda	384.6	417.6	442.1	466.2	508	562.9	0.971741	-0.57012

Countries showing decrease in prevalence of tuberculosis arranged with coefficient values

							$r(x_4y_2)$	$r(x_4y_1)$
Peru	359.2	349.1	324.5	298.4	289.9	274.8	-0.97601	0.218279
Viet Nam	346.4	312.8	273.9	262.8	255.5	251.5	-0.91095	-0.36702
Costa Rica	29.8	28.3	27	26.3	23.6	19.2	-0.90862	-0.95568
Mongolia	485.8	338.3	342.2	303.4	273.5	285.3	-0.88541	0.481532
Nepal	524.3	499.4	474.7	449.4	362.3	309.8	-0.86868	0.766451
India	533.2	529.5	519.8	507.3	495.4	457.3	-0.83294	-0.66781
Yemen	234.5	226.9	206.1	194.8	177.8	167.2	-0.80622	0.408716
Papua New Guinea	722.4	681.1	715.7	633.2	654.3	637.1	-0.7868	-0.07452
Soloman is.	459	357.5	334.3	322.9	307.8	288.9	-0.63536	-0.35574

Belize	73.6	51.2	53.4	70.8	72.8	51.9	-0.00742	0.065265
Haiti	621.9	605.6	588.5	563.6	537.7	518.1	0.078287	-0.46911
Guinea-Bissau	404.2	404.7	402.9	403.4	406.4	286.5	0.111863	0.362763
Namibia	767.2	451.4	467.1	484	514.4	539.6	0.735205	0.064479

3.3.6 An overall analysis of indicators

- Only developing countries show significant decline or improvement in indicators.

- All developed countries shows marginal improvement in their indicators. All of them show an increase of 1 or 2 years in their life expectancy, a decrease of 1 or 2 point decrease in IMR and same decrease in under 5 mortality.

- Developing countries which shows improvement in one indicator also shows decline in other indicator. It can be seen in Table 11.

Table 11 Showing trends in health indicators for countries during 1995-2000

	LE	IMR	U 5 MR	TB
Albania	Decrease	×	Decrease	×
Belarus	×	×	Decrease	Increase
Belize	Decrease	×	×	Decrease
Congo	×	Increase	Decrease	×
Gambia	Increase	×	Decrease	Increase

Haiti	Decrease	Increase	×	Decrease
Mongolia	Increase	Increase	×	×
Namibia	Decrease	Increase	Decrease	Decrease
Papua New Guinea	×	Increase	×	Decrease
Soloman is.	×	Decrease	Increase	Decrease

- Countries which show improvement in at least one indicator with no significant deterioration in other are listed below in table 12. Symbol '×' states that the decline or rise in indicator value is not significant.

Table 12 showing trends in health indicators for countries during 1995-2000

	LE	IMR	U 5 MR	TB
Brazil	×	Decrease	×	×
Estonia	×	×	Decrease	×
Egypt	×	Decrease	×	×
Malaysia	×	×	Decrease	Decrease
Oman	×	×	Decrease	×
Peru	×	Decrease	Decrease	Decrease
Viet Nam	×	Decrease	Decrease	Decrease
Yemen	Increase	Decrease	Decrease	Decrease

- Countries which are worst affected i.e. those which show decline in each indicator are listed in Table 13.

Table 13 showing trends in health indicators for countries during 1995-2000

	LE	IMR	U 5 MR	TB
Burundi	Decrease	Increase	Increase	Increase
Cameroon	Decrease	Increase	Increase	Increase
Chad	×	Increase	Increase	Increase
Côte d'Ivoire	Decrease	Increase	Increase	Increase
Guyana	×	Increase	×	Increase
Kazakhstan	Decrease	Increase	Increase	Increase
Kyrgyzstan	Decrease	Increase	Increase	Increase
Mali	×	Increase	Increase	×
Niger	Decrease	Increase	Increase	×
Rwanda	Decrease	×	Increase	Increase
Swaziland	Decrease	Increase	Increase	Increase

- Though there is decline in budget deficit as percentage of GDP for all countries, the effect of this is felt in developing countries only. A decline in per capita government expenditure on health or per capita total expenditure on health will affect only developing country as can be seen from the analysis. Developed countries have well developed infrastructure which can prevent the effect of slight cuts in health expenditure on its indicators.

CHAPTER 4

OTHER MEASURES LINKING GLOBALISATION TO PUBLIC HEALTH

This chapter will discuss the effect of other policy measures linking globalization to public health. We will concentrate our discussion on the patents, Asian financial crisis and debt crisis in African countries.

4.1 Effect of patents on public health

A patent is a property right granted by a country to the inventor of a noble, which is non-obvious and useful. Because the invention must be novel (meaning that it has not been previously disclosed anywhere in the world) and because it cannot be obvious to one ordinarily skilled in the art, the grant of the property right cannot interfere with the public's access to what already exists. Discoveries are generally excluded. However, difference in discovery and invention is difficult to note in practice.

The benefit of granting an inventor the exclusive property right of a patent for the limited period of 20 years is that he or she should invent with the help of financiers and make it available to market where it is needed and reap profits. Whatever patent strategy is employed by the inventor, the aim is always the same – to maximize the profit accruing to the inventor and those who have supplied him or her with the capital necessary to develop and commercialize the invention. For a patent to have any commercial value there must be a market for the invention embodied in the patent, which will support the cost of development of the invention and return a profit.

The effect of increase licensed patent protections can be drastic in the near future. Now only 5% of the life-saving drugs are under patent list for

developing countries according to WHO model. However many other essential drugs are under patents which when not available could result in fatal forms of the disease. The prices of essential medicines are rising world wide as the table below suggests. Here the price difference is given between the main and generic production but now with product and process patents the generic products have to go out of market resulting in price rise.

Table 14 Retail prices for medicines under patent in ten OECD countries, and for their generic equivalent in India. (Prices of 100 units in US$, surveyed in 1999)

Generic name and strength in mg	Patent holder	Disease treated, and incidence	Most expensive in OECD	Cheapest in OECD	Generic in India
Ceftriaxone sodium 1000mg	Roche	Acute respiratory-tract infections (3.45m deaths – 1998) Meningitis (140,000 deaths – 1998) Gonorrhoea (62m new cases – 1997)	3380	1525	277
Ciprofloxacin 500mg	Bayer	Multi-resistant TB (Total TB: 1.49m deaths – 1998)	549	169	10
Lamivudine 150mg	IAF-Biochem	HIV/AIDS (2.8m deaths – 1999)	524	290	115

Source- Bala, K. and K. Sagoo (2000) "Patents and prices", HAI News 112, April/May 2000.

Some of the price differences in these examples might be attributable to higher production costs in OECD countries. However, price comparisons between developing countries with different patent regimes show similar results. Higher prices because of this will affect mostly developing countries. Whatever the improvement they have shown in their indicators over the years will soon start showing declining trends. Many arguments advocate patents on the name of innovation and more R&D in the sector however the facts suggests some reversed outcomes.

Only 10 per cent of research targets the diseases that cause 90 per cent of the global disease burden. TB, diarrhea, and pneumonia, which account for 18 per cent of illness, receive only 0.2 per cent of R&D. There has been only one new treatment for TB in the last 30 years. Only 13 of the 1,223 new drugs marketed between 1975 and 1997 were specifically developed to treat tropical diseases (and only four of these were direct results of industry R&D). Medicines for Some diseases, such as sleeping sickness and leishmaniasis, are not researched commercially at all. (Source-UNDP report 1999 & 2000)

The patent system is the primary economic mechanism by which investment in health care inventions is induced. As a mechanism of the free market, the patent system focuses investment on health care solutions most likely to return the maximum profit. The United States of America is the only large market in which health care products, in particular pharmaceuticals, are not subject to some form of price regulation. Therefore, the United States is the

most profitable market for providers of health care inventions. The disease burden of the United States differs greatly from the disease burden of the majority of developing countries. Therefore, the patent incentive in the United States does not induce health care inventions most needed by developing countries.

The lack of adequate health care infrastructures and the lack of inducements to create new pharmaceutical inventions for diseases affecting developing countries have led to a disproportionate disease burden in many developing countries. This burden has greatly increased by the rapid rise in HIV infection in many developing countries, most particularly in sub-Saharan Africa. HIV disease differs from many other diseases that are common in developing countries in sense that all of the therapies currently available to prevent death and prolong life are recent inventions under patent in the countries where they were created.

This brief discussion on patents clearly shows a sign of negative effects of patents on public health of the developing world.

4.2 Effect of the Asian Financial Crisis

With the opening up of the global market in Asia, it experienced a boom in its rate of growth. Other nations also join the league and opened up their markets without thinking enough for pros and cons of the globalization. After experiencing six to seven years of high growth rate the situation become worse after the financial crises the region faced.

The total deregulation of the banking and financial markets due to revolution in communications technology have facilitated instantaneous money transfers worldwide. This has enabled currency speculators to move immense resources electronically at a blink across countries. In 1997, Thailand was forced to devalue its currency after it came under sustained speculative attack; this spread to the rest of Southeast Asia and South Korea. The huge inflows turned to sudden massive outflows as speculators acted like a herd, rushed out in panic. Roughly $22 billion and $30 billion flowed out of Asia in 1997 and 1998 respectively (Lester *et al* 2000:194).[1] Banks failed and stock markets collapsed; the cost of the crisis to the region in 1998 was said to be some $260 billion or one percent of global output, equivalent to the annual income of Africa *(UNCTAD* 1998)[2]. The social effects were severe and are likely to persist long after economic recovery. The immediate effects were political chaos mass unemployment, food shortages, rising food prices, riots and millions became impoverished overnight. Many local businesses went bankrupt due to high interest rates, currency devaluation and credit squeeze. A total of 435 Malaysian firms were declared bankrupt in the nine months

[1](Lester *et al* 2000:194).

[2] UNCTAD, *Trade and Development Report 1998* New York & Geneva 1998.

from July 1997 to March 1998. Livelihoods were lost for employers and employees, as they did not receive rescue packages unlike the large conglomerates. (*UNCTAD* 1998)

Poverty increased markedly in Indonesia where 20 percent of the population or 40 million were affected. In Korea and Thailand also poverty increased. Unemployment increased in all the affected countries. More than 13 million people lost their jobs. Real wages in Korea fell by nearly 10 percent in the 12 months following April 1997. Social budgets came under tremendous strain. Philippines health expenditures declined by 10 percent with 6 percent reductions in family health and nutrition and 10 percent in communicable disease control; while in Malaysia the cut was initially 18-12 percent but a stimulus package was later introduced (*UNDP* 1999:42)[3].

In Indonesia, the collapse of the rupee and the rising inflation which is estimated at over 80 percent in 1998, reduced purchasing power and resulted in negative savings. Unemployment was forecasted at 15 million in 1998 that is equal to 17 percent of the work force; wages fell by some 40-60 percent and poverty increased by 50 percent by the end of 1998 (*UNCTAD* 1998: 73; *UNDP* 1999:40).

In Korea, unemployment seriously deteriorated and estimated at 10 percent by the end of 1998. The financial crisis affected women, the young and unskilled workers hardest. Unemployment raise by 7.1% among women

[3] UNDP, *Human Development Report 1999* New York: Oxford University Press 1999.

between April 1997 and April 1998, compared with 3.8 percent for men (*UNDP* 1999:40).

In Thailand unemployment almost doubled to 8.8 percent between 1997 and Feb 1998. Poverty increased by one third by the end of 1998 because of job losses in rural and urban areas. *(UNCTAD* 1998:74), public health budget wMali and Swazilandas reduced by 10 percent while the community and social services took a cut of 7.6 percent. Since the 1997 crisis, income disparity in Thailand has increased. The poorest saw their annual household income reduced to 3.8 percent from 4.2 percent in 1997 while the richest group was two percent richer at 58.5 percent in the same period. After the crisis, 3.1 million poor were added to the list of poor. 11.4 percent of the population considered poor (Yuwadee T., 1 Aug. 2000).[4]

All these developments in the region affect the public health of the region greatly.

4.3 Effect of debt crises in African countries

[4] Yuwadee Tunyasiri, 'Plan to ease poverty takes shape' *The Bangkok Post* Aug 1, 2000 p2.

In this section focus will be on the effects of debt crises in health sector, precisely the effect of debt crises on AIDS is analyzed. "Every child born in the developing countries comes to the world bearing an average debt obligation of $417. Sub-Saharan Africa spends more on servicing its debt than on the health and education of its 310 million children." The debt crisis is worst in Sub-Saharan Africa: 34 out of the 41 countries in the IMF/ World Bank Highly Indebted Poor Countries (HIPC) are in Sub-Saharan Africa, which still owes $170 billion to creditors and pays creditors $40 million a week to service its debts (Drop-the-Debt)[5]. It is believed that "Life expectancy will soon be 17 years shorter because of HIV/AIDS, 47 years instead of 64 (Schoofs, Mark,1999)[6].

Debt servicing is very high in these countries and surpasses the health spending. Table given below gives a clear idea of the situation.[7]

[5] Drop-the-Debt World Bank and IMF Chiefs in Africa 18th-26th February 2001 briefing (February 2001)

[6] Schoofs, Mark AIDS: the agony of Africa Village Voice (1999)

[7] Values in the last 2 columns from Oxfam, calculated from Decision Point documents, I-PRSPs, the World Development Indicators 2000 and the UNESCO World Education Indicators (2000).

TABLE 15 Showing burden of debt services

Country	Debt service payments 1999 $(millions)	Debt service payments 1999 $(millions)	Health Spending $(millions)
Malawi	102	59	51
Rwanda	49	16	8
Tanzania	144	142	88
Uganda	179	51	16
Zambia	331	158	24

Source- world development indicators (2000) and Oxfam report on African debt crises.

From the above table it is clear that after the payment for debt servicing it becomes very difficult for countries to provide proper services to the masses. The effects of reduced government expenditure are analyzed in section 1 for many countries. Here focus will be on HIV/AIDS. Reduced government expenditure forces the countries to introduce user's fee for health services and education. This resulted in reduced acces to health services and education hence contributing to reduced awareness on health issues including HIV/AIDS, poor general health and reduced treatment of disease among AIDS sufferers.

Illiterate population is less able to learn about AIDS and hence they have greater chances of infection. Reduced government expenditure greatly affects the unemployment, wages, and supplies of food through the public

distribution System. Increased unemployment, wage cuts and removal of subsidies push masses to the margins of society. These increases the chances of infection many fold, worst hit by this are women and girls who go in prostitution because of shortage of funds and as a result have a greater probability of catching the infection.

An economy become vulnerable where large numbers of people are suffering from diseases of one kid or other. Population become less productive and its resource are not fully utilized leading to wastage in the country. Since people spend on diseases they have negative savings which results in less investment by a country in its development. Companies also pay for their employee's diseases. This increases the cost to companies and reduces their profitability. Because of the less productivity and inefficiency in the economy the growth rate and overall development of country is greatly affected leading to increased debt to cater the needs of people.

Example - MALAWI

In Malawi, 16 per cent of adults are infected with HIV and 31 per cent of women attending ante-natal clinics are HIV-positive.[8] The impact of HIV/AIDS on the economy is already affecting economic growth rates. A study of tea workers shows mortality rates increased six-fold between 1991 and 1995, costing the company six per cent of its operating profit. In 2000, Malawi's Gross Domestic Product was already lower by five per cent due to

[8] Jubilee Plus http://www.jubileeplus.org/index.htm

HIV/AIDS.[9] In Malawi, there is only one doctor per 50,000 people[10]. Yet, government spending on health care of $51 million was dwarfed, in 1999, by debt repayments of $102 million. Even though debt relief reduced annual repayments to between $51-59 million in 2000, a condition of that relief was that health expenditure must remain 15 percent lower than in 1997/8 (when expenditure peaked).[11] Meanwhile, the cost of tackling up Malawi's AIDS programme to an effective level is estimated at $152 million.[12]

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[9] Drop-the-Debt World Bank and IMF Chiefs in Africa 18th-26th February 2001 briefing (February 2001)

Drop the Debt Reality Check: the need for deeper debt cancellation and the fight against HIV/AIDS (10 April 2001)

[10] UNAIDS AIDS epidemic update: December 2000 UNAIDS (December 2000

[11] Drop-the-Debt World Bank and IMF Chiefs in Africa 18th-26th February 2001 briefing (February 2001)

[12] UNAIDS AIDS epidemic update: December 2000 UNAIDS (December 2000)

CONCLUSION

The world has witnessed a great change over the last five decades. We have come a long way from the normal growth path countries use to follow under the demographic transition. The countries, especially, in the last two decades have registered a great change in their economic and social outlook.

We have seen the newspaper headlines talking about economic and social development of the world especially in developed countries and upper middle income countries. However, simultaneously, newspapers have also talked about economic and social degradation in developing and underdeveloped countries. This raises a question as to how the same process of globalisation can affect countries in two different ways or how the global pattern of development really been something different?

In this dissertation, we have considered the broader issue of globalisation affecting the social and economic out look of countries; however, the focus of our study has been how globalisation is affecting public health. We have chosen 'health' as the linking indicator between globalization and economic and social development because health indicators are the one that show improvements when economic and social development of a country takes place and it is the health status of a country, which in turn, affects the economic and social development.

From this perspective, we have to analyse the impact of Structural Adjustment Programmes (SAP), patents and other policy measures to study the linkages between globalisation and public health.

Structural adjustment programmes ask countries to cut down their budget deficits as percentage of GDP. This however forces countries to cut down expenditure in social sectors and consequently these cuts in social spending affect the public health of the country. In this respect, we have analysed the correlation between health indicators and health expenditure. The countries under study are selected based on declining budget deficit as percentage of GDP. Correlation coefficient between different health expenditure variables and health indicator variables is found across all countries by taking the country averages of each indicator over the years 1995 to 2000. Correlation coefficient is also found for each country and between each set of variables separately. The results focus on the relationship established between health indicators and health status and thereby try to answer the effects of structural adjustment programme on public health.

Patents for medicines give monopoly rights to the patentees and result in increase in prices of medicines, thereby reducing the availability of medicines to the poor and consequently affecting public health. Effect of some other policy measures were also discussed in the dissertation. The effect of the Asian financial crisis on the public health of affected countries and the effect of the debt crisis in African countries on their public health. More specifically, the effect of debt crisis on AIDS was discussed.

The results of Chapter Three and the discussion of Chapter Four shows that only developing countries show significant decline or improvement in health indicators whereas developed countries shows marginal improvements. This

hints that developing countries witnessed large change in their economic and social development because of globalisation.

For all countries life expectancy at birth and per capita government expenditure on health at average exchange rate (US$) shows a significant positive correlation as r value is 0.55. There is much higher value of coefficient between life expectancy and per capita total expenditure on health in international $, r value of 0.66 states that life expectancy depends more on per capita total expenditure on health than on per capita government expenditure on health. However per capita government expenditure on health becomes important because life expectancy does not depend much on out of pocket expenditure as percentage of total expenditure on health and out of pocket expenditure as percentage of private expenditure on health. Low government spending on health, which is caused by large cuts in social spending, will affect the life expectancy negatively.

Infant morality shows a significant negative correlation with per capita government expenditure on health ($r = -0.517$), per capita total expenditure on health ($r \approx -0.64$) and positive correlation with out of pocket expenditure as percentage of total expenditure on health ($r \approx 0.447$). Out of pocket, expenditure as percentage of private expenditure on health does not show significant coefficient value ($r \approx 0.042$); this shows that improvement in infant mortality depends primarily on the per capita government expenditure on health.

Under five-mortality rate shows significant value of correlation coefficient with each expenditure variable except out of pocket expenditure as percentage of private expenditure. As most of the countries have very high out of pocket expenditure as percentage of private expenditure on health and shows increasing trends in under five mortality. Government expenditure should increase and out of pocket expenditure on health should decrease to see a positive effect on this indicator.

All the four coefficient values show that prevalence of TB depends entirely on per capita government expenditure on health and per capita total expenditure on health. So the increase in prevalence of TB can be attributed to low per capita expenditure on health.

Developing countries that show improvement in one health indicator often also show decline in other health indicators. This result can be attributed to the focus of government in those countries towards the improvement in one indicator, because the strain on the social budget could not finance the overall improvement in health status. Alternatively, this may be because of the initiative of UN organisations with regards to specific indicators.

Improvement in at least one indicator with no significant deterioration in other for some countries can be attributed to the increased per capita government expenditure on health. In case of the countries which did not register significant increase in per capita government expenditure on health

this increase in health status can be attributed to increase in per capita total expenditure on health

Countries that are the worst affected show decline in status of almost all indicators. All these countries show decline in per capita government expenditure on health. This decline in per capita government expenditure is probably the reason for the decline in all indicators.

This exercise shows that the effect of SAP on health of developing economies is probably negative. There is decline in budget deficit as percentage of GDP for all countries but the effect of this is felt in developing countries only.

Tightening of patent laws have led to increase in the price of medicines. This increase in price is probably because of two reasons. One, because now the generic equivalent of the medicines cannot be produced due to the rights of the patentees. Second, the monopoly rights given to patentees for 20 years increase the price of medicines. Only 10% of the research expenditure in medicines is concentrated on those diseases that carry burden of 90%. However, the drugs for sleeping sickness and leishmaniasis are not researched commercially at all, as these diseases are tropical and investment in these will not benefit the company. Hence, the arguments given in support of patents seem to be doubtful.

The Asian financial crisis resulted in bankruptcy, unemployment, reduced purchasing power because of rising inflation and then to increased poverty. This also resulted in the increase in prices of essential foodstuffs, medicines, and the price of health care. Overall, this crisis affected the public health badly. The social effects were severe and are likely to persist long after economic recovery.

The African debt crisis is the biggest challenge for African countries. They pay a very high share of their income for servicing their debts. Sub Saharan Africa pays $ 40 million/week loans amounting to $ 170 billion. Debt service payments are higher than health spending. Poorly developed health infrastructure in these countries, very low health spending and per capita income, a very high burden of diseases, and debt servicing together with high incidence of AIDS indicates a harsh future for these countries.

From the study, we can say that the process of globalisation has affected the public health negatively in developing countries.

This study has a number of limitations. There are only four expenditure indicators included in the study. Moreover, other factors, which affect health, have to be taken in to account to check the robustness of the conclusions. The correlation coefficient establishes a relationship between variables but more robust conclusions would require a regression analysis using time series data for these countries. Only four health indicators were studied and they provide a limited picture of the health status of the country. More indicators

should be included to know the overall effect of globalisation on public health. A record of the relationship has to be analysed in countries, which have already carried out SAPs. Detailed analysis is also required for other mechanisms linking globalisation and public health.

A further research should include a large data set, more number of indicators, a longer period for analysis (at least from 1990 to 2005), and more countries. Methodology of the analysis should be regression model fitting cross sectional data in time series.

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APPENDIX

SOURCE OF DATA -

GDP at market prices, national currency, current prices
UN statistical division, (UN estimates) [code19460].

Government finance deficit or surplus, national currency
UN statistical division, (UN estimates) [code 6290]

All other data
World health statistics 1995-2006, World Health Organisation

calculated as (budget deficit/GDP)*100

budget deficit as% of GDP

Country or Area Name	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Albania	0	0	0	0	0	0	0	0	0	0	-8.77180767	-9.879706312	-11.60864225
Algeria	0	0	0	0	0	0	0	0	0	-4.393829787	-1.408631942	2.928292666	2.378487646
Australia	-2.7206205	-2.118899	-0.891141066	0.667093015	1.652445932	1.991432967	0.478628947	-2.232906911	-2.934897453	-2.802633905	-2.246612037	-0.886875705	0.357104509
Austria	-61.446091	-77.62226	-72.38727196	-66.22613727	-49.68244348	-59.33555896	-60.75329543	-48.54808675	-66.84772329	-76.24472819	-68.29774925	-54.82432356	0
Azerbaijan	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	-0.002233922	-0.001021726	-0.000594282	-0.000433033
Bahamas	-1.2924829	-0.518331	-0.818982013	-2.797202797	-4.032653061	-2.394415137	-4.258806891	-2.833526309	-2.752352922	-0.613741676	-0.676503178	-1.773147892	-3.605362489
Bahrain	0.93101619	-4.219663	-9.778544768	3.578003165	-7.863738124	-6.386839666	-3.955298804	-6.449229116	-0.097168311	-2.785475394	-5.757162347	-2.397558849	-5.249266862
Bangladesh	-0.9635282	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	-5.825138	-6.361678	-6.517829564	-6.642036655	-2.177934697	-7.115865357	-2.041074901	-1.014702641	-2.608419717	-2.32905799	0.717400599	-3.245544207	-0.889319062
Belarus	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	-5.083829097	-3.57244347	-1.827102489	-2.652743846	-1.805835304	-1.560368138
Belgium	-428.89559	-379.0412	-296.0004027	-249.2586729	-250.7134897	-217.1411629	-236.6039602	-263.1630035	-236.6449336	-162.0491391	-124.6980008	-99.43263794	-74.64363429
Belize	-3.3957935	0	0	7.132740553	-0.789343247	0.694660254	-3.201317462	-4.28636232	-7.359274482	-6.096788082	-3.201451613	-1.221815063	-2.489914425
Bhutan	-8.6629317	-3.508208	0	0.810941353	-10.73938841	-7.826610476	-0.854234824	-3.892036512	4.550889719	-0.543707579	0.081670262	2.162897158	-2.282916215
Bolivia	-49.940881	-1.654452	-0.353689187	-0.420156402	0	0	0	0	-4.746718999	-3.262447532	-2.162277028	-2.314862669	-4.280592642
Botswana	22.6555835	22.27134	18.23119083	0	9.182906867	0.385474602	9.372640566	10.50128335	13.09281516	0	0	0	4.933427283
Brazil	-11.133201	-13.36336	-12.08581645	-15.26198083	-16.13072747	-6.171527012	-0.427024516	-3.804804992	-9.32808399	-6.090892169	0	0	-7.311434028
Bulgaria	0	0	0	-4.172632227	-1.010636954	-8.151575237	-4.494845665	-4.929493308	-12.07624425	-4.661765154	-5.24807968	-18.89650755	2.026668037
Burkina Faso	0.95596441	-5.226331	-4.410286728	-5.002035002	3.209463804	-3.438715236	-4.235208739	-3.87457832	-4.120070168	-3.964400935	-2.854138387	-1.59720976	-3.180443357
Burundi	-0.1050606	2.467304	-0.998119646	0.729920802	2.589335442	0.647679196	1.991193876	-8.892015337	-5.259323162	-4.915451816	-2.650609909	-8.022485833	-3.024106048
Cambodia	0	0	0	0	0	0	0	0	0	0	0	-1.857894982	-0.28190021
Cameroon	0	0	0	0	-2.831772997	-5.093376865	-4.692283544	-2.205255006	-1.524370717	-2.473282062	0.182146547	0	0
Canada	-5.9894033	-3.982396	-2.542531382	-3.936284042	-3.887175878	-4.80165441	-5.685000341	-6.192081658	-5.908668499	-4.834502956	-3.660754102	-1.8874789	0.613042433
Chad	0	-2.756957	-2.702213421	-3.042537533	-4.624968368	-5.633492734	-9.022605325	-14.43764172	-5.571359223	-12.54931298	-6.315117892	-12.01672817	-7.302892102
Chile	-2.0723706	-0.831323	1.720002581	0.933111327	1.333979023	0.726959426	1.391632677	2.063847431	1.795319651	1.53073452	2.334982512	2.105912584	1.795082608
China	0.24567509	-0.818135	-0.532894346	-0.911316649	-0.965018827	-3.959715058	-3.514501607	-2.721188384	-2.042277403	-2.014748119	-1.554080037	-1.268834955	-1.237746047
China, Macao Special	0	0	0	0	0	0	0	0	0	0	0	0.048101506	1.65727382
Colombia	-2.2388501	-1.118443	-0.376463822	-1.149221365	-2.78349492	-0.682700141	0.081453863	-2.812078664	-0.62987061	-1.521037269	-2.297276728	-3.753498028	-3.70067577
Comoros	-15.717795	-8.559446	0	0	0	0	0	0	0	0	0	0	0
Congo	0	0	0	0	0	0	0	-14.12947857	-12.61672941	-13.22271987	-8.166067033	-1.885819805	-8.085859703
Costa Rica	0.70567963	-1.331443	-1.358696634	-1.221708498	-2.602948715	-2.62794228	-2.65796643	-1.391513218	-1.761004224	-5.147699121	-4.016503877	-3.881002798	-2.740229623
Cote d'Ivoire	0	0	0	0	0	0	0	0	0	-6.068024263	-2.657405737	-0.929174967	0.339089276
Croatia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	0.622017996	-0.727185867	-0.123920408	-0.937067636
Cyprus	-5.1204777	-2.96484	-5.626888783	-4.528981775	-2.824269435	-5.142457174	-6.585890004	-4.593292523	-2.295182197	-1.372499302	-0.961909354	-3.304186047	-5.113224237
Czech Republic	0	0	0	0	0	0	0	0	0.101519059	0.82794468	0.490904293	-0.108391358	-0.890690935
Democratic Republic c	#DIV/0!	0	0	0	0	-4.545454545	-14.40677966	-15.00991221	-13.72015198	-1.771731602	0.020181635	-0.322480406	-0.806145724
Denmark	-0.5769587	4.307859	3.73260607	2.109345914	1.016364934	-0.660086029	-1.805657376	-1.777640512	-2.405657325	-2.702096843	-2.323781687	-0.288081774	1.124781347
Djibouti	1.48238422	-2.202742	0	-1.006495523	0	0	0	0	0	0	0	0	0
Dominican Republic	-1.3062197	0.707509	-0.310218001	-0.223740887	0.338971057	0.609068476	1.052287308	3.339288704	0.236519103	-0.502012119	1.060064357	0.294827974	0.948508242
Ecuador	1.88050456	-0.262255	-0.377219338	-0.012335509	0.940030075	1.31220937	1.50355275	3.460530083	3.657540747	0.62079914	-2.721391863	-0.772056701	-4.929859923
Egypt	-8.5795042	-9.125725	-4.354457493	-6.690165926	-4.788797425	-5.079633335	-0.797845908	-3.02524648	1.509076356	0.284405229	0.78493777	-1.689345747	-1.799528745
Estonia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0.412664088	1.202842072	-1.994316724	1.324863148	-0.542270899	-0.775919134	2.380424638
Ethiopia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	-6.994517122	-5.473357862	-9.936142949	-4.070532684	-1.974821813	-1.533337674
Fiji	-2.6930091	-4.826949	-5.045733788	-0.748740554	-2.946265449	-2.763636364	-5.063663075	-4.865451389	-6.287638669	-4.287317621	-3.311897106	-7.075020992	-9.324818937
Finland	-4.7247493	0.645237	-10.09020556	2.330268822	10.50086779	1.063034829	-40.19711436	-84.99163393	-76.98462163	-66.26596043	-55.74808882	-36.80582114	-14.3890027
France	-16.981151	-21.09283	-7.603581609	-14.68086496	-12.09574957	-13.26908869	-8.037022654	-24.7523238	-36.04124442	-35.65630064	-42.06533778	-33.66254181	-22.42047578
Gabon	0.05807036	0	0	0	-4.767926212	3.412512546	-1.643728393	0	0	0	0	0	0
Gambia	0	0	0	0	0.022088113	0.882361898	-1.458952075	4.575979487	3.721029753	0	0	0	0
Georgia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	0	0	0	0
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Ghana	-2.2093118	0.058467	0.544101877	0.372050989	0.72678521	0.162425555	1.514680752	-4.799255517	-2.512588767	2.145930992	0.90679256	-2.958762523	-2.108634347
Grenada	0	0	0	0	0	0	-1.875076659	0.174177454	-0.210339209	-1.108728771	2.244202366	0	0
Guatemala	-1.921288	-1.379585	-1.031562306	-1.385258629	-3.18433419	-1.18367335	0.512660061	0.753907538	-1.65697955	-1.25714653	-0.256467466	-0.280689995	-2.080509787
Guinea	0	0	0	0	-3.484953784	-3.283608885	-3.385783537	-2.804052785	0	0	0	0	0
Guinea-Bissau	-32.207013	-16.03047	-3.702301609	-12.30595714	-9.72483324	-14.15031347	-13.37335741	-15.53128737	0	0	0	0	0
Guyana	-37.698574	-58.87337	-42.43669943	-31.63886875	-6.964181994	-21.69422279	-23.52255813	-17.10489151	-6.767471754	-6.752771442	-3.269590239	-3.145257376	-6.197341532
Haiti	-2.1648253	-2.114766	-1.543802328	-4.30339929	-4.623466055	-4.419191919	-1.644115574	-3.929165834	-2.548004423	-3.061481769	-2.796256912	-0.770868426	-0.621388964
Honduras	-8.9792554	-6.461862	-3.596628537	-2.965084856	-3.282368879	-6.816622797	-2.807404683	-4.577659574	-6.380624972	-5.053703832	-3.535606687	-3.17421435	-2.055053651
Hungary	-0.868702	-2.523113	-2.921526608	-0.201839415	-1.731240003	0.728174882	-3.746738545	-7.170555173	-5.622515968	-7.001319514	-6.284684675	-3.067862375	-4.45765294
Iceland	-3.8672214	-4.728558	-2.033693838	-3.7490071	-2.49759863	-2.41238167	-4.319764089	-3.111097951	-4.066285241	-4.993895429	-4.467686937	-0.900699201	0.354268267

1998	1999	2000	2001	2002	2003	2004	2005
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-5.010752688	-5.367617517	2.202202202	-1.03991949	0	0	0	0
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-0.827075599	-2.389014448	-1.49855401	-3.324524313	-6.227737167	-3.437233293	-2.236701939	-4.289985963
-0.853166033	-1.99004403	0.079922924	-1.372370904	0	0	0	0
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-7.753273944	0	0	0	0	0	0	0
2.672477611	1.465885399	0.579004814	1.872248327	-0.030307622	0.739291276	3.496595489	6.592291211
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-4.834209293	-5.877538866	-3.967444988	-0.006929526	-1.078077364	-5.08697013	-7.239702664	-7.340487416
-2.735039497	-1.338278916	-2.336807789	-2.974377113	-3.627172945	-3.702182043	-2.597846402	-1.428750797
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India	-8.0073023	-8.759495	-7.895581021	-7.643451662	-7.473164576	-7.657107269	-5.480708509	-5.334560366	-7.044528759	-5.603740237	-5.03740703	-4.887926397	-4.87282166
Indonesia	-0.8895492	-3.209593	-0.756179598	-2.668423161	-1.703942145	0.344442134	0.357555561	-0.353244191	0.556957499	0.852726415	2.019526391	1.056170815	-0.610599595
Iran (Islamic Republic	-3.6522778	-8.081311	-6.893246564	-8.869816249	-3.798748952	-1.759029591	-2.238731068	-1.272174953	-0.621222953	0.23628086	0.121919269	0.185326004	-0.983500817
Ireland	-8.5895608	-8.043375	-6.41129129	-2.095437782	-1.420624964	-1.28451468	-0.61750621	-1.729482051	-0.595242706	-0.685670649	-0.488271169	0.173451472	0.425586323
Israel	-3.027637	0.675321	-3.151611684	-7.603614116	-3.976583758	-4.915459469	-6.203304381	-3.916519404	-2.283811192	-2.801823942	-4.202813578	-3.978183477	0.271238335
Jamaica	-8.2215688	0	0	0	0	0	0	0	0	0	0	0	0
Japan	-4.8933334	-4.783742	-3.510039589	-2.583702319	-2.892256685	-1.56330672	1.681391029	0.311059011	-1.53342873	0	0	0	0
Jordan	-5.5311355	-7.077556	-8.974463461	-9.03418124	-5.779688883	-3.538582618	0.435011033	5.003871681	3.648300721	1.037173015	1.045665684	-1.349697997	-3.180578616
Kazakhstan	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	-7.17455623	-2.482868102	-4.207269124	-3.827305388
Kenya	-2.8768862	-3.654059	-5.766023219	-2.808650191	-2.944432477	-3.291060824	-3.880314844	-1.032994908	-3.584161066	-4.570770053	-1.019412831	0.90523519	-1.766167475
Korea, Republic of	-1.1218044	-0.087657	0.415059181	1.465230852	0.184163967	-0.64652321	-1.545965711	-0.461313719	0.586220515	0.289234566	0.259504054	0.096077454	-1.170147178
Kuwait	-3.5503876	-18.03959	2.557356008	-10.78641954	3.512529749	0	0	0	-5.477693265	-13.32833333	-7.856656151	10.81323576	11.4056696
Kyrgyzstan	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	-7.057351486	-7.667731629	-11.54901487	-5.424521246	-5.231752901
Latvia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	0	0	-1.434586372	0.655091144
Lebanon	0	0	0	0	0	0	0	0	-7.748443911	-17.54949306	-18.61370156	-20.56377743	-24.5868044
Lesotho	0	0	-20.69109068	-17.27903223	-7.477286678	-1.050033204	-0.520380917	3.478574477	5.525788288	5.035413153	3.209219858	3.38924519	1.881355932
Lithuania	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	1.398601399	0	-5.989852972	-4.714804605	-4.503694085	-3.546321129	-1.868570282
Luxembourg	321.909995	223.2692	105.8309806	89.40381833	94.72579351	161.13329	-320.2782243	0	0	18.24488669	83.20787076	163.6179234	76.78711459
Madagascar	0	0	0	-3.506168529	-4.14950191	-0.864916551	-5.121881624	-6.20288298	-4.766776729	-4.025669667	-1.578793481	-1.33997235	-2.373854754
Malawi	-8.4283641	-9.951095	-8.335791725	-5.840298976	-2.616391853	-1.701624877	0	0	0	0	0	0	0
Malaysia	-5.6886537	-10.48412	-7.727472527	-3.620915464	-3.240428383	-2.88627069	-1.95376099	-0.824916048	0.20558327	2.255181341	0.836506003	0.715321678	2.351709576
Maldives	-3.389455	-8.249556	1.466410749	1.729262362	-2.492120929	-8.315077163	-9.517918429	-11.85359859	-11.67945198	-5.008849128	-6.390409063	-2.524052066	-1.359099952
Mali	-8.9388697	-7.383353	-5.143998668	-4.481974667	-4.293921984	-2.634274843	-3.832803008	-3.946297803	-4.297149277	-4.434453867	-2.70230469	-0.775952464	-1.889057367
Malta	-3.7962701	-3.583406	-6.282636782	-0.02791882	-4.369527563	-4.872506377	-4.751690925	-2.923785441	-2.757756415	-3.435931447	-2.534861323	-7.275813792	-9.203194247
Mauritania	0	0	0	0	0	-5.173041894	-5.213613324	-2.950585458	-7.735018857	-2.569224078	1.150437967	7.592461481	0
Mauritius	-3.4497142	-1.737287	0.226653069	0.310139473	-1.4329843	-0.409492286	0.004379219	-0.713233831	0.033138435	-0.260741944	-1.157747962	-3.899046607	-3.890169014
Mexico	-7.0433729	-12.23781	-13.30443234	-8.889390956	-4.56985252	-2.527008089	2.917775834	4.169516609	0.513534524	-0.027180046	-0.532601984	-0.219593555	-1.076182677
Mongolia	-6.5168558	-14.20954	-15.00650389	-15.60639511	-13.13487666	-10.8002335	-7.317711194	-4.683597393	-13.00160286	-6.511637173	-5.303914192	-7.683595849	-7.915708073
Morocco	-7.2766582	-7.694601	-4.493411795	-3.22262069	-5.131232919	-2.236316655	-2.097293283	-1.386521757	-2.611716169	-3.191648942	-4.389391765	-2.970191304	-1.500901546
Myanmar	-0.7912268	-2.510673	-2.205304376	-3.016670383	-4.162321724	-5.126331931	-4.814188285	-2.828444837	-2.153912761	-3.332882096	-4.121515588	-3.163211192	-0.923887168
Namibia	0	6.311954	-3.487625406	0.042969019	5.706502636	-1.184340932	-2.756307423	-5.403726708	-3.580950333	-1.691055503	-3.747048638	-5.93631337	-2.623126977
Nepal	-7.2548136	-6.52564	-6.11048478	-5.565553201	-8.976699899	-6.781349114	-8.237102268	-6.725668453	-6.041149095	-3.745132282	-3.601688149	-4.409572823	-3.888589834
Netherlands	-11.092594	-3.13487	-6.926819391	-9.030880501	-8.435915478	-8.638491565	-7.141543362	-7.500632571	-2.927952538	0.921523896	-7.303229499	-2.929835329	-3.138072044
Netherlands Antilles	-0.971145	-2.069233	-1.914093356	-0.368580413	-1.784281019	-1.447224259	-1.207931531	-1.591146124	-0.606844586	-0.909888172	-2.177006393	0	0
New Zealand	-4.5052935	-3.563238	1.023617782	2.005159964	0	3.95823916	1.946028868	-2.227857667	0.102450961	0.772400439	0.424044131	5.035141115	3.851802876
Nicaragua	-13.157895	-9.859155	-9.688195991	-15.04545455	-2.049171752	-57.38502929	2.527490792	-2.015896008	-0.030616649	-3.18472611	-0.286235382	-0.906512193	-0.761832515
Nigeria	-2.1005491	-5.746956	-2.900455027	-4.441889253	-3.748487544	-4.44675644	-6.226033759	-4.345349807	-9.515702622	-4.822494383	0.033423112	0.895809226	-0.116273418
Norway	3.33993561	3.099448	-0.062789791	-0.155274917	-0.746027165	0.531508711	-2.878867004	-6.568644818	-5.485925127	-1.691530896	1.545370662	0.634808418	0.793270161
Oman	-10.143152	-22.27524	-4.406800096	-10.75205458	-8.033633034	-0.730024483	-6.519445973	-12.20811229	-10.63993671	-9.781974111	-8.820093458	-4.420952284	-0.464734379
Pakistan	-5.912933	-7.380534	-6.504765716	-4.963663692	-5.995287047	-4.079474803	-5.732149219	-6.447169721	-6.864811443	-5.476134256	-5.256092131	-6.285262483	-6.383092009
Panama	-2.7073432	-3.648573	-3.653421701	-1.93909053	-2.391922494	2.646258963	4.608167957	4.228811846	3.432339345	1.650656728	2.549242151	-0.653286277	0.177508925
Papua New Guinea	-2.2662283	-3.05148	-1.332245327	-1.008210701	-1.128828348	-3.398910041	-1.849211272	-5.218565001	-5.825851123	-2.541717769	-0.51283293	0.520824135	0.217655367
Paraguay	0.21146162	1.479181	0.898571734	0.705715126	2.63324334	3.143507853	-0.166906623	0.857489364	1.264821102	2.229698039	-0.064131122	-1.018024794	-1.302184069
Peru	-2.8465377	-4.862706	-7.509263896	-3.870742184	-6.39188203	-8.02808532	-2.217674453	-3.697290564	-3.649654217	-3.168518011	-3.391318738	-1.446253168	-0.801047853
Philippines	-1.9510984	-5.033446	-2.450041303	-2.908473915	-2.114444526	-3.452722103	-2.111279468	-1.181228492	-1.484682158	1.069978003	0.581022282	0.28803981	0.064448522
Poland	-1.7485402	-0.276682	-1.443879868	-2.324166089	0	0	0	0	0	-1.998510649	-1.748354129	-1.888400957	-1.647184374
Republic of Moldova	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	0	-6.355217783	-5.68254539	-7.61132559
Romania	0.00033491	0.000531	0.000800742	0.000639123	0.00082225	9.37226E-05	0.000194336	-0.000468207	-4.68513E-05	-0.000250834	-0.000295684	-0.000401888	-0.000385701
Russian Federation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	0	-4.865728014	-7.35158655	-6.421092894
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Saint Kitts and Nevis	-6.229228	1.121297	-16.25620825	-7.003333528	-0.975470917	-0.011632235	-0.288132541	1.346506417	1.848670451	1.13082114	0	0	0
Saint Lucia	-2.4250983	-1.825671	0.977216971	2.02211024	1.019380004	-0.094377665	0	0	0	0	0	0	0
Saint Vincent and the	2.0026264	1.280932	1.355225437	-1.286681716	-1.8125	-2.373831776	0.069808028	-4.317460317	-3.462732919	-1.01978691	-0.3085554	-2.04787234	-10.55485498
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	-3.131617658	-2.751245343
Seychelles	-14.921162	-19.51938	-3.796833584	-3.998952811	-9.035969551	-0.045752631	-6.221907984	-3.975507631	-31.63479334	-2.212752008	-8.285808745	-14.72140526	3.802792013
Sierra Leone	-5.0207192	-0.933455	-11.47352132	-4.909095046	-3.458599418	-1.60652572	-4.547960428	-4.859117397	-3.919056438	-4.882630336	-6.057596973	-5.757884005	-5.787883073
Singapore	1.52863951	1.800636	-4.68219595	6.078215709	1.161037013	9.710697466	10.1738303	11.74160347	13.78527718	12.13340627	13.34028227	14.45801597	9.562930787
Slovakia	0	0	0	0	0	0	0	0	0	0	0	-1.33761663	-3.989173246
Slovenia	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0.374260937	-0.273233038	-0.271805031	0.059379837	-1.389033937
Solomon Islands	-8.159561	-5.964356	-11.62909836	-8.980926431	0	-9.43568307	-17.67507939	0.30271262	-4.893475366	-2.936817102	-0.367149758	-0.161335188	-3.604084321
South Africa	-2.7790404	-3.935205	-4.920210482	-3.092842524	-2.268790032	-3.608151379	-4.213205615	-7.098663443	-6.650975165	-8.024973036	-4.281153074	-4.622188707	-4.102051828
Sri Lanka	-9.6115714	-10.20916	-8.745127384	-12.46479914	-8.485405852	-7.652488601	-9.207497228	-5.254261139	-6.209849835	-8.262055502	-8.059473386	-7.511772785	-4.367085998
Sudan	0	0	0	0	0	0	-0.005165639	-0.006980376	-0.004806061	-0.002512115	-1.666011772	-3.349240613	-0.841216706
Swaziland	-3.3893633	-4.695876	1.790137784	3.712244607	5.196961425	7.347433897	4.977635987	-1.507681315	-5.09681263	-4.854965585	1.380076783	-0.988392543	2.783910479

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-1.223027846	0.379641562	-1.572892907	-1.060507997	-0.40436793	-1.923446703	-2.901766293	-4.99965092
0.625549191	1.699800352	2.607549566	0.91729771	-2.212774535	-3.629179832	-3.426399068	-2.55345301
-0.775610735	-3.745418862	-3.424309879	-4.673740246	-4.721095004	-3.970279842	-2.393467298	-1.757805772
-3.93417971	-1.684709308	-1.708766776	-4.430899535	0	0	0	0
-0.125755851	-1.582229423	-2.808131399	-2.935829377	0	0	0	0
-2.212067316	-3.376590715	0	0	0	0	0	0
0	0	0	0	0	0	0	0

APPENDIX B

Total expenditure on health as % of GDP

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	73	72.5	72	73	71	70.2	70.2	69.4	69.5	70.4	72
Albania	3.45	3.375	3.3	3.6	3.2	3.3	3.4	3.4	6.6	6.8	6.5
Algeria	4.6	4.7	4.8	4.4	4.1	4.4	4.2	3.6	3.8	4.2	4.1
Australia	8.25	8.225	8.2	8.3	8.4	8.5	8.4	8.3	9.2	9.3	9.5
Austria	8.65	8.625	8.6	8.7	8	8	8.1	8	7.4	7.5	7.5
Belarus	5.6	5.65	5.7	5.5	6.2	5.4	5.7	5.7	6.6	6.4	5.5
Belgium	8.75	8.725	8.7	8.8	8.5	8.5	8.7	8.7	8.7	8.9	9.4
Belize	3.75	3.775	3.8	3.7	4	4.3	4.7	4.6	4.8	4.6	4.5
Brazil	7.3	7.25	7.2	7.4	7.5	7.5	7.9	8.3	7.8	7.7	7.6
Bulgaria	4.1	4.25	4.4	3.8	4.3	4	4.1	3.9	7.2	7.9	7.7
Burundi	3.35	3.425	3.5	3.2	2.5	2.8	2.6	3.1	3.1	3.1	3.1
Cameroon	4.1	4.1	4.1	4.1	4.1	4.2	4.3	4.3	4.5	4.6	4.2
Canada	9	9.05	9.1	8.9	8.9	9.1	9.2	9.1	9.4	9.6	9.9
Chad	3.05	3.025	3	3.1	3.1	2.9	2.9	3.1	6.8	6.3	6.5
Congo	3.05	3.175	3.3	2.8	2.8	3.5	2.9	2.2	2	1.9	2
Costa Rica	6.25	6.275	6.3	6.2	6.3	6.5	6.4	6.4	6.8	7.2	7.3
Côte d'Ivoire	2.9	2.9	2.9	2.9	2.8	2.7	2.6	2.7	3.9	3.8	3.6
Denmark	8.25	8.225	8.2	8.3	8.2	8.4	8.5	8.3	8.6	8.8	9
Egypt	3.75	3.725	3.7	3.8	3.9	4	3.9	3.8	5.4	5.9	5.8
Estonia	7.9	8.25	8.6	7.2	6.3	6	6.6	6.1	5.1	5	5.3
France	9.6	9.6	9.6	9.6	9.4	9.3	9.4	9.5	9.4	9.7	10.1
Gambia	3.75	3.825	3.9	3.6	3.5	3.8	4.2	4.1	7.8	7.5	7.4
Germany	10.75	10.68	10.6	10.9	10.7	10.6	10.7	10.6	10.8	10.9	11.1
Guinea-Bissau	3.95	3.775	3.6	4.3	3.9	4	3.9	3.9	4.3	6.2	5.6
Guyana	4.6	4.65	4.7	4.5	4.8	4.8	5	5.1	5.3	5	4.8
Haiti	5.45	5.625	5.8	5.1	4.9	5.1	4.9	4.9	7.1	7.5	7.5
India	5.1	5.05	5	5.2	5.3	5	5.1	4.9	5	4.9	4.8
Israel	6	6	6	6	6.2	5.1	4.2	3.7	9.2	9.3	8.9
Kazakhstan	7.25	7.525	7.8	6.7	6.4	6.8	6.1	6	3.4	3.5	3.5
Kyrgyzstan	10.85	10.83	10.8	10.9	11.3	11.6	11.7	11.8	4.5	5.1	5.3
Lebanon	2.25	2.225	2.2	2.3	2.3	2.5	2.5	2.5	11.7	10.6	10.2
Malaysia	6.15	6.025	5.9	6.4	6.5	6.4	6.8	7.6	3.7	3.7	3.8
Maldives	3.25	3.225	3.2	3.3	4.2	4.5	4.7	4.9	6	5.8	6.2
Mali	3.2	3.2	3.2	3.2	3.3	3.8	4.2	4.3	4.3	4.5	4.8
Mauritania	4.7	4.45	4.2	5.2	5	6.2	6.1	6.6	2.9	3.9	4.2
Mongolia	4.55	4.575	4.6	4.5	4.4	4.3	4.4	4.5	7.3	6.7	6.7
Namibia	7.8	8	8.2	7.4	7.4	7.6	7.3	7.1	6.4	5.9	6.4
Nepal	5.15	5.125	5.1	5.2	5.5	5.7	5.5	5.4	5.4	5.6	5.3
Niger	3.8	3.8	3.8	3.8	3.8	3.9	3.8	3.9	4.3	4.3	4.7
Norway	8	8	8	8	7.9	8.6	8.8	7.8	8.9	9.9	10.3
Oman	2.95	2.975	3	2.9	2.7	3.1	2.9	2.8	3.1	3.3	3.2
Pakistan	4.1	4.15	4.2	4	4	4	4.1	4.1	2.6	2.6	2.4
Papua New Gu	2.8	2.85	2.9	2.7	3.2	3.9	4.2	4.1	3.7	3.5	3.4
Peru	4.55	4.575	4.6	4.5	4.5	4.7	4.9	4.8	4.6	4.4	4.4
russian fed.	5.45	5.475	5.5	5.4	5.8	5.9	5.6	5.3	5.7	5.9	5.6
Rwanda	6.15	6.175	6.2	6.1	5.5	5	5.4	5.2	4.1	4.2	3.7
Slovakia	7.25	7.125	7	7.5	6.1	5.9	5.8	5.9	5.6	5.7	5.9
soloman is.	4.25	4.275	4.3	4.2	4.6	5.3	5.6	5.9	5.1	4.9	4.8
South Africa	8.8	8.6	8.4	9.2	9	8.7	8.8	8.8	8.4	8.4	8.4
Swaziland	3.6	3.45	3.3	3.9	3.3	3.7	4	4.2	6	5.9	5.8
Sweden	8.25	8.175	8.1	8.4	8.1	7.9	8.6	8.4	8.8	9.2	9.4
Uganda	3.45	3.475	3.5	3.4	3.4	3.7	4	3.9	7.3	7.6	7.3
Uk	7	7	7	7	6.8	6.8	7.1	7.3	7.5	7.7	8
US	13.25	13.28	13.3	13.2	13	12.9	13	13	14	14.7	15.2
Viet Nam	4.25	4.075	3.9	4.6	4.5	4.7	5.5	5.2	5.5	4.9	5.4
Yemen	4.75	4.925	5.1	4.4	4.6	5.2	5	5	5	5	5.5
Zimbabwe	7.3	7.2	7.1	7.5	9.3	11.4	8.1	7.3	9.1	8	7.9

source - world health organisation, world health report 95,96,97,98,99,2000,01,02,03,04,05 and 06

Life expectancy at birth(years)	1995	1996	1997	1998	1999	2000	% CHANGE
Namibia	60	61	56	52	43	43	-28.33
Swaziland	59	59	60	60	47	45	-23.73
South Africa	64	65	65	55	49	51	-20.31
Burundi	51	51	47	42	43	41	-19.61
Kazakhstan	78	71	68	68	64	63	-19.23
Rwanda	47	47	42	40	41	39	-17.02
Zimbabwe	52	52	49	45	40	45	-13.46
Cameroon	57	58	56	54	51	50	-12.28
Niger	48	48	49	48	40	43	-10.42
Haiti	58	58	54	53	53	52	-10.34
Kyrgyzstan	70	70	68	68	65	64	-8.571
Mali	47	47	48	53	43	44	-6.383
Côte d'Ivoire	50	50	51	47	48	47	-6
Pakistan	63	63	64	64	64	60	-4.762
russian fed.	68	68	64	67	68	65	-4.412
Albania	72	73	71	73	69	69	-4.167
Belize	74	74	75	74	72	71	-4.054
Guyana	66	66	64	65	69	64	-3.03
Belarus	70	70	70	68	68	68	-2.857
soloman is.	71	71	72	72	63	69	-2.817
Papua New Guinea	57	57	58	58	55	56	-1.754
India	62	62	62	62	60	61	-1.613
Costa Rica	77	77	77	77	77	76	-1.299
Bulgaria	71	71	71	71	71	70.99	-0.014
Chad	49	49	48	48	48	49	0
Congo	51	50	51	48	53	51	0
Denmark	76	76	76	75	75	76	0
Malaysia	71	72	72	72	69	71	0
Sweden	79	79	79	78	79	79	0
Uganda	44	44	41	40	42	44	0
Australia	78	78	78	78	79	79	1.2821
Canada	78	78	79	79	79	79	1.2821
Austria	77	77	77	77	77	78	1.2987
Belgium	77	77	77	77	78	78	1.2987
Israel	77	77	78	78	78	78	1.2987
Uk	76	77	77	77	77	77	1.3158
US	76	77	77	76	77	77	1.3158
Oman	70	71	71	71	72	71	1.4286
Algeria	68	68	69	69	68	69	1.4706
Brazil	67	67	67	67	68	68	1.4925
Maldives	63	64	65	65	63	64	1.5873
Mauritania	52	53	53	53	51	53	1.9231
Guinea-Bissau	45	45	44	44	46	46	2.2222
France	77	77	79	78	79	79	2.5974
Norway	77	77	78	78	78	79	2.5974
Germany	76	77	77	77	77	78	2.6316
Estonia	69	69	69	69	70	71	2.8986
Lebanon	69	69	70	70	67	71	2.8986
Peru	67	67	68	68	67	69	2.9851
Egypt	65	65	66	66	65	67	3.0769
Viet Nam	66	67	67	67	67	69	4.5455
Nepal	55	56	57	57	57	58	5.4545
Mongolia	65	65	66	71	70	71	9.2308
Slovakia	71	71	71	73	72	79	11.268
Yemen	51	52	58	57	58	60	17.647
Gambia	46	46	47	47	57	57	23.913

Infant mortality rate

	1995	1996	1997	1998	1999	2000	% CHANGE
Norway	8	7	5.5	5	4	4	-50
Peru	61	60	46	45	38	32	-47.54
Oman	27	26	25	25	20	15	-44.44
Estonia	16	16	12	19	14	9	-43.75
Belarus	17	17	15	23	16	10	-41.18
Sweden	5	5	5	5	4	3	-40
Guinea-Bissau	207	132	133	130	129	128	-38.16
Egypt	61	58	56	51	44	38	-37.7
Israel	8	8	7	8	6	5	-37.5
Gambia	127	125	123	112	96	81	-36.22
Brazil	56	55	43	42	39	37	-33.93
Germany	6	6	6	5	4	4	-33.33
Malaysia	12	12	11	11	9	8	-33.33
Slovakia	12	12	13	11	9	8	-33.33
Maldives	54	52	50	50	43	37	-31.48
Austria	7	6	6	6	5	5	-28.57
Canada	7	6	6	6	5	5	-28.57
Denmark	7	7	7	7	6	5	-28.57
France	7	7	7	6	5	5	-28.57
Yemen	114	112	109	80	83	86	-24.56
Costa Rica	13	13	12	12	11	10	-23.08
Nepal	93	90	83	83	77	72	-22.58
Viet Nam	40	39	38	38	34	31	-22.5
Uganda	113	112	180	107	98	89	-21.24
russian fed.	20	20	19	18	17	16	-20
Congo	84	83	91	90	79	68	-19.05
Albania	28	27	32	30	26	23	-17.86
Australia	6	6	6	6	5	5	-16.67
Belgium	6	6	7	7	6	5	-16.67
Mali	154	152	150	118	124	131	-14.94
Algeria	49	47	52	44	43	42	-14.29
Uk	7	7	6	7	6	6	-14.29
Lebanon	31	30	79	29	28	27	-12.9
US	8	7	7	7	7	7	-12.5
Chad	117	115	116	112	112	112	-4.274
South Africa	50	49	68	55	52	49	-2
Bulgaria	14	14	16	17	15	14	0
Guyana	45	44	59	58	51	45	0
India	77	75	73	72	74	77	0
Namibia	56	55	98	65	60	56	0
Niger	119	117	115	115	118	122	2.521
Rwanda	108	107	126	124	117	111	2.7778
Mongolia	55	54	53	51	54	57	3.6364
Pakistan	82	78	75	74	80	86	4.878
Belize	31	30	30	29	31	33	6.4516
Zimbabwe	66	66	69	65	68	71	7.5758
Mauritania	96	94	93	92	98	105	9.375
Haiti	82	80	84	68	80	92	12.195
Papua New Guinea	65	64	62	61	68	75	15.385
Burundi	99	98	116	119	117	116	17.172
Kazakhstan	27	28	35	35	34	33	22.222
Swaziland	70	68	66	65	75	86	22.857
Côte d'Ivoire	90	89	87	87	100	113	25.556
Cameroon	59	57	59	74	82	91	54.237
Kyrgyzstan	33	33	40	40	46	52	57.576
soloman is.	25	24	27	33	44	65	160

Under 5 mortality rate	1995	1996	1997	1998	1999	2000	% CHANGE
Oman	34	32	31	23	19	15	-55.88
Viet Nam	59	56	51	40	35	30	-49.15
Norway	9	9	6	5	5	5	-44.44
Brazil	70	69	45	42	40	39	-44.29
Peru	73	71	60	51	46	42	-42.47
Estonia	19	19	18	14	13	11	-42.11
Malaysia	23	22	21	17	16	14	-39.13
Belarus	19	19	19	15	14	12	-36.84
Albania	39	38	49	37	31	25	-35.9
Gambia	193	190	185	156	142	128	-33.68
Sweden	6	6	6	5	4	4	-33.33
Egypt	73	70	66	57	53	49	-32.88
Israel	10	9	9	8	7	7	-30
Germany	7	7	7	6	5	5	-28.57
Slovakia	14	14	13	11	11	10	-28.57
Namibia	94	91	68	68	69	69	-26.6
Yemen	159	155	81	99	108	117	-26.42
Australia	8	8	8	7	6	6	-25
Austria	8	8	7	6	6	6	-25
Canada	8	8	7	6	6	6	-25
Denmark	8	8	8	7	6	6	-25
Uk	8	8	7	6	6	6	-25
Nepal	126	122	108	101	98	95	-24.6
russian fed.	26	27	36	28	24	20	-23.08
France	9	9	8	7	7	7	-22.22
Algeria	56	54	56	50	47	44	-21.43
Congo	134	133	129	118	113	108	-19.4
South Africa	76	73	68	65	64	63	-17.11
Uganda	174	172	180	162	154	145	-16.67
Maldives	71	68	65	62	61	60	-15.49
Belgium	7	7	7	6	6	6	-14.29
Mauritania	145	142	137	131	128	125	-13.79
Lebanon	37	36	33	32	32	32	-13.51
US	10	9	9	9	9	9	-10
India	102	99	90	92	93	94	-7.843
Costa Rica	15	14	14	14	14	14	-6.667
Bulgaria	17	18	16	16	16	16	-5.882
Mongolia	69	68	69	67	66	65	-5.797
Pakistan	107	104	99	103	106	108	0.9346
Guinea-Bissau	207	203	195	205	210	215	3.8647
Belize	38	37	36	38	40	41	7.8947
Guyana	63	60	71	70	70	70	11.111
Papua New Guinea	84	82	80	87	91	95	13.095
Chad	175	172	167	183	191	200	14.286
Zimbabwe	102	103	108	112	114	117	14.706
Haiti	107	104	109	117	121	125	16.822
Mali	188	184	178	201	212	224	19.149
Rwanda	162	161	197	200	201	203	25.309
Burundi	146	143	167	178	184	190	30.137
Cameroon	113	109	104	127	139	151	33.628
Côte d'Ivoire	138	137	128	158	173	188	36.232
Swaziland	103	99	95	118	130	142	37.864
Niger	186	182	176	223	246	270	45.161
Kyrgyzstan	40	39	46	58	64	70	75
soloman is.	30	29	27	43	52	60	100
Kazakhstan	31	31	39	56	65	73	135.48

Per capita total expenditure on health in international $

	1995	1996	1997	1998	1999	2000	% CHANGE
Congo	39	31	30	39	31	25	-35.9
Kazakhstan	268	251	275	225	212	211	-21.27
Bulgaria	241	191	204	192	196	198	-17.84
Algeria	158	149	146	163	162	142	-10.13
Burundi	17	14	12	14	13	16	-5.882
Rwanda	42	46	44	39	41	40	-4.762
Haiti	56	51	51	53	52	54	-3.571
Kyrgyzstan	150	138	147	157	147	145	-3.333
nambibia	373	344	353	366	362	366	-1.877
Guinea-Bissau	28	35	33	24	26	28	0
Oman	431	422	419	484	440	448	3.9443
Estonia	531	481	483	487	541	556	4.7081
Chad	18	19	19	19	18	19	5.5556
soloman is.	89	89	95	106	110	97	8.9888
russian fed.	369	355	390	382	379	405	9.7561
Niger	20	21	21	23	22	22	10
Zimbabwe	155	174	225	279	197	171	10.323
Pakistan	68	67	68	69	72	76	11.765
Côte d'Ivoire	40	42	43	44	44	45	12.5
Yemen	62	54	60	69	68	70	12.903
Slovakia	596	695	608	641	649	690	15.772
France	1970	1985	2032	2094	2211	2335	18.528
Austria	1831	1936	1869	1965	2063	2171	18.569
South Africa	557	632	637	620	638	663	19.031
Belgium	1900	1981	2011	2006	2142	2269	19.421
Cameroon	46	48	50	49	52	55	19.565
Canada	2114	2092	2184	2287	2428	2534	19.868
Peru	197	200	212	220	236	238	20.812
Germany	2264	2341	2466	2520	2618	2754	21.643
US	3621	3762	3905	4068	4252	4499	24.247
Costa Rica	385	378	403	445	466	481	24.935
Australia	1765	1855	1951	2059	2141	2213	25.382
Norway	1865	2025	2193	2441	2558	2373	27.239
Gambia	36	34	34	39	45	46	27.778
Denmark	1882	2009	2106	2247	2364	2428	29.012
Sweden	1622	1714	1767	1746	2010	2097	29.285
Nepal	51	54	60	63	63	66	29.412
Lebanon	537	560	604	590	684	696	29.609
India	54	60	65	64	71	71	31.481
Israel	1777	1921	1941	1966	2188	2338	31.57
Brazil	476	503	531	533	566	631	32.563
Uganda	27	27	29	32	36	36	33.333
Uk	1315	1422	1482	1530	1672	1774	34.905
Guyana	146	155	177	175	189	197	34.932
Egypt	100	110	121	127	133	138	38
Papua New Guinea	105	106	118	135	153	147	40
Malaysia	166	192	201	199	213	234	40.964
Swaziland	145	177	158	179	195	210	44.828
Albania	89	108	91	104	117	129	44.944
Belize	188	184	207	223	254	273	45.213
Belarus	290	297	380	363	405	430	48.276
Mauritania	33	35	36	43	49	52	57.576
Maldives	141	163	180	190	219	254	80.142
Mali	17	18	24	26	29	32	88.235
Viet Nam	68	87	93	104	128	129	89.706
Mongolia	63	80	83	105	109	120	90.476

Out of pocket expenditure as % of total expenditure on health

	1995	1996	1997	1998	1999	2000	% CHANGE
Slovakia	17.9	18.8	8.3	8.4	10.6	10.4	-41.9
Zimbabwe	30.9	30.1	27.4	33.2	23	22.2	-28.16
Rwanda	38.1	37.5	38.3	32.6	28.9	29.5	-22.57
Mauritania	25.5	24	26.7	27.2	24.1	20.7	-18.82
Oman	10	9.8	10.6	11.1	10.2	8.4	-16
Algeria	20.7	18.8	19.7	19.3	18.3	17.4	-15.94
Yemen	70.8	63.8	62.3	57.3	60.9	61.1	-13.7
Peru	34.6	31.7	32.3	32	30.8	30.9	-10.69
Burundi	52.1	47	48.5	47.6	47.3	46.9	-9.981
Guinea-Bissau	37.9	36.1	36	34.9	34.2	34.6	-8.707
France	11.1	10.6	10.5	10.4	10.3	10.2	-8.108
Congo	31.9	31.8	35.4	43.7	32.7	29.8	-6.583
Niger	50.8	49.4	49.2	47.5	46.6	47.5	-6.496
Malaysia	43.9	41.7	42.4	42.3	40.2	41.2	-6.15
Norway	15.2	15.3	15.2	14.8	14.3	14.3	-5.921
Cameroon	70.4	70.3	69.7	68.7	67	66.3	-5.824
Belize	57.8	59.1	57.1	54.1	55.2	54.5	-5.709
Gambia	18.6	18.6	18.2	17.9	17.1	17.6	-5.376
Uganda	36.2	34.9	32.3	33.5	32.9	34.5	-4.696
Nepal	67	67.3	63.1	61.3	64.4	64	-4.478
Uk	10.9	11	10.7	11	10.7	10.6	-2.752
Egypt	51	50.4	49.5	49.5	49.3	49.6	-2.745
Chad	20.7	20	20.7	21.4	21.4	20.2	-2.415
India	83.8	84.4	84.3	81.6	82.1	82.2	-1.909
Canada	15.8	16.1	16.8	16.2	16.1	15.5	-1.899
Guyana	17.6	17.5	16.5	16.6	16	17.3	-1.705
Brazil	39	40.9	37.8	37.5	38.3	38.5	-1.282
Denmark	16.3	16.2	16.3	16.6	16.2	16.4	0.6135
Lebanon	58.1	57.9	58.5	59.6	59.3	58.6	0.8606
US	15.1	14.9	15.1	15.5	15.5	15.3	1.3245
South Africa	12.3	11.3	10.6	12.6	12.5	12.6	2.439
Maldives	16.2	15.5	18.1	18.2	17.5	16.6	2.4691
Pakistan	75.2	77	77.1	76.4	78.1	77.1	2.5266
Swaziland	27.2	27	28.4	28	30.1	27.9	2.5735
Costa Rica	26.6	27.6	28.4	28.9	26.8	27.5	3.3835
Australia	15.9	16.5	16	18.4	17.6	16.8	5.6604
Germany	10	10.1	10.8	11.2	10.9	10.6	6
Israel	22.2	21.4	21.3	23	22.3	24.1	8.5586
Mongolia	19.8	27.4	27.4	25.8	24.8	21.9	10.606
Belarus	15.2	15.1	12.5	14.8	17.5	17.2	13.158
Mali	42.3	43.6	48.7	46.7	46.6	48.3	14.184
Haiti	18.7	20.3	20.8	20.1	21.2	22	17.647
Belgium	13.4	13.5	13.7	13.9	13.6	16	19.403
Côte d'Ivoire	45.8	49.3	50.3	50	55.5	55	20.087
Albania	19.6	17.8	20.2	21.1	21.2	23.8	21.429
Namibia	5.3	5.9	6.2	6	6.2	6.5	22.642
Bulgaria	18.1	19.2	18.9	20.6	21.1	22.4	23.757
Viet Nam	55.2	60.3	63.5	65.6	70.1	68.7	24.457
Austria	14.6	15.2	17.3	16.8	18.2	18.6	27.397
Papua New Guinea	7.6	9.1	9.3	7.9	8.4	9.8	28.947
Kazakhstan	18.2	23.7	23.6	29.4	29.1	26.8	47.253
Sweden	14.8	15.2	15.7	16.2	22.2	22.7	53.378
russian fed.	15.2	17.4	21.1	25.1	29.9	23.4	53.947
Estonia	8.6	10	11.3	13.2	14	19.7	129.07
Kyrgyzstan	11.9	19.2	20.3	28.1	33.4	38.3	221.85
soloman is.	0.4	0.4	0.3	0.3	0.2	3.2	700

Prevalence of tuberculosis (per 100 000 population)

	1995	1996	1997	1998	1999	2000	% CHANGE
Lebanon	35.1	41.7	35.4	32.4	20.9	19.8	-43.59
Oman	21.6	14.9	14.8	13.5	14.3	12.5	-42.13
Mongolia	485.8	338.3	342.2	303.4	273.5	285.3	-41.27
Nepal	524.3	499.4	474.7	449.4	362.3	309.8	-40.91
Slovakia	50.7	44.6	41.2	36.4	33.9	30.9	-39.05
soloman is.	459	357.5	334.3	322.9	307.8	288.9	-37.06
Costa Rica	29.8	28.3	27	26.3	23.6	19.2	-35.57
US	6.2	5.7	5.2	4.9	4.5	4.2	-32.26
Germany	12.6	11.9	11.3	10.6	9.9	8.7	-30.95
Namibia	767.2	451.4	467.1	484	514.4	539.6	-29.67
Belize	73.6	51.2	53.4	70.8	72.8	51.9	-29.48
Guinea-Bissau	404.2	404.7	402.9	403.4	406.4	286.5	-29.12
Yemen	234.5	226.9	206.1	194.8	177.8	167.2	-28.7
Norway	6.8	6.5	6.1	5.6	5.3	4.9	-27.94
Egypt	9.7	8.9	8.4	8	7.5	7	-27.84
Viet Nam	346.4	312.8	273.9	262.8	255.5	251.5	-27.4
Canada	5.9	5.6	5.3	5	4.7	4.4	-25.42
Israel	9.6	9.5	9.1	8.2	7.9	7.2	-25
Austria	14.3	13.6	12.9	12.2	11.5	10.8	-24.48
Peru	359.2	349.1	324.5	298.4	289.9	274.8	-23.5
Sweden	5	4.7	4.3	4.3	4.2	4	-20
Haiti	621.9	605.6	588.5	563.6	537.7	518.1	-16.69
Belgium	14.3	13	13	12.1	12.1	12.1	-15.38
Brazil	120.3	116.8	113.5	109	105.8	102.2	-15.05
India	533.2	529.5	519.8	507.3	495.4	457.3	-14.23
France	83.3	87.2	96.8	100	103.8	71.5	-14.17
Papua New Guinea	722.4	681.1	715.7	633.2	654.3	637.1	-11.81
Uganda	574.9	574.1	450.9	468.6	463	509	-11.46
Estonia	47.2	55.5	51.1	48.8	45.4	41.9	-11.23
South Africa	796.8	816.2	817.1	798.5	670.8	708	-11.14
Niger	320.8	325	298.2	289.1	290.5	288	-10.22
Australia	7	7.1	6.7	6.5	6.2	6.3	-10
Malaysia	154.2	150.5	178.4	176.1	173.8	139.1	-9.792
Albania	42.5	41.9	44.2	43.3	42.4	39.5	-7.059
Mali	618.3	607.4	600.5	598.4	597.2	597.4	-3.38
Uk	9.3	9.4	9.3	9.2	9.1	9	-3.226
Pakistan	423.7	422.9	422.9	417.4	422.9	416.1	-1.794
Maldives	89	86.9	98.5	84.5	88.3	89.6	0.6742
Congo	323.6	510	549.6	443.4	622.4	343.2	6.0569
Mauritania	590	619.9	613.6	618.3	628.2	638.4	8.2034
Bulgaria	57.4	59.2	65	68	67.8	64.2	11.847
Zimbabwe	571.7	676.6	770.1	572.8	599.9	648.8	13.486
Algeria	42.1	43.2	44.4	45.7	46.9	48.2	14.489
Cameroon	240	251.5	270.7	275.6	277.3	277.9	15.792
Burundi	387.6	415.8	422.5	510.1	471.6	499	28.741
Chad	339.4	394.2	458.6	483.7	423.9	443.4	30.642
Kyrgyzstan	118.1	142.1	165.9	148.3	146.8	156.9	32.854
Belarus	82.6	91.7	99.3	110.8	114.5	111.2	34.625
Côte d'Ivoire	423	451.6	484.5	514.2	546.9	600.6	41.986
russian fed.	132.7	152.8	164.4	180.6	182.7	190.2	43.331
Rwanda	384.6	417.6	442.1	466.2	508	562.9	46.36
Gambia	344.6	327.9	325.4	313.7	500.4	505.4	46.663
Guyana	98.7	106.8	113.8	126.4	137.4	147.1	49.037
Kazakhstan	94.8	110.9	137.4	166.4	138.9	145.2	53.165
Swaziland	610.3	688.1	787.6	887.6	1036	1191.5	95.232

Out of pocket expenditure as % of private expenditure

	1995	1996	1997	1998	1999	2000	% CHANGE
Uk	54.925	54.85	54.7	55	55.3	17	-69.05
Zimbabwe	47.225	46.45	44.9	48	52.2	21	-55.53
France	42.45	42.7	43.2	42.2	42.4	32	-24.62
Gambia	100	100	100	100	100	86.5	-13.5
Uganda	55.55	55.5	55.4	55.6	53.4	50	-9.991
Cameroon	85.875	86.25	87	85.5	84.1	81.9	-4.629
Brazil	66.9	66.9	66.9	66.9	67.1	64.9	-2.99
Rwanda	62.125	62.95	64.6	61.3	66.1	60.3	-2.938
Malaysia	74.025	74.55	75.6	73.5	72.4	72.4	-2.195
Papua New Guinea	83.775	83.65	83.4	83.9	83.3	82	-2.119
Canada	55.4	55.6	56	55.2	55.3	54.3	-1.986
Costa Rica	92.025	92.05	92.1	92	90.4	90.9	-1.222
Estonia	88.825	88.75	88.6	88.9	90	88	-0.929
Nepal	93.9	94	94.2	93.8	93.3	93.2	-0.745
Mali	73.95	74	74.1	73.9	73.4	73.4	-0.744
Algeria	91.675	91.75	91.9	91.6	92	91.1	-0.627
Belarus	100	100	100	100	100	99.6	-0.4
Belize	100	100	100	100	100	99.6	-0.4
Bulgaria	100	100	100	100	100	99.6	-0.4
Germany	100	100	100	100	100	99.6	-0.4
Sweden	100	100	100	100	100	99.67	-0.33
Guyana	100	100	100	100	100	99.8	-0.2
Israel	100	100	100	100	100	99.87	-0.13
Lebanon	100	100	100	100	100	99.88	-0.12
Burundi	100	100	100	100	100	99.9	-0.1
India	100	100	100	100	100	99.9	-0.1
Swaziland	100	100	100	100	100	99.95	-0.05
Slovakia	100	100	100	100	100	99.97	-0.03
Maldives	100	100	100	100	100	99.98	-0.02
Namibia	100	100	100	100	100	99.98	-0.02
Pakistan	100	100	100	100	100	99.98	-0.02
Haiti	100	100	100	100	100	99.99	-0.01
Norway	96.675	96.65	96.6	96.7	96.8	97	0.3362
Côte d'Ivoire	91.575	91.55	91.5	91.6	91.9	92	0.4641
Viet Nam	87.4	87.1	86.5	87.7	87.6	87.9	0.5721
Congo	91.15	90.8	90.1	91.5	91.6	91.8	0.7131
Oman	43.15	44.6	47.5	41.7	42.9	43.6	1.0429
Mauritania	74.3	74.3	74.3	74.3	74.1	75.2	1.2113
Chad	80.55	80.5	80.4	80.6	82	81.6	1.3035
Kyrgyzstan	93.525	93.65	93.9	93.4	92.8	94.8	1.3633
russian fed.	85.1	85	84.8	85.2	84.4	86.7	1.8801
Niger	83.225	83.05	82.7	83.4	85.4	85	2.1328
Yemen	96.35	94.5	90.8	98.2	97	98.9	2.6466
soloman is.	48	47.7	47.1	48.3	49.2	49.9	3.9583
Austria	58.875	59.05	59.4	58.7	60.7	61.3	4.1189
Albania	62.175	63.15	65.1	61.2	63.3	65	4.5436
Guinea-Bissau	43.3	43.3	43.3	43.3	45.3	45.3	4.6189
Peru	81.275	80.85	80	81.7	81.7	85.2	4.8293
Denmark	81.5	78.1	71.3	84.9	84.7	86	5.5215
Kazakhstan	81.275	81.45	81.8	81.1	81.2	86	5.8136
Australia	56.625	55.65	53.7	57.6	59.3	60.4	6.6667
Belgium	50.15	49.7	48.8	50.6	49.6	58.4	16.451
Mongolia	18.875	19.65	21.2	18.1	18.7	22.2	17.616
Egypt	43.075	43.05	43	43.1	42.6	52.2	21.184
US	27.3	27.4	27.6	27.2	26.5	61.2	124.18
South Africa	21.775	21.75	21.7	21.8	22.1	78.3	259.59

Per capita government expenditure on health at averege exchange rate US$

	1995	1996	1997	1998	1999	2000	% CHANGE
Kyrgyzstan	23	21	19	17	11	10	-56.52
Guinea-Bissau	10	8	6	6	7	6	-40
Kazakhstan	51	55	62	47	32	32	-37.25
russian fed.	103	119	122	77	46	66	-35.92
Burundi	3	2	2	2	2	2	-33.33
Côte d'Ivoire	9	9	8	9	7	6	-33.33
South Africa	155	152	148	116	115	108	-30.32
Austria	1801	1756	1430	1497	1460	1305	-27.54
Germany	2449	2430	2089	2075	2042	1819	-25.72
Rwanda	8	8	9	8	8	6	-25
Yemen	9	6	6	6	6	7	-22.22
France	1954	1937	1722	1751	1736	1563	-20.01
Chad	5	6	5	5	5	4	-20
Pakistan	5	4	4	4	4	4	-20
Brazil	136	143	159	154	106	109	-19.85
Gambia	11	10	10	11	9	9	-18.18
Zimbabwe	22	30	40	33	17	18	-18.18
Bulgaria	56	37	43	48	49	46	-17.86
Congo	18	18	15	14	15	15	-16.67
Namibia	372	389	380	324	335	310	-16.67
Belgium	1648	1682	1435	1480	1507	1379	-16.32
Denmark	2335	2378	2171	2242	2295	2061	-11.73
Estonia	188	193	179	188	192	167	-11.17
Sweden	1885	2096	1848	1797	1826	1685	-10.61
Algeria	58	59	55	58	56	53	-8.621
Papua New Guinea	29	29	31	29	28	27	-6.897
Mongolia	16	17	16	15	15	15	-6.25
Belarus	49	66	74	68	56	47	-4.082
Slovakia	196	225	211	215	191	188	-4.082
Viet Nam	5	5	5	5	5	4.99	-0.2
Cameroon	6	6	6	6	6	5.99	-0.167
Haiti	10	10	10	11	12	10	0
Mauritania	11	11	10	10	11	11	0
Uganda	4	4	5	4	5	4	0
Peru	58	61	62	62	60	59	1.7241
soloman is.	35	37	41	36	38	36	2.8571
Norway	2265	2407	2358	2429	2584	2412	6.4901
Oman	228	228	202	195	199	245	7.4561
Australia	1132	1255	1287	1175	1277	1229	8.5689
Malaysia	55	67	63	48	54	60	9.0909
Swaziland	36	41	36	37	38	40	11.111
Canada	1299	1296	1312	1302	1373	1483	14.165
US	1639	1714	1767	1810	1883	1992	21.538
Uk	1138	1179	1223	1324	1405	1415	24.341
Israel	1229	1432	1431	1361	1467	1534	24.817
Guyana	32	35	40	40	37	40	25
Mali	4	4	5	5	5	5	25
Albania	20	21	15	21	26	26	30
Costa Rica	141	134	143	157	169	187	32.624
India	3	3	4	4	4	4	33.333
Nepal	3	3	4	4	3	4	33.333
Egypt	16	18	21	22	24	24	50
Belize	47	44	50	58	66	72	53.191
Lebanon	105	123	140	147	162	164	56.19
Maldives	53	63	68	70	78	84	58.491
Niger	1	1	1	1	2	2	100

Private expenditure as % of total expenditure

	1995	1996	1997	1998	1999	2000	% CHANGE
Slovakia	17.9	18.8	8.3	8.4	10.6	10.4	-41.9
Burkina Faso	39	33.7	31.6	31	28.4	29.3	-24.87
Mauritania	25.5	24	26.7	27.2	24.1	20.7	-18.82
Oman	20.5	19.9	21.2	21.7	20.5	17.1	-16.59
Australia	32.9	33.4	31.5	30.2	28.9	27.6	-16.11
Algeria	21.2	19.2	20.2	19.8	18.7	17.8	-16.04
Yemen	77.7	71.6	69.8	64	67.8	68	-12.48
Burundi	52.1	47	48.5	47.6	47.3	46.9	-9.981
Guinea-Bissau	37.9	36.1	36	34.9	34.2	34.6	-8.707
Peru	44.1	41.7	42.6	42.3	40.4	40.8	-7.483
Rwanda	52.4	50.1	52.1	48.7	46.6	48.7	-7.061
Congo	31.9	31.8	35.4	43.7	32.7	29.8	-6.583
Norway	15.8	15.8	15.7	15.3	14.8	14.8	-6.329
Malaysia	43.9	41.7	42.4	42.3	40.2	41.2	-6.15
Israel	25.6	21.4	21.3	23	22.3	24.1	-5.859
Belize	57.8	59.1	57.1	54.1	55.2	54.5	-5.709
Gambia	18.6	18.6	18.2	17.9	17.1	17.6	-5.376
Namibia	43	49	48.4	48.3	40.8	40.7	-5.349
Cameroon	79.2	79.4	79	78.1	76.2	75.3	-4.924
Mongolia	31	36.9	37.3	34.6	33.5	29.7	-4.194
Nepal	73.6	74	69.4	67.4	71.1	70.7	-3.94
Egypt	56.1	55.4	54.1	54	53.6	53.9	-3.922
Chad	20.7	20	20.7	21.4	21.4	20.2	-2.415
Canada	28.6	29.2	29.8	29.2	29.2	28	-2.098
India	83.8	84.4	84.3	81.6	82.1	82.2	-1.909
Guyana	17.6	17.5	16.5	16.6	16	17.3	-1.705
Costa Rica	31.6	32.8	33.2	33.5	31.3	31.6	0
Lebanon	72	71.6	72.3	72.5	72.5	72.2	0.2778
Niger	54.9	57.2	56.3	55.3	54.6	55.1	0.3643
France	23.9	23.9	23.8	24	23.9	24	0.4184
United States of Am	54.7	54.5	54.8	55.5	55.7	55.7	1.8282
Denmark	17.5	17.6	17.7	18.1	17.8	17.9	2.2857
Maldives	16.2	15.5	18.1	18.2	17.5	16.6	2.4691
Uganda	60.5	56.7	54.8	62	58.1	62	2.4793
Pakistan	75.2	77	77.1	76.4	78.1	77.1	2.5266
Swaziland	27.2	27	28.4	28	30.1	27.9	2.5735
Brazil	57.3	59.6	56.5	56	57.2	59.2	3.3159
Germany	23.3	23.2	24.7	25.2	25.2	24.9	6.867
Austria	28.2	29.4	29.1	28.6	30	30.3	7.4468
Côte d'Ivoire	56.3	58.8	59.1	58.1	63.7	63.1	12.078
South Africa	51.3	53.1	53.9	57.6	57.4	57.8	12.671
Belarus	15.2	15.1	12.5	14.8	17.5	17.2	13.158
Mali	46.9	50.4	54.2	53.5	53.2	54.5	16.205
Zimbabwe	49	45.4	40.9	44	51.1	57.4	17.143
Haiti	43.2	47.7	48.3	50.1	49	50.7	17.361
United Kingdom	16.1	17.1	20.1	20.1	19.8	19	18.012
Bulgaria	18.1	19.2	18.9	20.6	21.1	22.4	23.757
Viet Nam	59.6	65.2	68.8	70.9	75.6	74.2	24.497
Papua New Guinea	8.4	10.1	10.6	9.1	10.1	11.4	35.714
Solomon Islands	3.8	3.8	4.7	4.2	2.7	5.5	44.737
Kazakhstan	18.2	23.7	23.6	29.4	29.1	26.8	47.253
Russian Federation	18.5	21.9	27.1	31.1	35.3	27.5	48.649
Sweden	14.8	15.2	15.7	16.2	22.2	22.7	53.378
Albania	23	32	36.2	36.4	35.8	37.9	64.783
Estonia	8.6	10.2	11.5	13.7	19.6	23.3	170.93
Kyrgyzstan	11.9	19.2	20.3	28.1	33.4	38.3	221.85

average of [Life expectancy at birth(years) (y1)], correlation with

	r
average of x1 (95-C	0.5544
average of x2 (95-C	0.66036
average of x3 (95-C	-0.3529
average of x4 (95-C	-0.0354
average of x5 (95-C	-0.1368

average of [Infant mortality rate(per 1000 live births) (y2)],correlation with

	r
average of x1 (95-C	-0.5176
average of x2 (95-C	-0.6395
average of x3 (95-C	0.44701
average of x4 (95-C	0.04263
average of x5 (95-C	-0.2087

average of [Under 5 mortality rate(per 1000 live births) (y3)],correlation with

	r
average of x1 (95-C	-0.4897
average of x2 (95-C	-0.6045
average of x3 (95-C	0.42523
average of x4 (95-C	0.69215
average of x5 (95-C	0.82259

average of [Prevalence of tuberculosis (per 100 000 population) (y4)],correlation with

	r
average of x1 (95-C	-0.3476
average of x2 (95-C	-0.4734
average of x3 (95-C	0.19601
average of x4 (95-C	-0.0072
average of x5 (95-C	0.02608

Life expectancy at birth(years) (y1), correlation with

	x1 95-00		x2 95-00
Country	**r**	**Country**	**r**
Albania	-0.566722350613973	Costa Rica	-0.9420476006607
Algeria	-0.56591645841811	Cameroon	-0.906804313140
Australia	0.344935114770445	Swaziland	-0.812816585138
Austria	-0.593826518160358	Belize	-0.796576778153
Belarus	0.299501246537875	Pakistan	-0.7355348983984
Belgium	-0.510704445978959	Belarus	-0.7192532512766
Belize	-0.874248873928324	russian fed.	-0.685797929041
Brazil	-0.932050946691968	Côte d'Ivoire	-0.682909384573
Bulgaria	0.0385854084713155	India	-0.6578956543168
Burundi	0.563636363636364	Albania	-0.637783004484
Cameroon	0.65	soloman is.	-0.6110145633511
Canada	0.489389347793477	Papua New Guinea	-0.5694292309322
Chad	0	South Africa	-0.483539560431
Congo	0.118511365784994	Congo	-0.4394892532210
Costa Rica	-0.778813736063329	Zimbabwe	-0.427149480269
Côte d'Ivoire	0.458992546021578	Algeria	-0.419553706006
Denmark	-0.143220922501125	Bulgaria	-0.380792722164
Egypt	0.577714413198828	Guinea-Bissau	-0.335286223160
Estonia	-0.664388831983354	Namibia	-0.3340948818721
France	-0.89529507059433	Niger	-0.315189771249
Gambia	-0.863094683353126	Chad	-0.312799721496
Germany	-0.815545995641205	Mali	-0.311039617967
Guinea-Bissau	0.139572631559771	Mauritania	-0.264772170558
Guyana	-0.462820662577839	Malaysia	-0.2197023919267
Haiti	-0.449617986997636	Uganda	-0.149425026894
India	-0.462910049886276	Denmark	-0.123866966174
Israel	0.581316705402833	Kyrgyzstan	-0.1222857325024
Kazakhstan	0.60325915547287	Guyana	-0.034702836041
Kyrgyzstan	0.983406996586599	Lebanon	-0.0140935510961
Lebanon	0.0681749751121856	Burundi	0.1334825521162
Malaysia	0.303721429456685	Oman	0.1525285128919
Maldives	0.142966349487041	Haiti	0.2065475618588
Mali	0	Maldives	0.2368777431174
Mauritania	-0.462910049886276	USA	0.2782547940290
Mongolia	-0.908295106229247	Slovakia	0.4131037973949
Namibia	0.863778625671283	Canada	0.6337775256829
Nepal	0.707106781186548	Egypt	0.6555203585329
Niger	-0.959403223600247	Peru	0.6605239349013
Norway	0.380035336424842	Viet Nam	0.6926520914834
Oman	-0.452370940624131	Rwanda	0.7004808872445
Pakistan	0	Yemen	0.7092530077199
Papua New Guinea	0.750824060245252	Kazakhstan	0.7426806432289
Peru	0.1	UK	0.7516740345990
russian fed.	-0.194803026102199	France	0.7691045392316
Rwanda	0.387201546331183	Germany	0.7806707258887
Slovakia	-0.529424067902095	Australia	0.8005050197431
soloman is.	-0.0452808652973483	Estonia	0.8014899147288
South Africa	0.956611116880578	Sweden	0.8064812784315
Swaziland	-0.421388617065954	Belgium	0.8141170382529
Sweden	0.213537745879547	Israel	0.8321496235959
Uganda	-0.43994134506406	Austria	0.9004982737360
UK	0.593255462905173	Norway	0.9098722123764
USA	0.472627806845377	Brazil	0.9163355790281
Viet Nam	-0.91350027839114	Mongolia	0.9279202866994
Yemen	-0.5	Gambia	0.9446266816761
Zimbabwe	0.428295610748413	Nepal	0.9934103226355

Life expectancy at birth(years) (y1), correlation with

Country	x3 95-00 r
Kyrgyzstan	-0.953000461766794
Gambia	-0.886122830971561
Norway	-0.87472896817425
Kazakhstan	-0.873429944898938
France	-0.784293552337459
Yemen	-0.752164391081363
Haiti	-0.751842587944844
South Africa	-0.751441810333825
Albania	-0.746642410707088
Namibia	-0.74301045167608
Nepal	-0.736814822735943
Chad	-0.652222019301192
Belarus	-0.607688344781369
Slovakia	-0.594626899805268
Congo	-0.589044711088742
Algeria	-0.573434149910067
Swaziland	-0.561760173747368
Côte d'Ivoire	-0.541244633932171
Egypt	-0.501063020233843
Peru	-0.451734299301307
Guinea-Bissau	-0.430619779509948
Guyana	-0.342798303669055
USA	-0.190975234858101
Oman	-0.185648448780629
Denmark	-0.173237117209725
UK	-0.16317217798026
Lebanon	-0.16118870123532
Brazil	-0.145919671395533
Costa Rica	-0.0834199924647203
Papua New Guinea	-0.0787185868359113
Mongolia	-0.0661981040723127
Mali	-0.0622657801685391
soloman is.	-0.0492800217662677
russian fed.	0.0035590604131339
Pakistan	0.0140847968588534
Australia	0.282145195475752
India	0.315580899534859
Mauritania	0.323902612473886
Canada	0.378374684479862
Maldives	0.383643352037391
Belize	0.431788681546
Bulgaria	0.432688237188464
Zimbabwe	0.506783801138929
Germany	0.508545266373259
Belgium	0.517580720548272
Malaysia	0.550217672381143
Burundi	0.57288727072151
Viet Nam	0.64056408173044
Israel	0.651070007257459
Niger	0.706169898774582
Austria	0.712273957615748
Uganda	0.722341878414598
Rwanda	0.72670072059724
Sweden	0.824134203791931
Estonia	0.919871089551777
Cameroon	0.992794566579433

Country	x4 95-00 r
Brazil	-0.783788968968(
Peru	-0.7369893185287
Albania	-0.6459705615626
Sweden	-0.642808629364:
Israel	-0.6298581677452
soloman is.	-0.6280269148436
Côte d'Ivoire	-0.6272964492734
Gambia	-0.6239155006172
Nepal	-0.6230185844717
Lebanon	-0.6118627623360
Algeria	-0.6049405469741
Germany	-0.5723152031165
Slovakia	-0.5711264373085
South Africa	-0.4731364556665
France	-0.4069748480302
Uganda	-0.3843817333071
UK	-0.3577560396761
Maldives	-0.2934015028487
Estonia	-0.2558328675552
Kyrgyzstan	-0.2452264528186
Denmark	-0.2146419076760
Canada	-0.1057142217903
Bulgaria	-0.0830454798537
Oman	-0.0729962405864
Mauritania	-0.0220720664051
Zimbabwe	-0.0096708867945
Malaysia	0.0168276375585
USA	0.0573365328858
Congo	0.2165418083213
Yemen	0.2205118221838
Papua New Guinea	0.2561325439542
India	0.2890311980690
Niger	0.2956305492965
russian fed.	0.3297153667403
Guyana	0.3630073463994
Kazakhstan	0.3844015719425
Chad	0.3892392012661
Haiti	0.3937632287971
Mongolia	0.4308104809701
Viet Nam	0.4418840248036
Belgium	0.4936888312504
Rwanda	0.5040384783533
Belarus	0.52
Burundi	0.5666282030124
Namibia	0.5997812969083
Norway	0.6433276719212
Swaziland	0.6686583467778
Mali	0.6772528307673
Costa Rica	0.6788255952550
Belize	0.6790880776873
Egypt	0.7610433170812
Australia	0.8260543647208
Guinea-Bissau	0.8555771123177
Cameroon	0.8982022800095
Austria	0.9162970289325
Pakistan	0.9419787384341

Infant mortality rate(per 1000 live births) (y2),correlation with

	x1 95-00		x2 95-00
Country	**r**	**Country**	**r**
Costa Rica	-0.96	Maldives	-0.980175335
Kyrgyzstan	-0.96	Peru	-0.973133466
Maldives	-0.94	Gambia	-0.960094896
Côte d'Ivoire	-0.92	Norway	-0.950379193
Egypt	-0.91	Nepal	-0.948436342
Albania	-0.89	France	-0.943999842
Papua New Guir	-0.83	Sweden	-0.937509661
Israel	-0.78	Costa Rica	-0.936761214
Canada	-0.77	Egypt	-0.934260735
Norway	-0.76	Israel	-0.931751534
Mali	-0.73	Viet Nam	-0.920939516
Cameroon	-0.71	Austria	-0.905843001
USA	-0.63	Malaysia	-0.904042774
UK	-0.62	Germany	-0.901745922
Burundi	-0.6	Yemen	-0.879683272
Nepal	-0.51	Brazil	-0.871313131
India	-0.5	Canada	-0.858313653
Haiti	-0.46	Albania	-0.841699278
Oman	-0.36	Australia	-0.810716081
Australia	-0.34	Denmark	-0.794519521
Zimbabwe	-0.28	russian fed.	-0.791244004
Kazakhstan	-0.21	Mali	-0.772425095
soloman is.	-0.12	UK	-0.721582612
Lebanon	-0.07	Belgium	-0.610839691
Peru	-0.06	USA	-0.600223862
Congo	-0.02	Slovakia	-0.542090441
Bulgaria	0	Estonia	-0.536716107
Mongolia	0	Uganda	-0.495254599
Belgium	0.031	Kazakhstan	-0.494460239
Malaysia	0.133	Belarus	-0.465496576
South Africa	0.217	Burundi	-0.465195387
Algeria	0.24	Bulgaria	-0.351829053
Namibia	0.307	Zimbabwe	-0.303652173
Pakistan	0.309	Rwanda	-0.291121524
Yemen	0.402	Namibia	-0.290379113
Brazil	0.403	India	-0.216646276
Chad	0.416	Algeria	-0.200629598
Swaziland	0.473	Oman	-0.196723814
Rwanda	0.486	Chad	-0.169841555
Belarus	0.502	Niger	-0.14346843
Uganda	0.538	Lebanon	-0.125388829
Belize	0.609	Guinea-Bissau	-0.073046472
Mauritania	0.624	Kyrgyzstan	0.072238045
Guyana	0.639	Mongolia	0.116630733
Sweden	0.656	South Africa	0.1398358
Denmark	0.666	Haiti	0.145856443
Niger	0.68	soloman is.	0.265784674
Slovakia	0.704	Guyana	0.287228265
France	0.743	Papua New Guine	0.551787357
Gambia	0.747	Côte d'Ivoire	0.583474157
Austria	0.786	Belize	0.619529764
Germany	0.796	Congo	0.650332524
Viet Nam	0.806	Pakistan	0.70611868
Estonia	0.808	Mauritania	0.707549138
russian fed.	0.84	Swaziland	0.731204285
Guinea-Bissau	0.872	Cameroon	0.867166413

Infant mortality rate(per 1000 live births) (y2),correlation with

	x3 95-00		x4 95-00
Country	**r**	**Country**	**r**
Cameroon	-0.98	Cameroon	-0.932150667
Sweden	-0.93	Papua New Guine	-0.9163948
Mauritania	-0.92	Swaziland	-0.892738908
Austria	-0.9	Austria	-0.855924163
Zimbabwe	-0.88	Australia	-0.836954598
Viet Nam	-0.83	Belize	-0.836660027
russian fed.	-0.79	Belgium	-0.758840438
Guyana	-0.73	Pakistan	-0.745454545
South Africa	-0.68	Zimbabwe	-0.740250668
Belgium	-0.65	Egypt	-0.710946014
Estonia	-0.63	Chad	-0.702923539
Mongolia	-0.63	Haiti	-0.693393613
Israel	-0.59	Yemen	-0.690557942
Germany	-0.52	Congo	-0.661850413
Mali	-0.49	Peru	-0.651980382
Burundi	-0.49	Norway	-0.643122884
Albania	-0.48	Denmark	-0.574487824
Uganda	-0.47	Viet Nam	-0.55990091
Chad	-0.37	India	-0.553398591
Belarus	-0.33	russian fed.	-0.497736813
USA	-0.27	Guinea-Bissau	-0.362653101
Australia	-0.27	South Africa	-0.326200479
Belize	-0.2	Burundi	-0.263080556
Lebanon	-0.16	Albania	-0.219774761
Maldives	-0.12	USA	-0.196399245
Rwanda	-0.08	Oman	0.15877593
Niger	-0.08	Kazakhstan	0.212649144
Pakistan	-0.04	Lebanon	0.247406934
Denmark	6E-15	Namibia	0.26578099
Costa Rica	0.006	Rwanda	0.298093293
Bulgaria	0.04	Guyana	0.384122939
Canada	0.173	Kyrgyzstan	0.386015816
Swaziland	0.19	Bulgaria	0.387298335
India	0.206	Estonia	0.417239394
Namibia	0.249	UK	0.445056003
Slovakia	0.291	Brazil	0.450865834
Haiti	0.467	Algeria	0.475718714
Papua New Gui	0.51	Uganda	0.502099781
Nepal	0.563	Canada	0.51663504
Congo	0.696	Germany	0.581318359
Egypt	0.699	France	0.615601153
Brazil	0.701	Mali	0.621818786
Oman	0.71	Mongolia	0.625956481
Malaysia	0.725	Niger	0.636374622
Peru	0.74	Slovakia	0.715195375
France	0.755	Belarus	0.742391432
Côte d'Ivoire	0.758	Malaysia	0.759123186
Algeria	0.766	Nepal	0.770180789
Yemen	0.791	Israel	0.774596669
Gambia	0.837	Gambia	0.783297762
Kazakhstan	0.853	Mauritania	0.800153105
Guinea-Bissau	0.856	Costa Rica	0.801126242
soloman is.	0.859	Maldives	0.815435506
Norway	0.864	Sweden	0.878310066
Kyrgyzstan	0.935	soloman is.	0.878349257
UK	0.954	Côte d'Ivoire	0.952910855

Under 5 mortality rate(per 1000 live births) (y3), correlation with

Country	x1 95-00 r
Albania	-0.9711
Kyrgyzstan	-0.9636
Maldives	-0.95893
Egypt	-0.95275
Lebanon	-0.94917
UK	-0.94333
India	-0.93413
Papua New Guinea	-0.91342
Kazakhstan	-0.87151
Israel	-0.78625
Côte d'Ivoire	-0.7816
Cameroon	-0.71991
Chad	-0.71013
USA	-0.63373
Norway	-0.61813
Canada	-0.60267
Nepal	-0.59255
Burundi	-0.54575
Zimbabwe	-0.35826
Bulgaria	-0.35773
Costa Rica	-0.34659
soloman is.	-0.2942
Rwanda	-0.2192
Australia	-0.19284
Peru	-0.08804
Oman	-0.04898
Guinea-Bissau	0.058435
Mauritania	0.06482
Uganda	0.145679
Brazil	0.291977
Swaziland	0.340347
Malaysia	0.373834
Pakistan	0.374415
Belarus	0.467999
Estonia	0.487026
Denmark	0.491576
Haiti	0.497988
Mali	0.516149
Slovakia	0.522065
Algeria	0.576034
Yemen	0.607339
Belgium	0.609251
Viet Nam	0.626693
Gambia	0.642015
Namibia	0.65092
russian fed.	0.688837
Sweden	0.6921
Mongolia	0.7
Congo	0.743897
Germany	0.796359
Guyana	0.82181
France	0.855176
Austria	0.872128
Belize	0.883655
Niger	0.883756
South Africa	0.918568

Country	x2 95-00 r
Nepal	-0.99309
Peru	-0.98179
Egypt	-0.96884
Mauritania	-0.96831
Viet Nam	-0.96572
Gambia	-0.95691
Israel	-0.94362
Denmark	-0.93796
Maldives	-0.93767
Australia	-0.93766
Mongolia	-0.93514
Canada	-0.93348
Germany	-0.92843
UK	-0.92275
Norway	-0.91281
Uganda	-0.9093
Sweden	-0.90572
Belgium	-0.90396
Kazakhstan	-0.90271
France	-0.89692
Malaysia	-0.89374
Albania	-0.89285
Lebanon	-0.83447
Belarus	-0.82522
Austria	-0.80036
Brazil	-0.79838
South Africa	-0.79029
India	-0.74929
Rwanda	-0.64436
Estonia	-0.64229
USA	-0.60022
Guinea-Bissau	-0.55671
Oman	-0.54234
Costa Rica	-0.46456
Yemen	-0.45307
Slovakia	-0.3734
Burundi	-0.19761
russian fed.	-0.15134
Chad	-0.11269
Namibia	-0.08272
Algeria	0.039211
Bulgaria	0.151976
Haiti	0.157431
Kyrgyzstan	0.25508
Zimbabwe	0.33291
Congo	0.463644
Pakistan	0.585212
soloman is.	0.632026
Niger	0.662351
Côte d'Ivoire	0.743251
Cameroon	0.8048
Guyana	0.825534
Mali	0.829567
Belize	0.854922
Papua New Guinea	0.857318
Swaziland	0.869266

Under 5 mortality rate(per 1000 live births) (y3), correlation with

Country	x3 95-00 r
Cameroon	-0.95223
Austria	-0.95205
Viet Nam	-0.93288
Estonia	-0.93267
Sweden	-0.92475
Namibia	-0.82031
Niger	-0.8137
Belarus	-0.77737
Lebanon	-0.76182
Guyana	-0.75188
Belgium	-0.74251
Rwanda	-0.71406
Belize	-0.70631
Israel	-0.70254
Zimbabwe	-0.64129
Albania	-0.63938
Australia	-0.58498
Costa Rica	-0.56788
Bulgaria	-0.54586
Burundi	-0.538
Maldives	-0.52613
Germany	-0.50858
Guinea-Bissau	-0.38211
South Africa	-0.34366
Denmark	-0.3018
USA	-0.26968
russian fed.	-0.2239
Pakistan	-0.17345
Congo	-0.01538
Uganda	0.045797
Canada	0.129464
Chad	0.161766
Mongolia	0.165657
Papua New Guinea	0.170482
Mali	0.381342
India	0.407089
Oman	0.412369
Mauritania	0.440189
Swaziland	0.451171
UK	0.638052
soloman is.	0.669794
Slovakia	0.694624
Haiti	0.708436
Yemen	0.724223
Malaysia	0.738471
Peru	0.754359
Nepal	0.759661
Brazil	0.771497
Kazakhstan	0.783717
Egypt	0.788899
Norway	0.789082
Côte d'Ivoire	0.805686
France	0.866167
Algeria	0.876396
Gambia	0.888746
Kyrgyzstan	0.964949

Country	x4 95-00 r
Cameroon	-0.96117
Mali	-0.94612
Australia	-0.92082
Denmark	-0.77432
Congo	-0.74332
Belgium	-0.72224
Papua New Guinea	-0.71583
Austria	-0.71281
Swaziland	-0.71219
Belize	-0.70858
Niger	-0.68958
Mongolia	-0.67843
Kazakhstan	-0.65593
Viet Nam	-0.65457
Haiti	-0.65122
Egypt	-0.60672
Norway	-0.54767
Burundi	-0.54013
Pakistan	-0.52764
South Africa	-0.50405
Zimbabwe	-0.45585
Rwanda	-0.35159
Guyana	-0.26362
USA	-0.1964
Estonia	-0.03966
Albania	-0.01828
India	0.107417
Kyrgyzstan	0.205805
Yemen	0.210597
Bulgaria	0.29277
Costa Rica	0.296099
Namibia	0.297907
Brazil	0.357726
Lebanon	0.408783
Oman	0.425796
Algeria	0.52686
UK	0.532184
Maldives	0.535632
France	0.552954
Peru	0.570974
Canada	0.587892
Mauritania	0.596493
Israel	0.622832
russian fed.	0.631571
Slovakia	0.634151
Gambia	0.674775
Malaysia	0.676774
Nepal	0.682393
Belarus	0.695608
Germany	0.695608
Sweden	0.695608
Guinea-Bissau	0.763325
Chad	0.862116
Uganda	0.862453
Côte d'Ivoire	0.953838
soloman is.	0.965095

Prevalence of tuberculosis (per 100 000 population) (y4), correlation with

	x1 95-00		x2 95-00
Country	**r**	**Country**	**r**
USA	-0.977658615	Germany	-1
Egypt	-0.976819872	Egypt	-0.99
Costa Rica	-0.955684375	USA	-0.98
UK	-0.918806802	Peru	-0.98
Mali	-0.899059652	Canada	-0.96
Côte d'Ivoire	-0.877410806	Brazil	-0.95
Gambia	-0.854630486	Australia	-0.94
Canada	-0.825702745	Israel	-0.93
Lebanon	-0.80783919	Austria	-0.92
Denmark	-0.797023482	Lebanon	-0.92
Albania	-0.762910885	Viet Nam	-0.91
Algeria	-0.735492455	Costa Rica	-0.91
Uganda	-0.688964858	UK	-0.9
Israel	-0.682091871	Estonia	-0.9
India	-0.667814452	Norway	-0.89
Burundi	-0.627413384	Mongolia	-0.89
Niger	-0.588911924	Mali	-0.88
Kyrgyzstan	-0.520668114	Nepal	-0.87
Haiti	-0.469105729	Sweden	-0.85
russian fed.	-0.457165133	India	-0.83
Malaysia	-0.416137386	Yemen	-0.81
Viet Nam	-0.367023605	Albania	-0.8
soloman is.	-0.355737725	Niger	-0.8
Kazakhstan	-0.342662926	Papua New Guinea	-0.79
Chad	-0.303003539	Belgium	-0.75
Australia	-0.29629696	Pakistan	-0.65
Congo	-0.265837463	soloman is.	-0.64
Papua New Guinea	-0.074519333	Bulgaria	-0.63
Bulgaria	-0.037171619	Kazakhstan	-0.6
Maldives	0.001399984	Uganda	-0.58
Belarus	0.020940732	Rwanda	-0.57
Norway	0.037017611	Slovakia	-0.5
Namibia	0.064478844	South Africa	-0.42
Belize	0.065265162	Oman	-0.36
Mauritania	0.100632777	France	-0.25
France	0.1265769	Congo	-0.2
Peru	0.218279117	Malaysia	-0.14
Swaziland	0.333495626	Algeria	-0.14
Guinea-Bissau	0.362762948	Burundi	-0.13
Cameroon	0.362962397	Kyrgyzstan	-0.1
Slovakia	0.37770137	Maldives	-0.02
Yemen	0.408716193	Belize	-0.01
Mongolia	0.481531723	Zimbabwe	-0
Estonia	0.575928878	Haiti	0.078
Zimbabwe	0.589725819	Guinea-Bissau	0.112
Brazil	0.596301457	Chad	0.637
Pakistan	0.608050753	russian fed.	0.696
Belgium	0.659780747	Namibia	0.735
Guyana	0.683825483	Cameroon	0.816
Sweden	0.687056251	Mauritania	0.839
South Africa	0.747417803	Belarus	0.881
Nepal	0.766451434	Swaziland	0.91
Austria	0.904345379	Gambia	0.918
Germany	0.941719306	Côte d'Ivoire	0.935
Oman	0.960502892	Guyana	0.953
Rwanda	0.97174138	Denmark	0.967

Prevalence of tuberculosis (per 100 000 population) (y4), correlation with

Country	x3 95-00 r
Viet Nam	-0.966769726
Austria	-0.95032563
Rwanda	-0.892345594
Mali	-0.877558467
Haiti	-0.860282726
Algeria	-0.856536799
Israel	-0.828572584
Gambia	-0.802866143
Cameroon	-0.79771446
Sweden	-0.759790899
Estonia	-0.728561796
Namibia	-0.71270774
USA	-0.700292205
Burundi	-0.672412915
Mauritania	-0.622789148
South Africa	-0.611642067
Australia	-0.608111157
Germany	-0.580257299
Lebanon	-0.538032912
Albania	-0.519814436
Mongolia	-0.510405255
Belgium	-0.490224674
Guyana	-0.456088687
soloman is.	-0.411297205
Belize	-0.294043874
Zimbabwe	-0.235559653
Papua New Guinea	-0.164824544
France	-0.132499183
Pakistan	-0.058138231
Malaysia	-0.034352262
Costa Rica	0.002950417
Oman	0.140598085
Congo	0.140849132
Denmark	0.223996786
Canada	0.257744714
Maldives	0.289868731
Chad	0.352035989
Guinea-Bissau	0.359116038
Nepal	0.386347055
Belarus	0.452426431
Brazil	0.471266655
Swaziland	0.556934503
Kyrgyzstan	0.567998539
Bulgaria	0.63763913
India	0.681679188
UK	0.696825745
Yemen	0.711220564
Slovakia	0.733559018
Peru	0.775742101
Niger	0.844476389
Egypt	0.857383516
russian fed.	0.86341082
Kazakhstan	0.882382714
Côte d'Ivoire	0.91784322
Norway	0.926423498
Uganda	0.933297067

Country	x4 95-00 r
Austria	-0.82
Norway	-0.81
Rwanda	-0.73
Swaziland	-0.73
Australia	-0.71
Guyana	-0.67
Gambia	-0.64
Guinea-Bissau	-0.62
Mauritania	-0.61
Egypt	-0.6
USA	-0.59
russian fed.	-0.52
Cameroon	-0.5
soloman is.	-0.49
Yemen	-0.48
South Africa	-0.47
Burundi	-0.47
Algeria	-0.43
Belgium	-0.38
Belarus	-0.37
Mongolia	-0.33
Congo	-0.33
Albania	-0.29
Viet Nam	-0.29
Kazakhstan	-0.25
Zimbabwe	-0.19
Bulgaria	-0.07
Oman	-0.03
Maldives	-0.01
Namibia	-0.01
Estonia	0.048
Chad	0.114
Uganda	0.135
Kyrgyzstan	0.368
Niger	0.397
Denmark	0.418
Belize	0.457
Papua New Guinea	0.464
Mali	0.506
Sweden	0.558
Slovakia	0.582
Peru	0.588
Brazil	0.595
Lebanon	0.623
Haiti	0.665
Canada	0.68
Malaysia	0.686
Israel	0.701
UK	0.714
Pakistan	0.721
Germany	0.741
France	0.758
Costa Rica	0.775
Côte d'Ivoire	0.865
India	0.866
Nepal	0.901

Table showing average value of variables in period 1995-2000

	Y1	Y2	Y3	Y4	y5
Albania	71.08333333	27.66666667	36.5	42.3	33.55
Algeria	68.69166667	46.16666667	51.16666667	45.08333333	19.48333333
Australia	78.475	5.666666667	7.25	6.633333333	30.75
Austria	77.25833333	5.833333333	6.958333333	12.55	29.26666667
Belarus	69.08333333	16.33333333	16.375	101.6833333	15.38333333
Belgium	77.35833333	6.166666667	6.625	12.76666667	56.3
Belize	73.61666667	30.66666667	38.375	62.28333333	57.63333333
Brazil	67.31666667	45.33333333	50.91666667	111.2666667	20.05
Bulgaria	71.11666667	15	16.5	63.6	32.16666667
Burundi	45.99166667	110.8333333	168.125	451.1	48.23333333
Cameroon	54.35833333	70.33333333	123.9583333	265.5	77.86666667
Canada	78.63333333	5.833333333	6.958333333	5.15	29
Chad	48.575	114	181.5416667	423.8666667	20.73333333
Congo	51.06666667	82.5	122.625	465.3666667	34.21666667
Costa Rica	76.69166667	11.83333333	14.16666667	25.7	32.33333333
Côte d'Ivoire	48.775	94.33333333	153.6666667	503.4666667	59.85
Denmark	75.89166667	6.5	7.25	452.9333333	17.76666667
Egypt	65.79166667	51.33333333	61.45833333	8.25	54.51666667
Estonia	69.46666667	14.33333333	15.70833333	48.31666667	14.48333333
France	78.23333333	6.166666667	7.958333333	90.43333333	23.91666667
Gambia	50.125	110.6666667	165.7916667	386.2333333	18
Germany	76.89166667	5.166666667	6.25	10.83333333	24.41666667
Guinea-Bissau	45.03333333	143.1666667	205.8333333	384.6833333	35.61666667
Guyana	65.60833333	50.33333333	67.45833333	121.7	16.91666667
Haiti	54.875	81	113.8333333	572.5666667	48.16666667
India	61.69166667	74.66666667	95	507.0833333	83.06666667
Israel	77.775	7	8.416666667	8.583333333	22.95
Kazakhstan	70.34166667	28.66666667	49.08333333	132.2666667	25.13333333
Kyrgyzstan	67.53333333	40.66666667	52.83333333	146.35	25.2
Lebanon	69.325	37.33333333	33.79166667	30.88333333	72.18333333
Malaysia	71.15833333	10.5	18.875	162.0166667	41.95
Maldives	63.99166667	47.66666667	64.625	89.46666667	17.01666667
Mali	46.96666667	138.1666667	197.9166667	603.2	52.11666667
Mauritania	52.55833333	96.33333333	134.6666667	618.0666667	24.7
Mongolia	68.16666667	54	67.33333333	338.0833333	33.83333333
Namibia	52.55833333	65	76.54166667	537.2833333	45.03333333
Nepal	56.88333333	83	108.4583333	436.65	71.03333333
Niger	45.95	117.6666667	213.9166667	301.9333333	55.56666667
Norway	77.85833333	5.583333333	6.625	5.866666667	15.36666667
Oman	71.1	23	25.66666667	15.26666667	20.15
Pakistan	63.025	79.16666667	104.5416667	420.9833333	76.81666667
Papua New Guinea	56.88333333	65.83333333	86.625	673.9666667	9.95
Peru	67.83333333	47	57.25	315.9833333	41.98333333
russian fed.	66.84166667	18.33333333	26.83333333	167.2333333	26.9
Rwanda	42.95833333	115.5	187.4166667	463.5666667	49.76666667
Slovakia	72.025	10.83333333	12.20833333	39.61666667	12.4
soloman is.	69.66666667	34.66666667	40.20833333	345.0666667	4.116666667
South Africa	58.05833333	53.83333333	68.29166667	767.9	55.18333333
Swaziland	54.99166667	71.66666667	114.625	866.85	28.1
Sweden	79.10833333	4.5	5.25	4.416666667	17.8
Uganda	42.45	116.5	164.5416667	506.75	59.01666667
UK	77.09166667	6.5	6.958333333	9.216666667	18.7
USA	76.65833333	7.166666667	9.166666667	5.116666667	55.15
Viet Nam	67.18333333	36.66666667	45.29166667	283.8166667	69.05
Yemen	56.13333333	97.33333333	119.8333333	201.2166667	69.81666667
Zimbabwe	47.275	67.5	109.5416667	639.9833333	47.98333333

	X1	X2	X3	X4
Albania	21.5	106.3333333	20.61666667	63.32083333
Algeria	56.5	153.3333333	19.03333333	91.67083333
Australia	1225.833333	1997.333333	16.86666667	57.2125
Austria	1541.5	1972.5	16.78333333	59.67083333
Belarus	60	360.8333333	15.38333333	99.93333333
Belgium	1521.833333	2051.5	14.01666667	51.20833333
Belize	56.16666667	221.5	56.3	99.93333333
Brazil	134.5	540	38.66666667	66.6
Bulgaria	46.5	203.6666667	20.05	99.93333333
Burundi	2.166666667	14.33333333	48.23333333	99.98333333
Cameroon	6.000333333	50	68.73333333	85.10416667
Canada	1344.166667	2273.166667	16.08333333	55.3
Chad	5	18.66666667	20.73333333	80.94166667
Congo	15.83333333	32.5	34.21666667	91.15833333
Costa Rica	155.1666667	426.3333333	27.63333333	91.57916667
Côte d'Ivoire	8	43	50.98333333	91.6875
Denmark	2247	2172.666667	16.33333333	81.08333333
Egypt	20.83333333	121.5	49.88333333	44.50416667
Estonia	184.5	513.1666667	12.8	88.84583333
France	1777.166667	2104.5	10.51666667	40.825
Gambia	10	39	18	97.75
Germany	2150.666667	2493.833333	10.6	99.93333333
Guinea-Bissau	7.166666667	29	35.61666667	43.96666667
Guyana	37.33333333	173.1666667	16.91666667	99.96666667
Haiti	10.5	52.83333333	20.51666667	99.99833333
India	3.666666667	64.16666667	83.06666667	99.98333333
Israel	1409	2021.833333	22.38333333	99.97833333
Kazakhstan	46.5	240.3333333	25.13333333	70.5875
Kyrgyzstan	16.83333333	147.3333333	25.2	93.67916667
Lebanon	140.1666667	611.8333333	58.66666667	99.98
Malaysia	57.83333333	200.8333333	41.95	63.74583333
Maldives	69.33333333	191.1666667	17.01666667	99.99666667
Mali	4.666666667	24.33333333	46.03333333	73.79166667
Mauritania	10.66666667	41.33333333	24.7	65.68333333
Mongolia	15.66666667	93.33333333	24.51666667	28.62083333
Namibia	351.6666667	360.6666667	6.016666667	99.99666667
Nepal	1404.333333	59.5	64.51666667	93.73333333
Niger	1.333333333	21.5	48.5	70.19583333
Norway	216.1666667	2242.5	14.85	96.7375
Oman	4.166666667	440.6666667	10.01666667	43.90833333
Pakistan	272.6666667	70	76.81666667	99.99666667
Papua New Guinea	45	127.3333333	8.683333333	70.00416667
Peru	16	217.1666667	32.05	70.1375
russian fed.	7.833333333	380	22.01666667	71.86666667
Rwanda	225.8333333	42	34.15	52.89583333
Slovakia	204.3333333	646.5	12.4	99.995
soloman is.	37.16666667	97.66666667	0.8	48.36666667
South Africa	132.3333333	624.5	11.98333333	31.2375
Swaziland	38	177.3333333	28.1	99.99166667
Sweden	1856.166667	1826	17.8	99.945
Uganda	4.333333333	31.16666667	34.05	54.24166667
UK	1280.666667	1532.5	10.81666667	48.62916667
USA	1800.833333	4017.833333	15.23333333	32.86666667
Viet Nam	5.002	101.5	63.9	87.36666667
Yemen	6.666666667	63.83333333	62.7	95.95833333
Zimbabwe	26.66666667	200.1666667	27.8	43.29583333

Private expenditure on health as % total expenditure (X5), correlation with

Country	y1(95-00) r
Kyrgyzstan	-0.93606952
South Africa	-0.899429622
Gambia	-0.88487691
Kazakhstan	-0.853434404
Australia	-0.85158571
Haiti	-0.831862967
Chad	-0.81091772
Norway	-0.799870232
Yemen	-0.759687356
Congo	-0.713848214
Belarus	-0.672391241
Denmark	-0.657375735
Nepal	-0.651957928
Belize	-0.561302004
Swaziland	-0.539462655
Egypt	-0.533486281
Côte d'Ivoire	-0.514470154
Brazil	-0.453711953
Albania	-0.416978727
Mongolia	-0.403614897
Zimbabwe	-0.395780968
Guyana	-0.395262655
Slovakia	-0.350019301
Guinea-Bissau	-0.347150911
Papua New Guin	-0.312587383
Peru	-0.262444062
Israel	-0.255560684
Algeria	-0.199340554
Russian Federati	-0.127965522
Lebanon	-0.071124403
France	-0.045037735
Mali	-0.021237909
Oman	0
Pakistan	0.04025486
Mauritania	0.040595018
USA	0.071307403
Uganda	0.097657494
Canada	0.125
Sweden	0.215580699
Burkina Faso	0.36720631
Costa Rica	0.379818766
Maldives	0.533022698
India	0.540296279
Germany	0.547615612
Malaysia	0.554209835
Solomon Islands	0.567069591
Burundi	0.572198951
Rwanda	0.598357917
Niger	0.602197196
Austria	0.629514622
Viet Nam	0.675171588
Namibia	0.692093241
United Kingdom	0.746933207
Bulgaria	0.82381386
Estonia	0.942726994
Cameroon	0.983644336

Country	y2(95-00) r
Cameroon	-0.98002088
Austria	-0.93610291
Sweden	-0.93358441
Mauritania	-0.923842
Bulgaria	-0.83364101
Viet Nam	-0.82935408
Uganda	-0.74045023
Guyana	-0.73298392
Russian Federation	-0.73053588
Germany	-0.73021254
Mongolia	-0.68325056
Estonia	-0.61736615
Mali	-0.61291113
United Kingdom	-0.59955661
France	-0.58549055
Burundi	-0.48689958
Niger	-0.42421874
USA	-0.40588886
Chad	-0.37456949
Burkina Faso	-0.34727747
Denmark	-0.33197
Belarus	-0.33056201
Maldives	-0.12208473
Albania	-0.09673812
Rwanda	-0.07808057
South Africa	-0.07006141
Israel	-0.04742373
Pakistan	-0.03780336
Haiti	-0.02117195
Belize	0.05311034
Lebanon	0.12917746
Canada	0.17149859
Swaziland	0.19014039
India	0.20581852
Slovakia	0.29054842
Costa Rica	0.40394442
Solomon Islands	0.40747874
Namibia	0.4558845
Nepal	0.50724216
Zimbabwe	0.54639409
Brazil	0.56036483
Papua New Guinea	0.59531565
Congo	0.69565152
Malaysia	0.72531206
Peru	0.72901864
Algeria	0.76489906
Kazakhstan	0.77031224
Egypt	0.7809703
Oman	0.78315148
Côte d'Ivoire	0.80546178
Gambia	0.8368707
Yemen	0.83866574
Australia	0.85158571
Guinea-Bissau	0.85610244
Norway	0.89600254
Kyrgyzstan	0.9353343

Country	y3(95-00) r
Cameroon	-0.966859663
South Africa	-0.964700314
Sweden	-0.951097013
Estonia	-0.949411245
Viet Nam	-0.930286386
United Kingdom	-0.835011512
Lebanon	-0.811612454
Bulgaria	-0.772212786
Belarus	-0.749149883
Guyana	-0.740506994
Germany	-0.730212542
Niger	-0.632863325
Uganda	-0.632295735
Denmark	-0.627764821
Rwanda	-0.564774604
Maldives	-0.544878502
Burundi	-0.537689118
Austria	-0.514351448
France	-0.495415084
USA	-0.405888855
Guinea-Bissau	-0.382114576
Costa Rica	-0.379818766
Albania	-0.25276419
Pakistan	-0.136631002
Russian Federati	-0.093140996
Congo	-0.031159398
Namibia	0.120878348
Canada	0.131306433
Chad	0.140661385
Solomon Islands	0.153810267
Israel	0.158503915
Brazil	0.305318714
Papua New Guin	0.380845525
India	0.407088785
Mauritania	0.440188788
Mali	0.443397338
Swaziland	0.448316993
Mongolia	0.515367236
Oman	0.523202395
Zimbabwe	0.5317719
Burkina Faso	0.618790287
Haiti	0.696841112
Malaysia	0.711037184
Nepal	0.72083729
Yemen	0.725848448
Slovakia	0.726161317
Peru	0.748656796
Kazakhstan	0.785152151
Côte d'Ivoire	0.789639852
Norway	0.808327697
Egypt	0.860945658
Algeria	0.871247998
Gambia	0.889632231
Belize	0.930663132
Australia	0.943749674
Kyrgyzstan	0.964948754

Country	y4(95-00) r
Bulgaria	-0.97175816
Viet Nam	-0.95407273
Guinea-Bissau	-0.90834904
Burkina Faso	-0.86120183
Kyrgyzstan	-0.85276329
Algeria	-0.84591342
USA	-0.8206497
Peru	-0.81427445
Austria	-0.78434611
United Kingdom	-0.76798778
Denmark	-0.7420723
Haiti	-0.72784678
Cameroon	-0.71966566
Burundi	-0.67241292
Mongolia	-0.66748268
Brazil	-0.62008336
Maldives	-0.6129026
Swaziland	-0.5963462
Papua New Guinea	-0.58254723
Uganda	-0.56879427
Pakistan	-0.44875893
Sweden	-0.3759899
Israel	-0.29291282
Germany	-0.255394
Estonia	-0.19850273
Albania	-0.12639984
Yemen	-0.01110805
Malaysia	0.13374615
Congo	0.14084913
Solomon Islands	0.20812448
Canada	0.3105295
France	0.31403533
Mauritania	0.31728515
Chad	0.35203599
Costa Rica	0.38762169
Egypt	0.4190108
Belarus	0.45242643
Niger	0.45978146
Oman	0.46486013
Guyana	0.46727539
Kazakhstan	0.58332322
Norway	0.60644768
Lebanon	0.6402152
Namibia	0.66769265
Russian Federation	0.68330044
Slovakia	0.71400333
Belize	0.75047323
Rwanda	0.80021199
Mali	0.80839424
Nepal	0.8302018
India	0.83986044
Gambia	0.8434284
Côte d'Ivoire	0.86496395
South Africa	0.90390764
Australia	0.95867778
Zimbabwe	#DIV/0!