WORKING PAPER NO. 83

OPPORTUNITIES AND RISKS FOR THE POOR IN DEVELOPING COUNTRIES

EUGENIO DÍAZ-BONILLA

JULIE BABINARD

PER PINSTRUP-ANDERSEN

MAY, 2002

INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS
Core-6A, 4th Floor, India Habitat Centre, Lodi Road, New Delhi-110 003

Contents

Foreword

This paper, 'Opportunities and Risks for the Poor in Developing Countries by Eugenio Díaz-Bonilla, Julie Babinard and Per Pinstrup-Andersen', is part of a series of research papers prepared for the Working Group on Health and International Economy of the Commission on Macroeconomics and Health (CMH). The Commission was set up in January, 2000, by the Director General, World Health Organisation, under the Chairmanship of Prof. Jeffrey Sachs. As a member of the CMH and Chairperson of this Working Group, I have had the privilege of commissioning research papers on issues of importance for health and the international economy.

The paper addresses a number of issues and apprehensions regarding health, particularly that of the poor in developing countries, arising from the process of globalisation. In particular, the paper analyses the concern with respect to food security and nutrition as well as new challenges with respect to food safety. The canvas covered in the paper is large and the issues raised are numerous. But I am convinced that these issues need to be discussed and debated so as to help devise ways in which the process of globalisation can be managed to minimise its adverse impact on the poor.

Isher Judge Ahluwalia
Director & Chief Executive
ICRIER

May 2002

I Introduction*

The notion of globalization has attracted enormous interest during the last decade, and is currently at the centre of a heated debate about its possible benefits and costs, particularly for the most vulnerable populations. The differing views about globalization and its consequences are in part related to the complex and multidimensional nature of this phenomenon.

For the health community, globalization offers opportunities but also poses important challenges. Dramatic progress has been made in the area of health over the past 40 years, allowing world life expectancy to increase from about 50 years to around 64 years and infant and child mortality to fall by more than half during the same period. The health status of developing countries has also improved, with life expectancy from 45 to 62 years, and child mortality dropping from 216 to 95 per thousand from 1960 to the end of the 1990s (see Tables 1 and 2). However, improvements have been unequally distributed across regions. Developing countries share a disproportionate burden of avoidable mortality and disability, primarily attributable to preventable infectious diseases, malnutrition, and complications of childbirth. Of the total global disease burden, 92 per cent is concentrated in the low and middle-income countries, and nearly 60 per cent is in China, India, and sub-Saharan Africa.

In addition to the huge disparities that exist between developed and developing regions, there are also marked health inequalities within countries, with the burden of disease disproportionately afflicting the poorest populations. Compared to those who are not poor, those living in poverty are estimated to have a 4.3 times higher probability of death between birth and the age of 5 years, and 2.2 times higher probability of death between the ages of 15 and 39 years. Women who are poor have a 4.8 times higher probability of death between birth and the age of 5 years, and a 4.3 times higher probability of death between the ages of 15 and 59 years (WHO 1999c). Poverty also accounts for differences in child mortality, and indicators of malnutrition, such as stunting (low weight for age), wasting (low weight for height), and being underweight (low weight

* This paper has emerged from a longer paper prepared for the Working Group 4 (WG4) of the Commission on Macroeconomic and Health (CMH), set up by the World Health Organization.

for age), are higher among poor people in almost all countries (World Bank 2001). Overall, the poor not only have shorter lives than the rich, but also a bigger part of their lifetime is affected by disabilities.

As globalization proceeds, a pertinent question is its likely impact on the global health situation, including, in particular, whether it will improve or worsen the health of the poor in developing countries. The channels through which globalization may affect health outcomes are multiple. Will globalization help reduce (or exacerbate) the economic and social inequalities around the world, thereby narrowing (or widening) disparities in the distribution of the global burden of diseases? Is globalization limiting the governments' resources and policy options to confront health problems? Will globalization blur the distinction between national and international health, and would this undermine governments' ability to prevent and control diseases? What are the potential effects of expanded trade in health commodities and services, and the implementation of patents for medicines and other changes in Intellectual Property Rights as agreed in the multilateral negotiations of the World Trade Organization (WTO)? How is globalization changing the relationship between poverty, health, and food security and nutrition issues? What is the impact of globalization on the transnational movements of health risks? Answers to these queries will all have an impact on the global health situation.

Given that globalization is a multifaceted phenomenon, and that health is not a uni-dimensional, univocal term (Hsiao 2000), this paper does not pretend to cover the full range of issues linking globalization and health. Several relevant aspects of that relationship are addressed in other chapters in this book. The presentation is organized as follows. Section II presents different meanings of the notion of globalization, shows indicators for some of the components, and then tries to link globalization changes and health outcomes within a simplified framework to organize the presentation. Five main issues are highlighted, which are then covered in the following sections. Section III looks at the interaction between globalization, economic growth, poverty, and income distribution. Section IV focuses on the possible impact of globalization on the operation of the government in general. Both sections provide the general context for the discussion of globalization and health outcomes. The next section (V) moves to the core issue of the

relationship between globalization and the health system. Because much of this important discussion is covered in detail in other chapters in this book, here only some broad topics are highlighted regarding the possible changes that globalization may trigger on access, coverage, and the quality of health services, infrastructure, and regulations, thereby affecting the way poor individuals are assisted (or not) by those services. Section VI, recognizing the links between health and nutrition, considers possible ways in which globalization may affect food security and nutrition. Section VII looks at some social and environmental forces related to globalization that may lead to health challenges and health risks. While, as indicated, the sections on growth and poverty (III) and governance (IV) intend to provide the general context, the last two discuss factors that interact more directly with health outcomes, contributing to mitigate or exacerbate the risk of disease. The concluding Section VIII presents some policy and institutional responses that seek to reduce the negative and enhance the positive effects of globalization on health.

II What Is Globalization And How It May Affect Health?

II.1 Meaning and indicators of globalization

Globalization has been fueled by important changes in technology generation, adoption, and diffusion, including major advances in communications and transportation. It has been further promoted and accelerated by the end of the Cold War, which eliminated some of the geopolitical barriers to world integration, and by the process of economic deregulation and liberalization in many countries. Another important—and sometimes less appreciated—driver of globalization, is the dramatic increase in world population, which by itself, and separate from technology and policies, is also causing the "densification" of world economic, social, and environmental interactions.

There are at least three general notions of globalization. First, globalization refers to the multiplication and intensification of economic, political, social, and cultural linkages among people, organizations, and countries at the world level. This notion encompasses economic and non-economic components, including larger trade and financial flows;

expanding cross-border communications, international contacts among political groups, non-governmental organizations (NGOs), and other members of the civil society; and increased levels of tourism, among other examples. A second dimension is the tendency toward universal application of economic, institutional, legal, political, and cultural practices. The codification of trade rules under the WTO and its predecessor, the General Agreement on Tariffs and Trade (GATT), is one of many possible economic examples. Non-economic aspects include the spread of democracy, the increase in the number and coverage of environmental treaties, and even the controversial possibility of cultural homogenization in entertainment, food, and health habits. A third meaning of globalization is the emergence of significant spillovers to the rest of the world coming from the behaviour of individuals and societies. Examples include environmental issues such as cross-border pollution and global warming, financial crises and contagion, the global spread of HIV/AIDS and other diseases, and international crime.

These three notions are termed, in this paper, as "interactions", "homogenization", and "spillovers". They combine in different degrees the main ideas that merge into the common notion of globalization as deeper world integration, but it is useful to distinguish among them. Increased voluntary interactions, economic or not, across borders, is different from the expansion of global institutions and legal and regulatory frameworks ("homogenization"), as well as from involuntary and even unwanted global effects. Although different, those ideas are, at the same time, linked. For instance, more interactions (first notion) tend to generate the need for common institutions and rules (second notion) to structure and facilitate (or control) the increased linkages. Also, larger spillovers (third notion) may occur because there are more channels of interaction (first notion), and then global norms and institutions (second notion) provide a framework for coordinating responses to those common events.

Measurement of the dimensions of globalization usually focuses on the economic aspects, mostly the expansion of international trade in goods (Feenstra 1998) and increased international capital flows and the integration of financial markets (Obstfeld 1998; Knight 1998). Other aspects considered as indicators of increased globalization include the expansion of foreign direct investment and multinational corporations (Riker 1997),

including the internationalization of small and medium enterprises (Acs Z. 1997); and international migrations with their impact on the operation of labour markets (Williamson 1998). The level of communications also deepened with important increases in the number of television sets and telephone lines per capita, of Internet users, and of international travel (Foreign Policy 2001). On a different level, the number of intergovernmental organizations, of international non-government organizations, and of international treaties and international regimes in force have increased consistently during the last decades (Held and McGrew 2000).

As measured by those indicators, globalization appears to have increased recently, but the process has been more pronounced for industrialized than for developing countries (Foreign Policy 2001), and there are clear differences across developing regions and over time. An implication of the great diversity across developing countries in terms of the degree and nature of their economic integration with the world economy is that simple models of factor returns in open economies cannot capture the income distribution and poverty implications of the current process of globalization. The effects of current globalization are more difficult to isolate, and they may vary much more widely across countries (Kohl and O'Rourke 2000).

II.2 How does globalization affect health outcomes?

The world health problem has been characterized as one of fighting the "double burden" of disease (WHO 1999): the increased life expectancy recorded in recent decades, together with changes in lifestyle stemming from socioeconomic development, have increased the importance of non-communicable diseases and injuries ("new burden" or emerging agenda); while at the same time, as many as one billion people in the world still suffer from infectious diseases, undernutrition, and complications of childbirth, conditions not seen among the non-poor and that are largely avoidable because inexpensive and effective tools exist to deal with much of it ("old burden" or unfinished agenda) (WHO 1999).

In terms of the "double burden", there are clear differences among countries in terms of the main health and globalization issues. Leaving aside industrialized countries,

there are at least two broad situations in developing countries when analysing linkages between globalization and health. For poor and low-income countries, the main health problem relates to the impact of communicable diseases, the "unfinished agenda" of preventable health problems. Issues, such as TRIPS, negotiation of services and government procurement within the WTO may have less implications for these countries due to the exceptions they have under Special and Differential Treatment in trade negotiations. Also, brain drain and competition between public–private services may be less important concerns compared to the next category of developing countries.

For the middle-income countries, globalization and health issues present some differences. Globalization is helping them to grow faster, while at the same time may not be closing, or may be increasing, the income gap within those countries. The counterpart in terms of health issues to that dynamics in incomes is the greater presence of the full "double burden of disease", with demands to attend both the emergence of non-communicable diseases, while at the same time still struggling, although in different degrees, with the unfinished agenda of infectious diseases and malnutrition. Health services in those countries are pulled in two directions by the built-in tension between demands by social groups with higher incomes to address the health problems of the new agenda, and the requirements to attend the unfinished agenda of diseases mostly affecting the poor.

A possible framework to think about the health-globalization interaction is presented in Figure 1. The different components of globalization (e.g. trade, capital flows, labour migration, and so on, at the top of Figure 1) affect the functioning of government, civil society, markets, and the environment in developing countries (second level in Figure 1). In turn, changes in those four areas influence health outcomes through different channels. Those possible channels have been grouped in five main areas for expository purposes (third level in Figure 1): (1) growth, income distribution, and poverty; (2) democracy and governance; (3) health services; (4) nutrition and food security; and (5) other risk or mitigating factors.

III Globalization, Growth, and Poverty

III.1 Background

The relationship between globalization, and economic growth, income distribution and poverty, provides the general background for health outcomes. If growth leads to poverty reduction, health status should improve. Higher incomes at the individual level will facilitate access to health and health-related goods and services. Growth also provides societal resources to supply those goods and services, including government revenues. [1]

In addition to average growth rates (and income levels), the impact of globalization on distributional patterns and the variability of the growth process must be considered (Pinstrup-Andersen 1989, 1990; Lipton and Ravallion 1993; Addison and Demery 1989). Growth patterns that are more equally distributed and stable over time will reduce poverty more than unequal growth punctuated by recurrent crises, even if average growth is higher for the latter than the former. The question then is whether world growth has been sufficiently high, socially broad-based, and stable to help alleviate poverty, and what is the relationship of that performance with globalization. These two issues are briefly discussed next.

III.2 Trends in growth, poverty and inequality

Growth rates are significantly higher in the second half of the twentieth century than in any other previous period (Table 3). However, growth appears to have been higher in the 1960s and 1970s for sub-Saharan Africa and Latin America, although it has been up in Asia since the 1980s. Volatility in world per capita annual growth rates about tripled in the 1970s compared to the 1960s, and has remained at similar levels since for the world as a whole. However, there are important differences across developing countries with the

[1] There is also a strong reverse link going from improved health conditions to higher economic growth (WHO, 1999). Repeated episodes of illness and long-term disabilities perpetuate underdevelopment. For instance, malaria may slow economic growth in Africa by up to 1.3 per cent each year and sub-Saharan Africa's GDP would be up to 32 per cent greater now if malaria had been eliminated 35 years ago (WHO 2000c). Other disease like HIV/AIDS are increasingly making individuals less productive: infected people are prone to series of opportunistic infections, of which tuberculosis is the most frequent (UNAIDS 2000). But not only current human capital may be impaired by disease: children might be forced to discontinue their schooling as the household needs their help and can no longer afford school expenses, therefore reducing future human capital and growth prospects.

1980s showing larger volatility in Africa and Latin America, while for Asia the 1960s and 1970s appear as more unstable (Table 4).

The UNDP's Human Development Indices (HDI), which summarizes education, health, and income indicators, have been improving in developing countries, and are currently significantly higher than when now-developed countries had similar income levels in the nineteenth century (Crafts 2000). However, life expectancy declined after the 1980s in sub-Saharan Africa and some former republics of the Soviet Union (see Table 1).

The number and percentage of people in poverty in developing countries decreased drastically during the 1960s and 1970s. Household surveys available for those years[2] showed that the incidence of poverty (i.e. the number of poor people over total population) had declined significantly from an (un-weighted) average of 46 per cent to 24 per cent, and more importantly, the number of poor in the countries covered had declined by almost 60 million during that period (World Bank, *World Development Report*, 1990, Table 3.2 p. 41). More recent data since the mid 1980s, shows further, but slower, declines: the share of population living on less than one US dollar a day fell from 28 per cent in 1987 to 23 per cent in 1998. The absolute number of poor diminished only slightly (by 9 million persons) over the same period. However, if China is excluded, poverty actually increased by about 80 million people worldwide, mostly in South Asia, sub-Saharan Africa, and Eastern Europe and Central Asia (Chen and Ravallion 2000). The percentage of underweight children aged under five years in developing countries, another indicator of absolute poverty, also declined between 1980 and 2000, from 37 per cent to 27 per cent, as did the absolute number (from about 176 to 138 million). But again in sub-Saharan Africa the absolute number actually increased, and the incidence of undernutrition is still very high in South Asia and sub-Saharan Africa (Smith and Haddad 2000).

World income levels have become significantly more divergent over time, largely because of increases in inequality between countries. Rich countries, which by most

[2] These surveys covered 11 countries (Brazil, Colombia, Costa Rica, India, Indonesia, Malaysia, Morocco, Pakistan, Singapore, Sri Lanka, and Thailand) representing 50 per cent of the poor in developing countries. They used country-specific poverty lines as compared to the more recent studies mentioned below that utilized world-wide poverty lines, as well as country-specific ones.

measures are more globalized than developing countries, maintained or increased the income gap with poor countries. Trends in inequality within countries, in contrast, are less clear. There is some evidence that income inequality, especially in transition countries and some large developing countries (India, Indonesia, and China), has worsened since the 1980s, even though in the case of China, both the number and percentage of poor fell (Sharma, Morley, and Diaz-Bonilla, 2001). However, if instead of measuring inequality based on incomes, the Human Development Indicator is utilized, there appears to be some convergence in standards of living, with the gap declining both proportionately and absolutely between 1950 and 1995 (Crafts 2000).[3]

In summary, it seems that growth during the last wave of globalization raised incomes and standards of living (including health) in the developing world to levels not seen before, and poverty declined in relative terms. However, since the 1980s growth has been slowing down in sub-Saharan Africa and Latin American countries, collapsed in the former economies of the USSR, and has become more volatile for some developing countries and regions. Also, inequality appears to have increased (mainly across countries), and poverty, although declining in relative terms, has remained stable in the actual number of people affected.

III.3 Impact of globalization on growth, poverty, and inequality

In general, both early works based on case studies (Little et al. 1970; Balassa et al. 1971; Krueger 1978), and more recent empirical literature on growth based on cross-section regressions (Sachs and Warner 1995; Sala-i-Martin 1997), suggest that there is a positive correlation between trade and, in general, economic openness, on the one hand, and growth , on the other (although there are dissenters; see Rodrik 1999, 2001). Closed

[3] It should be noted that this convergence may result in part from the components of the HDI and the way it is calculated: there is a natural limit to the expected lifetime; there is a statistical limit to the percentage of literacy, and income per capita (which in principle is unbounded), it is in fact truncated in the HDI at some level considered "sufficient" for human development; income levels above that are not included in the index.

economies relying on the dynamics of smaller domestic markets (compared to larger opportunities in world markets) have tended to show slower and halting growth rates. In turn, high and stable growth rates have been commonly associated with reductions in poverty rates. Yet, higher growth rates would not be enough if globalization is, at the same time, worsening income distribution.

Empirical analyses of the relationship between openness and income distribution show mixed results (Kohl and O'Rourke 2000). Some find that openness worsens income distribution, at least initially in a Kuznets fashion (Lundberg and Squire 1999; Barro, 2000); some others find little evidence of Kuznets' effects (Deininger and Squire 1998); and still others find that openness may improve income distribution after controlling for demographic factors, although the size of this effect is modest (Higgins and Williamson 1999).

Other papers explain inequality in incomes as related to factors other than openness, such as inequality of land distribution, lack of education and civil liberties (Li et al. 1998); demographic transitions (Higgins and Williamson 1999); the nature of technological change; the type of endowments, with primary exporters appearing more associated to rising inequality (Galbraith et al. 1998); or other domestic policies and institutions. Existing cross-country studies appear to leave many open questions regarding the links between openness and inequality, and the results vary with either equation specification or the choice of openness indicator, although the finding that openness has at most a modest impact on inequality (in either direction) seems robust. The lack of precise results may be due to the diversity of country experience and the fact that there are many dimensions of openness besides trade, such as capital and labour flows (see Kohl and O'Rourke 2000).

A separate issue from whether developing countries are getting more integrated in international markets is the nature of the world economy they may be increasingly joining (Diaz-Bonilla 1999). A country's performance in terms of growth and poverty alleviation depends in good measure on the overall functioning of the international economy (Sharma, Morley and Diaz-Bonilla, 2001). During the 1960s and 1970s, higher growth, negative

real interest rates, and higher inflation helped mostly the relatively resource-abundant, primary exporters of Africa and Latin America, which also received much of the capital flows. The collapse in commodity prices, since the 1980s, affected less, and eventually benefited, the relatively more resource-constrained and increasingly primary importers of Asia, which were gradually specializing in manufacturing goods and over time became the main recipients of capital flows. African and Latin American countries, on the other hand, since the 1980s went through a painful process of fiscal adjustments to reduce the public sector imbalances and external debt accumulated during the previous decades.

Another important determinant of international economic conditions for developing countries is the behaviour of capital flows. They can accelerate growth and help finance additional investments; but they also tend to overvalue the domestic currency and increase the price of non-tradables relative to tradables. Consequently, there may be a positive growth and investment effect on the first type of goods, but a negative one on the latter ones. In the case of developing countries that reduced tariffs and other trade barriers protecting import-substitution products, the appreciation of the domestic currency due to capital flows added to the pressure of trade liberalization on the domestic producers. Additionally, expanded capital flows seem to have led lately to a more volatile world economic environment, with the sequence of financial crises in Mexico in 1995, Asia in 1997, Russia in 1998, and Brazil in 1999. The negative effects of those crises have been highlighted by the recent events in East Asia. Until 1997, developing countries in the region were benefiting from both reductions in poverty and improvement in the health and nutrition of their populations. The sudden emergence of financial crises and the subsequent disruption of the economies of many Asian and South American countries had both direct and indirect effects on health—impacts that may play out well beyond the upturn in GDP per capita. Evidence from Indonesia illustrates the health implications of the economic crisis. The large devaluation of the domestic currency caused by the crisis led to overall price increase, shortage of commodities, rise in unemployment, social unrest, and political turmoil, all of which affected the health of people. Poor and other vulnerable populations, but also middle-income groups, had difficulty paying for basic commodities as well as for the rising costs of medicines and health care. Nutritional and health indicators appear to

have deteriorated. Surveys show that four-fold increase in anaemia is likely, as well as an increase in wasting, night blindness, and diarrhoea in children, adolescents, and women (ACC/ SCN 2000). Also, one of the significant shortages experienced during the crisis was that of raw materials for drug production, leading to increases in the cost of drug and other medical supplies. Compressed public spending because of reduced tax revenues and higher cost of interest payments on external debt, also led to a reduction in health budget, with budget cuts affecting preventive programmes, and increasing financial risks for the poor who tend to be more reliant on public health services and facilities. In many countries where local currencies collapsed, budgets set for vaccines priced in foreign currency could no longer be met, creating short-term shortages and delays in getting enough vaccines to protect children from life-threatening infections (WHO 1998). An issue of importance here is the influence of the macroeconomic and regulatory policies in industrialized countries and their counterpart in developing countries, particularly policies linked to banking supervision, on the ups and downs of international capital flows and on their impact on developing countries.

III.4 Summing up

It is a truism to recognize that the relationship between globalization, growth, income distribution, and poverty, is a complex one. It has to be analysed in specific country, regional, household, and individual settings. In general, higher incomes and poverty reduction are associated with better health indicators. Also, globalization appears to be linked to higher average growth rates, but more recently, world economic volatility seems to have increased, mostly linked to swings in world capital markets influenced by changes in macroeconomic policies in industrialized countries. Despite higher growth, if, at the same time, the probability of economic financial crises increases with globalization, the poor will face additional risks.

As already mentioned, besides the level and variability of growth, it is also important to look at its distribution. But how globalization affects incomes across different countries and groups in society is not that clear. Much depends on the nature and components of the patterns of integration in the world economy by developing countries.

However, there are at least two other aspects that must be considered and that may affect outcomes even more than the degree of globalization per se. First, it is important to consider the behaviour of the international economy into which the developing countries are getting increasingly immersed; these conditions are mostly defined by the policies of industrialized countries. Second, the type of domestic complementary policies, institutions, and conditions may ultimately determine the impact on the poor. In fact, an important source of discrepancies in the assessments regarding the links between globalization and poverty is the failure to distinguish between three distinct levels of analysis: first, globalization as the process of getting more integrated in the world system; second, what are the relevant domestic conditions, institutions, and policies interacting with globalization; and, third, how is the world economy functioning. To use an analogy, the impact of opening up the windows of a house (first level) on the well being of those living there, will depend on their own health conditions (second level), but also on the weather outside (third level) (Diaz-Bonilla 2001).

IV Globalization, Democracy and Governance

IV.1 Should we worry about democracy and governance in a globalized world?

An important debate on globalization, and the operation of the public sector and politics in general, is whether the rising importance of international trade and finance, combined with increasing supranational accords, rules, and regulations, may reduce the economic and political autonomy of national governments, limiting their possibilities to address the issues that the electorate demands, and even weakening democracy itself. A more circumscribed concern is whether globalization may affect negatively government revenues, both directly (for example, if tax competition at the world level reduces the sources of revenues) and indirectly (through the impact of the rate and variability of growth on general tax collection). The debate has clear implications for poverty and health. More obviously, the level of government revenues affects the possibility of implementing transfer policies (like food subsidies or other poverty-oriented programmes) and to finance public services and investments in health, education, and related areas.

But whether globalization is impairing democracy, and the ability for democratic governments to implement policies, is also relevant for poverty and health. For the poor, it matters whether they have access to political assets and capabilities leading to voice, participation, and empowerment. Globalization can affect the legal, political, and civil society institutions and practices in ways that may help or hurt the poor and health outcomes in general.

Various studies show the positive relation between democracy and good governance, on one hand, and improved social welfare, on the other. Democracy and good governance include notions of freedom of association and speech, effective voice and political participation, the rule of law, transparency, accountability, and control of corruption. These issues matter directly and indirectly for the welfare of the people in any country, and particularly for the poor. Bad governance not only affects growth overall, but also worsens income distribution and appears to have a special negative impact on the poor through various channels (Thomas et al. 2000). Budgets may be allocated to big investment projects (where there are more opportunities for graft), instead of the much needed operational and maintenance expenditures. For instance, modernly equipped hospitals may be built in urban centres, while rural health facilities (where usually the poor are located), salaries for health staff, and medicines, may not receive enough budgetary appropriations. Not only the allocation of investment but also access to public services, including health attention, may be distorted by payment of bribes, whose distribution would then mimic a market allocation based on capacity to pay. Another example is corruption in government procurement of medicines and equipment, which leads to inflated prices and/or low quality products, thus substantially diminishing the welfare impact of a given budget allocation. Regarding health outcomes, Kaufman, Kraay and Zoido-Lobaton (1999) show evidence of the negative impact of bad governance on infant mortality, and Smith and Haddad (2000) documented the positive impact of democracy, among other variables, on declining child malnutrition.

IV.2 National dimensions

Since the end of the 1980s there has been a clear advance of democratic rule in the world (Gurr et al. 2000). What is the relationship of this trend with globalization in any of its dimensions? Some have argued that the spread of democracy has been strongly influenced by the globalization of communications (Giddens 1999). The information monopoly, on which the non-democratic political systems are based, has been eroded by an open framework of global communications. Authoritarian governments do not have the flexibility and dynamism necessary to operate in the global electronic economy (Giddens 1999). According to this line of argument, the same advances in the technology of communications, which allowed corporations to operate more effectively at the world level, are also increasing the links across societies, as well as changing the dynamics of the interaction between markets, the state, and civil societies, within each country and internationally. Various political and social alliances are formed across countries to confront global concerns, from violation of human rights, to environmental problems, to access to affordable drugs, and similar causes (see, among others, Diamond 2000; Boli and Thomas 2000).

Improved communications and information sharing have also begun to expose abuses of power and cases of corruption that may have gone unnoticed before. While this may have led to some cynicism because of the perception that corruption has increased (even though the change may have only been that now it is getting exposed in ways that did not happen before), at the same time the communications revolution offers the means to better control corruption. The Internet is utilized to increase the flow of communication between public institutions and the general public, as much as among different groups in civil society.

While globalization of communications may be fostering democracy and the rule of law, some have argued that economic globalization could be working in the opposite direction. Usually, this view combines several ideas. First, economic globalization may leave countries more vulnerable to international economic factors, including fluctuations in

world prices and capital flows. Second, globalization may also increase exposure to international competition, posing the risk of leaving the poor and malnourished as well as countries that are less developed behind. Third, because of amplified external competition, domestic economic change may be faster, which increases the need for government resources to help the affected populations. But this may not be possible if, as some suggest, governments are losing resources because of the mobility of capital and high-income individuals, while at the same time being forced to cut welfare expenditures to reduce costs and maintain a competitive economy.

The debate over whether open or closed economies are more vulnerable has a long tradition. After experiencing the vagaries of world markets for commodities during the first decades of the twentieth century, many developing countries turned to inward-oriented policies, with the objective, among others, of reducing external vulnerability. Various studies during the 1970s and 1980s that looked at the performance of the closed economies of several developing concluded, paradoxically, that they ended being more prone to drastic balance of payment crises, while those following outward-orientation policies showed better results not only in terms of efficiency but also flexibility and adaptability to external events (Balassa 1986). Still, the fact that growth in developing countries appears to be more volatile lately (see Section III) requires a careful consideration of this issue: as mentioned before, the volatility may be caused by macroeconomic shocks emanating from industrialized countries, rather than by policy changes in developing countries.

Another strand of the debate about open or closed economies looked at the relationship between the degree of openness and democracy and the rule of law. It was argued that closed countries, where the state holds substantial power over the fate of firms, fortunes, and people tended to be captured by elites and vested interests, undermining political institutions and the rule of law and leading to corruption and waste of resources (Krueger 1974; Bhagwati 1982; Hirschman 1982). On the other hand, opponents of globalization argue that opening the economies increase the power of multinational corporations. In any case, the process of liberalization and privatization has also created opportunities for the capture of rents by well-positioned private actors, mostly of local origin (see Schamis 1999; and Hellman, Jones, and Kaufmann 2000). The expectation,

however, is that the trends towards the expansion of democracy may increasingly put limits to cronyism and corruption.

The other issue already mentioned is whether globalization is leading to tax erosion and loss of public resources. A study of OECD countries (Tanzi, 2001) shows that tax collection did not decline with more openness: the total tax burden of the OECD member countries has increased substantially over the past three decades, from 26 per cent of GDP on average in 1965 to 37 per cent of GDP in 1997. However, the study enumerates different issues that can lead to future erosion of the tax base: electronic commerce; electronic money; more trade within multinational corporations increasing the problem of "transfer prices";[4] offshore financial centres and tax havens; derivatives and hedge funds; and the growing inability or, often, unwillingness of countries to tax financial capital and the incomes of persons with highly tradable skills. On the other hand, advances in computers and telecommunications may provide the means for better cooperation and coordination among tax authorities in different countries, even leading to the more distant, and probably utopian, alternative of a world tax organization to develop and coordinate solutions (Tanzi 2001).

For developing countries, trade liberalization may reduce government revenues in the form of trade taxes, although it depends on the form it takes: if trade liberalization represents a move from quantitative barriers to tariffs (or from prohibitive tariffs with no trade to lower tariffs that allow some trade), revenues may increase. Another channel influencing the fiscal position in developing countries is the operation of capital markets, which, in the context of the opening of capital accounts, may limit the range of applicable macroeconomic policies. This discipline has positive consequences if it reduces the ability of governments to undertake unsustainable expenditure programmes that inevitably lead to macroeconomic crises, which usually have more negative and irreversible effects on the poor. On the other hand, it has been argued that the discipline imposed by the bond market, or the policies advocated by international organizations as part of financial rescue packages, may lead to overly restrictive fiscal policies in developing countries, creating

[4] This issue refers to the possibility of declaring prices for transactions within the company, but across national borders, in a way that hides profits and/or allocates them to the lowest tax jurisdiction.

deflationary pressures in their economies and curtailing needed investments in human capital and infrastructure. Others have raised the point that changes in financial markets have led governments to follow pro-cyclical fiscal policies, exacerbating the phases of boom and bust. These are empirical points that need further analysis.

In summary, it seems that globalization has been associated to more open and democratic societies, but at the same time it may be increasing the challenge of answering the demands of the electorate within a purely national setting. This suggests the need to look at global governance issues.

IV.3 International perspectives [5]

One view argues that to cope with global challenges, the world needs to deepen the process of integration with better institutions of global governance. The limits of the nation-state were alluded to in the 1970s (see Keohane and Nye 1977; and Cooper 1980) regarding both the military and economic autonomy of governments. What was then called interdependence seemed to require more coordinated efforts of collective action among nations to achieve the desired goals. Others, however, have resisted what they see as limits to the autonomy of the nation-state through the evolution of international legal frameworks and institutions. The debate is whether these international regimes help improve public policies by facilitating cooperation among countries, or whether they impinge upon sovereignty and the functioning of democracies in ways that harm the attainment of those societal objectives.

Societies are changing around the world, increasing demands for more democratic forms of government and greater devolution of the management of public resources to local governments and organizations. The nature of many public goods is changing, as are the options for supplying them. There is a need to reconfigure the roles of the public and private sectors and of civil society in providing many public goods and services so as to make them more cost-effective and efficient and to meet the changing needs of rural

[5] This section is based on Diaz-Bonilla and Robinson (2001).

people, particularly the poor. But global problems require global approaches and institutions. Isolationism and unilateralism will not solve them.

V Globalization and Health Systems

V.1 Conceptual framework and differentiated conditions

WHO (2000) defines health systems as 'comprising all the organizations, institutions and resources that are devoted to health actions. A health action is defined as any effort, whether in personal health care, public health services or through intersectoral initiatives, whose primary purpose is to improve health' (WHO 2000). The objectives of the health system (WHO 2000b; Hsiao 2000) should include (a) an optimal level of health status distributed equitably among the population; indicators should go beyond averages and consider the distribution of health outcomes that differ significantly between rich and poor (Gwatkin and Guillot 1999); (b) an adequate degree of risk-protection for all, acknowledging that spending on health care strains household and government budgets and that the costs of serious illness are an important cause of poverty in many developing countries; (c) the highest attainable level of user satisfaction; and (d) efficiency in the use of the resources.

Table 5 shows the different organization of health services depending on four income categories (poor, low income, middle income, and high income), and the percentage of population in each segment (Hsiao 2000). As mentioned before, there are clear differences among different types of countries in terms of the health problems, how the health systems are organized, and the main globalization issues.

Figure 2 looks in greater detail at the health system within the general conceptual framework presented in Figure 1. At a general level, globalization may influence policy, regulatory, and institutional issues that affect the health inputs, operations, and outputs. It is important to also consider the impact of globalization on the quantity and quality of human endowments, health-related capital, infrastructure and equipment, medicines, and other inputs that may be available by the health services. Another crucial aspect is the link

between globalization and the financing and organization of the public and private health services, and related infrastructure, which together define the quantity, quality, and coverage (distribution) of their outputs. Health-related infrastructure, including sanitation, potable water, quality of housing, roads and communications, are important contributors to the overall health status of a population, both directly (as in the case of sanitation) or indirectly (in the case of roads and telephones) by facilitating access to health services.

Countries differ significantly in the way they balance public and private sector participation in the financing, insuring, and delivering of health services and the funding and construction of health-related infrastructure. This balance may change with the level of per capita incomes. Even at the same levels of economic development there can be important variations due to different historical traditions and societal values. In addition, the balance of public and private sector functions is becoming more immersed in the internationalization of those economies. Some of the issues raised by this process include: international migration of health workers and brain drain of health practitioners; expanded trade in health commodities (equipment and inputs), perhaps as a result of the reduction of tariffs and trade liberalization; increased internationalization of health insurance and health services, possibly related to the negotiations on Services under the WTO; the implementation of patents for medicines and other changes in Intellectual Property Rights as agreed in the TRIPS Agreement of the WTO; and other WTO issues such as government procurement. The discussion on WTO and trade-related health issues is covered in other papers in this collection. Here we concentrate only on the possible impact of globalization on the formation of "dual" health markets and the possible consequences for the poor.

V.2 Globalization and changes in the nature of the health burden and health markets

As mentioned, the world health problem has been characterized as one of fighting the "double burden" of disease (WHO, 1999): the "old burden" or unfinished agenda of infectious diseases, undernutrition, and complications of childbirth, along with the "new burden" or emerging agenda of non-communicable diseases and injuries. The higher, but also uneven, economic growth that the world has experienced during the last wave of

globalization, has contributed to the emergence of a differentiated cluster of health problems. Developed countries contend mostly with the new burden because higher incomes have allowed them to transcend the more basic health problems; many middle-income developing countries confront both burdens, in different proportions depending on their average income levels and internal distribution; while for the poorest countries, it is the old burden of nutrition and communicable diseases that will matter most in the next years, particularly that of HIV/AIDS, which is shaping as the deadliest menace. [6]

Different income growth and levels among countries not only define distinct health problems, they also lead to the conformation of diversified markets for health services. The varied ways in which the double burden may appear (or not) in a society force difficult decisions about the allocation of scarce resources, and are a source of distributive conflict across rich and poor households in those countries.

With increases in incomes in developing countries, the demand for private health services, including health insurance, goes up. This demand interacts with constraints on the supply of public health services in those countries, where governments face higher demands on limited resources, due to population increases and other causes. The public sector has to attend to public health issues such as immunizations, control of infectious diseases and vectors, health education, water and food safety, and basic health services with those limited funds, leaving mostly unattended the demand for higher levels of individual medical care. This unmet private demand (backed by higher incomes) eventually creates a market for private health services leading to the development of a dual market structure and to escalating costs, all of which may affect negatively the poor (Sbarbaro 2000). This tension between public and private health services may exist irrespective of whether the system is closed to, or allows the presence of, foreign providers of health services. Therefore, the dynamics of dual market structures and of escalating costs may happen whatever the nature (domestic or foreign) of the firms involved in the private health system, to the extent that this tension mostly depends on the nature of the

[6] The 10 main diseases identified by WHO as having the greatest impact on the poor include malaria, HIV/AIDS, tuberculosis, acute respiratory infections, diarrhoeal diseases, vaccine-preventable illness, mother and infant care, tropical parasites and helminthic infections, nutritional deficiencies, and tobacco-related illnesses.

"double burden" created by the epidemiological transition and on the profile of income growth and distribution in those countries. The best human, financial, and technological resources may end up being absorbed by the high-end segment catering to a healthier and most affluent clientele, while the poor and the greater health risks may be excluded. The public sector may get burdened with the most difficult cases, in terms of health and incomes, further straining public budgets that still have to attend to nation-wide health problems and reinforcing the image of low-quality public services, eroding support for the public health system (Sbarbaro 2000).

The dynamics of differentiated income growth has an international dimension as well, with richer countries competing for health care resources, including personnel, in what it is increasingly becoming a global market for health services. The tensions between different health problems and effective (i.e. income-backed) demand for solutions appear in many current health discussions. An example is the issue of how to finance research for the diseases of poverty, and whether and how to segment international markets for differential pricing of drugs. Another example is the brain drain of health professionals and staff, such as qualified nurses, who migrate from relatively less rich countries to higher-income countries where the aging of the population and the availability of resources are expanding the demand for health services. These examples could be expanded further, but it is important to keep the analytical focus on the common pressure behind all of them, coming from differentiated health problems, income growth, and health demands, at the national and international levels, in an increasingly integrated world health system.

VI Globalization, Food Security, and Nutrition [7]

VI.1 Nutrition

Globally, nutrition has improved in recent decades, but malnutrition—including deficiencies in micronutrients—is still widespread. Of the world's 6 billion people, about

[7] For a general discussion of nutrition and globalization issues see Pinstrup-Andersen and Babinard (2000, 2001).

800 million do not have enough to eat. Poorer populations usually consume few animal products, so their intakes of vitamin A, iron, zinc, riboflavin, vitamin B-12, vitamin B-6, and calcium are inadequate (Flores and Gillespie 2001). Poor diets may also contain few fruits and a limited variety of vegetables and, therefore, low amounts of B-carotene, folic acid, and vitamin C. While the global extent of these micronutrient deficiencies remains unknown, it has been estimated that about 2 billion people suffer from anaemia, mainly due to iron deficiency, and nine out of ten anaemia sufferers live in developing countries. For pregnant women, anaemia contributes to 20 per cent of all maternal deaths. In many developing countries, iron deficiency anaemia is aggravated by worm infections and malaria. For children, health consequences include premature birth, low birthweight, infections, and elevated risk of death. Poor nutrition during foetal life impairs growth, and physical and cognitive developments, resulting in lowered school performance. Low birthweight at term affects 21 per cent of the newborns in South Central Asia, and is also common in Middle and Western Africa, where 15 per cent and 11 per cent of infants are born undernourished. Research shows that about 33 per cent of preschool children in the developing world, or 182 million children under the age of five, are stunted (Pinstrup-Andersen, Pandya-Lorch, and Rosegrant 1999).

Thus, under-nutrition and related deficiencies are an important component of health problems in developing countries, and particularly among the poor. Nutritional deficiencies and diarrhoeal diseases represent above 15 per cent of the DALYs for the poorest 20 per cent of the world population, while maternal and perinatal conditions add another 13 per cent. This compares with 2.1 per cent and 3.3 per cent, respectively for the 20 per cent richest per cent of the world population (Gwatkin and Guillot 1999).

Reducing hunger and malnutrition will continue to remain a challenge. The International Food Policy Research Institute's global food model, the International Model for Policy Analysis of Commodities and Trade (IMPACT), projects that food and malnutrition will persist in 2020 and beyond. Under the most likely scenario, IMPACT projects that 135 million children under five years of age will be malnourished in 2020 (Pinstrup-Andersen, Rosegrant, and Pandya-Lorch 1999). This represents a decline of only 15 per cent from 160 million in 1995. Hence, one out of every four children in

developing countries will still be malnourished in 2020 compared with every third child in 1995. Child malnutrition is expected to decline in all major developing regions except sub-Saharan Africa, where the number of malnourished children is forecast to increase by about 30 per cent to reach 40 million by 2020. In South Asia, despite a reduction in the number of malnourished children by 18 million, as many as two out of five children will still be malnourished in 2020. With more than 77 per cent of the developing world's malnourished children in 2020, up from 70 per cent in 1995, sub-Saharan Africa and South Asia will remain "hot spots" of child malnutrition and food insecurity. Many of the countries in these two regions are among the least-developed countries in the world; they will require special assistance to avert widespread hunger and malnutrition in the years to come.

The nutritional and health status of a person are interdependent. Poor health reduces appetite and inhibits the absorption of nutrients in food, even if the available quantity would have been enough otherwise. Malnutrition weakens the body and makes it more susceptible to a variety of diseases. In turn both the nutritional and health status are influenced by three underlying determinants, which operate mostly at the household level: the degree of food security, the level and quality of care-providing activities (which usually depend on women's status), and the nature of the health environment, including access to health services (Smith and Haddad 2000).

Food security and nutrition issues can be analysed at different levels: global, national, regional, household, and individual. Since the World Food Conference of 1974, the focus has moved from the global and national perspectives to the household and individual levels, where food deficiencies emerge in a concrete way. At the same time it was recognized that the main problem of food security is lack of access due to poverty rather than any aggregate shortage of food supplies (Sen 1981). The 1996 World Food Summit summarized current views when stated that "food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life". Yet, availability and access are only preconditions for adequate utilization of food—necessary but not sufficient. They do not determine unequivocally the more substantive issue of

"nutrition insecurity" at the individual level, which requires "deeper" measures of malnutrition, such as the percentage of child malnutrition based on anthropometrical measures (Smith 1998). In addition to household food access, nutrition insecurity at the individual level requires a consideration of other determinants. Among them, the role of women (e.g., education, household gender roles, and their status in society) is crucial (see for instance, Smith and Haddad 2000), along with the general public health environment, democracy and good governance, and peace.

Globalization can interact with food security and nutrition at any of these different levels and can play either a positive or a negative role in reducing malnutrition and hunger. For developing countries and the poor, their food intake hinges increasingly on the ebb and flow of the world economy and on the response of their own local economies to it (Timmer, Falcon, and Pearson 1983).

VI.2 Food security and globalization

Food security, on average, appears to have improved over the past four decades. Total food availability for all developing countries, measured in daily calories and grams of proteins per capita, was more than 30 per cent higher in the second half of the 1990s compared to the 1960s, even though the population in the developing countries more than doubled from 2.6 billion to 5.7 billion persons during that time (Diaz-Bonilla and Thomas 2001). The number of malnourished children aged under five years (a better indicator of food problems than average food availability, because it captures directly income distribution effects) declined between 1970 and 1997 by about 37 million, and the incidence of malnutrition dropped from 46 per cent to 31 per cent in the same period (Smith and Haddad 2000). However, although food security has improved in general, some regions and countries are at risk, and some have become more food insecure. Average food availability is still low for regions such as sub-Saharan Africa and for the least-developed countries (LDCs). More distressing, the number of malnourished children under the age of five years has increased in sub-Saharan Africa from 1970 to 1997 by 14 million, and the incidence of malnutrition is still very high there and in South Asia (Smith and Haddad 2000).

The links between globalization (and in particular trade liberalization, one of the most visible components), and food security, continue to be hotly debated, and the discussion covers a whole range of opinions, from those who argue that trade causes hunger (Madeley 2000) to others who believe that a complete liberalization of world agricultural trade is the best possible approach (Griswold 1999). In the context of the Word Trade Organization (WTO) and more specifically the Agreement on Agriculture, the debate centres on whether important policy objectives such as the elimination of poverty and hunger (as cause and consequence of food insecurity) may have been helped or hindered by the current agreement, and whether further negotiations may improve upon the existing text or will further compromise the attainment of those objectives in poor countries.

The combination of domestic support, market protection, and export subsidies in industrialized countries has reduced agricultural market opportunities for developing countries, including through unfair competition of subsidized production from rich countries in the domestic markets of developing countries. This is especially important for poor developing countries where two-thirds of the population live in rural areas, agriculture generates about one-fourth of the gross domestic product (GDP), and a substantial percentage of employment and exports depend on agriculture (World Bank Development Indicators 2001). Various studies have shown that an agriculture-led growth strategy may have larger dynamic multipliers for the rest of the economy than other alternatives in poor developing countries (Delgado et al. 1998). A key concern for developing countries, therefore, is the elimination of subsidies and protectionism in industrialized countries, particularly the practice of export subsidies.

Another issue is agricultural trade liberalization in developing countries. During the WTO agricultural negotiations which began in March 2000, several developing countries indicated concerns that further trade liberalization could create problems for their large agricultural populations, where poverty is concentrated. Poor countries have argued for a slower pace in reducing tariffs (or maintaining their current levels) on the understandable premise that industrialized countries should first eliminate their higher levels of protection and subsidization. The aim is also to avoid any sudden negative impact

on poor producers, whose vulnerable livelihoods may be irreparably damaged by drastic shocks (for instance, by forcing poor families to sell productive assets or to take children from school). This policy debate reflects a permanent tension between maintaining high prices for producers versus assuring low prices for consumers. Out of concern for small farmers, some have argued that developing countries should move even further towards protection of the agricultural sector. However, considering that poor households may spend as much as 50 per cent of their income on food, these recommendations could have a negative impact on the poverty and food security of not only the increasing number of poor urban households and landless rural workers, but also poor small farmers, who tend to be net buyers of food. Trade protection for food products is equivalent to a very regressive implicit tax on food consumption, mostly captured by large agricultural producers, with a greater impact on poor consumers. Also, trade protection for any sector usually implies negative employment and production effects in other sectors, and the general effect of widespread trade protection is a reduction in exports. The best approach for developing countries should be to eliminate biases against the agricultural sector in the general policy framework, and to increase investments in human capital, property rights, management of land and water, technology, infrastructure, non-agricultural rural enterprises, organizations of small farmers, and other forms of expansion of social capital and political participation for the poor and vulnerable. At the same time, developing countries may legitimately insist that industrialized countries reduce their higher levels of subsidization and protection, and ask for policy instruments that allow the development of their rural sector and to protect the livelihoods of the rural poor from import shocks that could cause irreparable damage. Increased food and nutrition security for developing countries requires both, tackling agricultural subsidies and protectionism in developed countries, and increased international funding to support rural development, food security, and rural poverty alleviation programmes in developing countries. Agricultural trade negotiations can be linked to increased funding by international and bilateral organizations for agricultural and rural development, food security, and rural poverty alleviation (Diaz-Bonilla and Thomas 2001).

VI.3 New challenges in food safety

Compared to the broader concepts of food security and nutrition, food safety refers to a more focused concern about the avoidance of food-borne diseases, related to problems such as microbial pathogens, zoonotic diseases, parasites, adulterants, mycotoxins, antibiotic and pesticide residues, and heavy metals. Food safety has always been a problem in developing countries, where almost 2 million children die every year from diarrhoea, most of this caused by microbiologically contaminated food and water. In industrialized countries, on the other hand, the ratio of population dying from food-borne disease every year is very low, reaching about 20 per million people (WHO 2000). Yet food safety is growing as a concern in industrialized countries, particularly in Europe, where episodes of food poisoning associated with important changes in the distribution and use of farm products have already triggered health fears. Animal foods are seen as a particular problem, with for example, *bovine spongiform encephalopathy* (BSE), Salmonella, and Listeria becoming increasing threats to the food systems in many countries.

With globalization, food products are moving more rapidly than ever before and are now produced, handled, processed, and packaged in a number of complex ways, using a variety of techniques. A single source of food from a developed or developing country may be used in over 100 different products, which in turn are sold thousands of kilometres away (ACC/SCN 2000a; ACC/SCN 2000b). As consumers become more aware of the international nature of trade in food and farm products, a reaction is to close the links with the rest of the world and "relocalize" production, in some cases calling for a return to primitive agrarian communities that consume only what they can locally grow (Hines 2000).

However, a stronger trend is that as globalization proceeds, food safety standards become more uniform across countries. Otherwise, different standards of food safety between importers and exporters may lead to concerns about the safety of imported food, influencing public perceptions and policies regarding the production, processing,

transportation, storage, international trade, and preparation of food products (Pinstrup-Andersen 1999). These trends may have important consequences for developing countries and the poor. Safety concerns and efforts to combat these epidemics may further restrict market access for products from developing countries. Exports of food commodities from developing countries will be exposed to new and more demanding food safety standards partly through multilateral changes in the Codex Alimentarius, which is designed to ensure the quality and safety of the world's food supply, and partly through unilateral demands by importers (Pinstrup-Andersen 1999). As a result, positive effects of globalization on increasing exports by developing countries may be hindered, either because reasonable standards cannot be met, or because food safety will be used as nontariff barriers by importing countries.

Also, it is likely that changing attitudes and new legislation for food safety in developed countries will spill over into developing countries. In developing countries, safety concerns are not as prominent and farmers may not be able to meet the standards because they lack the adequate institutions and infrastructure. In addition, imposing these standards on developing countries could result in higher food prices for food consumers. For groups already at risk nutritionally, elevating these standards would mean a trade-off between food safety and food security.

More than the impact on developing countries and the poor of new food safety regulations, the more vocal debate about globalization in this context has centred on whether the rules agreed by member countries in the WTO may compromise the desired food safety standards in industrialized countries. A commonly heard argument is that the WTO rules force a "race to the bottom" also in the case of food safety standards. In fact, however, WTO member countries, and previously GATT contracting parties, have ample room to pursue their desired levels of food safety standards. The general principle is defined in GATT Article XX that allows the imposition of measures that may affect free trade for several reasons, including those "necessary to protect human, animal or plant life or health". This exemption is further elaborated in the Sanitary and Phytosanitary Agreement (SPS) of the WTO. The application of those measures requires complying with the usual GATT/WTO obligations regarding the non-discrimination between domestic and

foreign producers, or between different countries. The SPS also calls for the use of scientific evidence in the definition and assessment of risks, and the application of international standards when they exist and are consistent with the desired level of sanitary and phytosanitary protection. The consequences of the present WTO obligations can be illustrated with the following examples. First, if for example the Codex Alimentarius (the main body for international food standards), has established limits for residues of chemical product "X" in certain food items—based on the impact of that product on an average person—and that a country wants stricter limits on residues, based, say, on the impact on infants, then there is nothing that restricts the use of such higher levels of protection under the present WTO regime. This only requires a study showing that the residue levels applied are in fact based on the level of protection desired, i.e. based on the tolerance of infants and children under a certain age.

Another key issue regarding food safety is the precautionary principle. Contrary to common interpretations Article 5, paragraph 7, allows taking provisory measures in cases where "relevant scientific evidence is insufficient". The article, and further interpretation by the panels in the case "Measures Affecting Agricultural Products" presented by the US against Japan, require four cumulative elements to be present for a provisional measure to be consistent with Article 5.7: (a) that the relevant scientific evidence is insufficient; (b) that the provisory measure is adopted "on the basis of available pertinent information; (c) that the WTO member invoking Art. 5.7 is seeking to obtain the additional information necessary for a more objective assessment of risk; and (d) that the WTO member reviews the sanitary or phytosanitary measure accordingly, within a reasonable period of time (see Erik Wijkström 2000).

A conclusion of the analysis of the WTO legal texts is that the problem for food safety at the world level is not trade or trade-rules. More important is the need to develop a global food system based on adequate standards that apply across countries, and that does not discriminate against low-income developing countries and the poor in general. In May 2000, the World Health Assembly passed a food safety resolution focusing on the need to develop sustainable, integrated food safety systems for the reduction of health risk along the entire food chain.

Most developing countries will need technical and financial assistance to develop their own food safety systems. In particular, compliance with the SPS Agreement in the WTO should be approached as part of the improvements needed to protect the local population from food-borne diseases and not mainly as a way to comply with trade regulations. Similarly, tackling animal and plant health problems must be seen as part of SPS requirements to increase production and productivity in developing countries. Also, a strong SPS framework may be important for developing countries because a competitive export position requires establishing and maintaining the sanitary and quality requirements for their products. Probably the most adequate approach for developing countries is to insist on receiving the technical and financial assistance considered in the SPS Agreement (Articles 29 and 30) to build and improve their own systems of quality control and health and safety standards. These systems should be centred on their own needs to improve health and sanitary domestic conditions, and the regulatory burdens of compliance should, at the very least, not represent shares of the GDP larger than what industrialized countries devote to similar functions (Diaz-Bonilla, Robinson, Thomas, and Yanoma 2001).

IV.4 Globalization and shifts in diets

Despite the opportunities created for nutrition and food security by globalization, several aspects of this phenomenon may also worsen human nutrition and further aggravate health in developing countries. Increasing trade could result in the acceleration of a major shift in the structure of diets, resulting in a growing epidemic of the so-called "diseases of affluence". Once restricted to the rich industrialized nations, high fat diets and Western eating habits are now increasingly entering the diet of low-income countries and fostering new nutrition problems. Traditional low-cost diets, rich in fibre and grain, are likely to be replaced by high-cost diets that include greater consumption of sugars, oils, and animal fats, giving rise to increasing rates of overweight, obesity, and associated chronic diseases that affect children and adults alike (Drewnowski and Popkin 1997). Undernutrition and overnutrition already coexist in many countries, creating a double nutritional burden, parallel to the similar double burden of disease already mentioned: patterns of disease are now shifting away from infectious and nutrient deficiency diseases toward higher rates of coronary heart disease and some types of cancer. It appears that the

incidence of obesity is increasing in many developing regions, even in countries where hunger persists (Gardner and Halweil 2000).

The nutrition and health communities must respond to problems of unhealthy diets and overnutrition. While the stigma against obesity is absent in most developing countries, people affected by these trends will be hurt in the long run if measures to address these problems are not taken. Regulations must assure truth-in-advertising, particularly regarding processed foods with high sugar and fat content. Other interventions should foster—through cost-effective nutrition, education programmes, and dissemination strategies—a balanced and low cost diet that will limit the risks of obesity and coronary diseases.

The globalization of information technology provides several opportunities for accelerating the reduction in malnutrition. A vast amount of food and nutrition information and data is already available to anyone via access to the Internet. Such information can be fairly easily accessed to find out about new nutrition initiatives, determine the latest thinking on existing nutrition problems, obtain best practices, and map food production and undernutrition by country and region within country. The Internet also provides a forum for debate on issues that require discussion (ACC/SCN 2000a). Improved access to information can, however, also have negative effects on efforts to eliminate malnutrition. Misleading information from advertising or poor training about breastfeeding or HIV prevention, for example, could prove fatal. Also there will be imbalances in the content of that information, if it is generated solely by people who are removed from direct experience with poverty and malnutrition.

VII Globalization and Other Health-Related Developments

The topics addressed in this section cannot easily be classified elsewhere in this paper. The only common thread is that they have important implications for health outcomes, and that there are some clear links to the globalization process. They are presented here without any pretence of being part of a unifying framework. Although some arguments can be made about other possible topics to be included, this paper concentrates only on four issues: gender, war, environment, and the international spread of disease.

VII.1 Gender and health

Gender issues are at the core of health problems, particularly among the poor. Maternal and perinatal conditions represent about 13 per cent of total DALY losses for the poorest 20 per cent of the world population and only about 3 per cent for the 20 per cent richest of the world population (Gwatkin and Guillot 1999). The good health of women is key to the health status of families, as women are generally the main care providers for children and the elderly. Health problems may occur at different stages of the lifetime of individuals but as a cycle they usually begin at the key mother/child level and then persist throughout life. Inadequate care for mothers and children—which is usually linked to the role and status of women—insufficient health services, and an unhealthy environment are usually the immediate reasons for health and nutritional problems (see, for example Smith and Haddad 2000).

Considering gender issues go beyond addressing the current problems of a vulnerable group. At a general level, world poverty has a female face (UNDP 1995; ILO 1995). Indeed, it has been shown that restricted opportunities and discrimination against women can reduce economic growth for the whole society and have long term implications for future development—to the extent that the task of rearing children, which determines human capital in the next generation, falls largely on women (World Bank 2001).

Globalization can have an impact on women's current status and future opportunities through different channels, economic and non-economic. One obvious channel is that of trade liberalization. In a review of cases, Fontana and Wood (1998) concluded that trade liberalization had different effects on women and men as well as across different groups of women, depending on several factors and preconditions: gendered patterns of rights over resources; female labour force participation rates; education levels and gaps by gender; patterns of labour market discrimination and segregation; and, in general, the socio-cultural environments. They found differentiated results in industry, agriculture, and services.

For instance, in some parts of the developing world (particularly Asia but also in Latin America and the Caribbean), the expansion of export production has been associated

with the feminization of the industrial labour force, at least in its initial stages. Women have been drawn into paid work for the first time in export industries, with positive implications for their well-being and autonomy, although controversy remains about the current terms and conditions of female employment and the future of these employment opportunities. The impact of trade expansion on women's economic activity has wider human resource development as well as gender benefits. It gives women greater control of income, and as women tend to have more family oriented expenditure patterns than men, child nutritional status and other human resource development indicators may be expected to rise. In particular, improvement in women's demonstrated income-earning capability strengthens the incentive for investment in the human capital of girls, with all the wider benefits that the education of girls brings. The other side of the coin may be the (possibly negative) job-related health implications for women as well as the fact that they may have less time to provide care to children.

The implications of trade liberalization in agriculture and services are less clear. Surveying sub-Saharan Africa, Fontana and Wood (1998) found that women do not often benefit directly from increased export production of traditional crops since their property rights in land are limited and smallholder export production is based on unpaid family labour. They argue that the situation may be more favourable to women in non-traditional agricultural exports (such as fruits, vegetables, and floriculture), where, in some countries, they appear to be participating both as workers and as small producers. Paolisso, Hallman, Haddad, and Regmi (2001) looked at the issue of women's time for care, in the case of increased production and exports of fruits and vegetables in rural Nepal. They find that for households with more than one preschooler (more than 60 per cent of the sample), participation in the production of fruit and vegetables did not seem to affect women's time for the care of children aged under 5 years. For the rest of the households with one preschooler, the trade-offs seem more important, although leisure time increased in men and did not decrease in women, which would show some scope for protecting childcare time by reducing time to leisure. They conclude that in the medium run, benefits may accrue to unborn preschoolers if participation in the production of fruit and vegetable empowers women and offers them opportunities to earn and retain income without leaving

the community. This may have far-reaching impacts on the ability of women to exert their own preferences in a wide range of activities, including an increased allocation of resources to children. However, they also indicate that the current data set does not permit a longer-run analysis of those impacts. Finally, the lack of information about the highly heterogeneous service sectors, both formal and informal, does not allow many conclusions about how globalization may be affecting women in these sectors (Fontana and Wood 1998).

In general, it seems that, as is the case with other components and dimensions of globalization, much depends on the interaction between external factors and domestic conditions. In this respect, it may be more important to ensure that all discriminations against women in property rights, family law, employment opportunities, access to education and health services, political participation, and, in general, societal status are eliminated.

VII.2 War and violence

After a steady increase in war and violence since the 1950s, the aggregate level of conflict began to decline in the 1990s following the end of the Cold War. These trends differ by regions, with sub-Saharan Africa maintaining high levels of conflict during the 1990s (Gurr, Marshall, and Khosla 2000). While fostering a trend towards greater democratization and decentralization in most former Soviet Republics, the end of the Cold War led to the continuation of old social and ethnic divisions in much of Africa; little international effort was made to promote a peaceful transition after the demise of communism (Gurr, Marshall, Khosla 2000).

In addition to deaths, some of the painful results from those conflicts are (a) increases in orphans, people incapacitated to work, refugees and displaced population; (b) destruction of infrastructure; (c) increases in food insecurity and malnutrition in the medium term because agricultural land was rendered useless due to land mines; and (d) exacerbation of health problems, such as the spread of HIV/AIDS and different infectious problems. Direct DALY losses from war and violence amount to about 2.6 per cent of all total causes among the poorest 20 per cent of the world population, but the indirect losses

are far greater (Gwatkin and Guillot 1999). it is clear that, in many countries, violence and war should not be seen only as a domestic responsibility that can, in good conscience, be left alone to be solved internally by the countries suffering from it.

VII.3 International spread of disease

Increases in international travel, tourism, and food trade mean that toxic products, both legal and illegal, reach wider markets and that new and resurgent disease-producing organisms can be transported rapidly from one continent to another. During the 1990s, emerging and re-emerging infectious diseases have become a major public health concern. Some 30 new and highly infectious diseases have been recorded in the last 20 years (WHO 1997). Through contact in airports and air travel, which has skyrocketed in the last 40 years, from two million passenger a year in 1950 to over 1.4 billion today, airborne diseases such as pneumonic plague, influenza, and TB can easily be spread (Heyman 2001). HIV/AIDS has also spread through sexual tourism and, in sub-Saharan Africa, through migrant workers and truck drivers. Due to important migration flows caused by wars and civil strife, the number of refugees and displaced people has increased nine-fold over the past two decades. In 1996, as many as 50 million people worldwide, or 1 per cent of the world's population, had been uprooted from their homes. Refugees and displaced persons living in overcrowded, unsanitary conditions are at risk of outbreaks of cholera and other waterborne diseases (Heyman 2001). Insects and other animal vectors can also move globally carried by trade in goods (as the Asian tiger mosquito appeared to have enter the US in 1985 through a shipment of used tyres from Asia), by the wind, by birds, or by ocean currents (Silbergeld 2001).

The effort to control infectious diseases is undermined by the growing resistance of microbes to drugs that once were highly effective against infections. At the same time, there is a decrease in the speed of new drugs development, in part due to the cost of their development and a decline in resources available to fund disease surveillance, diagnosis, and control systems, based on the perception prevalent in the 1970s that communicable diseases had been controlled (WHO 1997, 2000).

Although antimicrobial resistance affects industrialized and developing countries alike, its impact is far greater in developing countries (WHO 1999b). However, effective, low-cost interventions are available (WHO 1999b): DOTS (Directly Observed Treatment, Short-course) for TB; insecticide impregnated bednets for malaria; prevention strategies for HIV/AIDS; Integrated Management of Childhood Illnesses (IMCI) which can help in the fight against pneumonia, diarrhoea, malaria, measles, malnutrition, and other diseases; and childhood vaccination for diphtheria, whooping cough, tetanus, polio, measles, and BCG. The World Health Organization and other international organizations have estimated the additional cost of effective implementation at about US$15 billion over five years (Heymann 2001).

In response to the risks associated with the international spread of diseases, two common, but inadequate, defensive reactions seem to be gaining ground in developed countries (Silbergeld 2001). In a world perceived as swarming with pathogens, the first approach seeks to kill all viruses with the widespread use of antibiotics and antimicrobials in almost everything. The problem, of course, is the clear increase in antibiotic resistance in those pathogens. The second approach consists in cutting links. However, both humanitarian and economic reasons call for the world community to invest the needed funds to solve the "old burden" of the unfinished agenda where it is still present, rather than try to fence it off. The needed interventions to do so require a concerted effort by public, private, and non-governmental organizations, at the national and international levels, possibly linked to other actions such as debt reduction under the Highly Indebted Poor Countries Initiative (HIPC) and peace efforts in countries affected by war and civil conflict. An integrated effort at the international level should be as important for industrialized countries, which could take advantage of the window of opportunity offered by the fact that the agents of those infectious diseases have not yet developed sufficient resistance to the available medicines. The costs seem modest compared to the benefits and waiting longer may mean that the curative impact of currently available medicines may be eroded or eliminated through increasing drug resistance (Heymann 2001). Controlling infectious diseases is a global challenge that requires a global response.

VII.4 Global environment

The environmental threats to human health are numerous. Some of them are more localized, such as lack of access to safe drinking water; inadequate basic sanitation in the household and the community; and indoor air pollution from cooking and heating using inadequate fuels and inadequate solid waste disposal. Others have intermediate reach, including water pollution from populated areas, industry, and intensive agriculture; and urban air pollution from motorcars, coal power stations, and industry. Most environmental threats have global implications (the "spillover" meaning of globalization discussed earlier) and can create climate change; stratospheric ozone depletion and transboundary pollution air and water pollution, acid rain, loss of biodiversity, desertification, and deforestation. Poor environmental quality has been calculated to be directly responsible for around 25 per cent of all preventable ill-health in the world today, mostly in the form of diarrhoea diseases, acute respiratory infections, malaria, other vector-borne diseases, chronic respiratory diseases, and childhood infections.

The development pattern with the extension and intensification of agricultural production systems, the process of industrialization, and the increased utilization of energy sources has important implications for air, water, and soil pollution, hazardous wastes and noise, and exposure of agricultural and industrial workers to different health risks, and global warming.

Although there are uncertainties about the magnitudes, rates, and regional patterns of climate change, studies suggest that much of the world will be impacted by climate change linked to the greenhouse effect. The mean temperature is likely to rise along with the incidence of extreme events such as heat spells, droughts, and floods (Rosenzweig and Hillel 1998). Already El Niño/Southern Oscillation (ENSO), the most important ocean-atmosphere phenomenon to cause global climate variability on inter–annual time scales, is occurring at shorter intervals: the average difference in years between those events between the mid 1950s and the beginning of the 1980s was more than 8 years; since the 1980s the average interval has dropped to 5 years.

The number of people killed, injured, or made homeless by natural disasters, in part associated to El Niño events, has also increased. Recently, there has been a growing recognition of the relationship between El Niño and some diseases transmitted by mosquitoes, such as malaria, dengue, and Rift Valley fever (WHO 2000). Also in 1997, heavy rain and floods in the Horn of Africa were followed by outbreaks of cholera. In 1998, in Central America, unusual weather patterns, including hurricane Mitch were followed by a resurgence of cholera (WHO 2001).

In the future, the projected climate change is not expected to affect all countries equally (IPCC 1996). Global agricultural production appears to be sustainable in the aggregate but crop yields and productivity changes will vary considerably across regions, with consequences for food security and nutrition. A majority of countries in sub-Saharan Africa (already a hot region with large tracts of arid or semi-arid land) appears to be the most vulnerable to temperature increases. Countries in South and South-east Asia will also be affected by increasing irregularity and intensity in tropical storms, as well as the Pacific Island Nations, which will suffer potential losses of costal land due to sea-level increases, saltwater intrusion into water supplies, and increased damages from tropical storms (Rosenzweig and Hillel 1998). As a consequence of the expected climate changes, the number of people at risk of hunger is also projected to rise in 2060 by between 38 to 300 million under the intermediate projections compared to a baseline without climate change (Rosenzweig and Hillel 1998).

VIII Shaping Globalization to Improve Health

As globalization proceeds, it is crucial to consider how to help shape the forces of globalization to ensure that health outcomes benefit the poor while improving on average.

The reasons to tackle health problems with a concerted effort at the international level, including the need for additional funding, are multiple. The first, and most important, reason is humanitarian: every 3 seconds a child dies in the developing world, mostly from diseases that could have been prevented with scientifically available and financially affordable measures, linked to better health care, nutrition, and infrastructure. The second reason relates to economic development in poor countries. Poverty leads to

illness and communicable diseases such as HIV/AIDS, TB, and malaria, which are themselves major causes of poverty. It is increasingly clear that investments to improve health can lead to accelerated and more equitable economic development. Recent studies suggest that in countries where 10 to 15 per cent of the population is HIV positive, the growth rate of GDP per capita can decline by up to 1 per cent per year for decades. For many of the most prevalent infectious diseases, the economic benefits far exceed the costs of controlling or reducing their incidence (WHO 1999 and 2000). Better health outcomes, that are equitably distributed, also contribute to social and political stability. The third reason should be self-interest on the part of industrialized countries. The increase in population and travel makes it impossible to insulate the health of people in industrialized countries—a relatively small percentage of the world's total—when the majority of the population on the planet continues to suffer from many diseases. The health, environmental, and humanitarian problems of developing countries will eventually affect rich countries through multiple channels, with potentially critical implications for the economic and physical security of developed nations. For instance, a delay by another decade in finding a cure for HIV/AIDS may result in this disease taking hold of China, India, many former Soviet Republics, and Eastern Europe, reaching a scale far beyond the current epidemic that plagues Africa. With other diseases, not acting now may mean that microbes or viruses develop resistance to drugs, as may happen with drug-resistant TB, which may become as widespread and as ordinary as TB and make its treatment much more expensive (Heymann 2001). On a positive note, helping developing countries put under control communicable diseases will add to their economic vitality and political stability, making them better partners for the industrial democracies.

Industrialized countries can do much to help reduce world poverty, and improve health outcomes. These countries define the global economic, political, and environmental agenda and context, and therefore cannot evade their responsibility to make this world a better place, especially for the poor. A number of broad policy issues require attention (Diaz-Bonilla 2001).

Peace, democracy, and good governance. Continued international diplomatic and political engagement and financial support is crucial in bringing peace and reconciliation to

countries affected by conflict and to sustain fragile transitions towards democracy. Otherwise, regional security problems and humanitarian crises will keep recurring. Improved codes of conduct and controls governing arms trade are essential, as are equitable international frameworks to reduce the flow of products (diamonds, drugs) that generate resources for war. The rich nations must also ensure that their firms abide by anti-bribery codes and that there are no safe havens for money laundering, while strongly supporting anti-corruption efforts in developing countries.

Trade liberalization in products of interest to developing countries. Low-income countries have historically faced high trade barriers in industrialized countries in products such as agriculture and textiles that best reflect the developing world's human and natural resource endowments. The Uruguay Round began to address some of the imbalances that developing countries suffer in international trade, but did not solve them. Efforts to rectify those imbalances should continue. In particular, current negotiations must eliminate the combination of agricultural protectionism and high subsidies in industrialized countries that has limited agricultural growth in the developing world and has weakened food security in vulnerable countries by competing with their domestic production.

International capital and aid flows. The last 20 years have witnessed serious international financial crises, several of which arose from policy changes in industrialized countries that affected exchange rates, interest rates, and capital flows, with destabilizing effects on weaker countries. Although developing countries must reduce their vulnerability through better macroeconomic and financial policies, these may not be enough if the main industrialized countries do not foster world financial stability with adequate macroeconomic policies. Moreover, the poorest countries, lacking access to international capital markets, need resources through aid flows. They would benefit from the acceleration and expansion of the HIPC and the implementation, and future increase, of aid targets for donor countries.

Technology and public goods. Expanded adaptive research on agricultural technology, and biotechnology in particular, focused on the needs of poor farmers and consumers in developing countries can contribute to enhance food security, nutrition, and

health. Yet, during the 1990s, growth in investment in agricultural research in, and for, developing countries stalled, and for some regions even decreased. Industrialized countries can help by fostering a serious debate over environmental, health, ethical, and equity concerns with respect to both agricultural biotechnology and agricultural research in general. Most importantly, they can provide scientific and financial support for technology development in poor countries and facilitate creative public–private partnerships. Similar arguments apply to research on health issues that overwhelmingly affect the world's poor. Finally, the proper balance between public and private-sector concerns about intellectual property rights continues to be debated, indicating the need to explore that relationship further.

Environment. Global environmental concerns, from climate change to stressed ecosystems, are complex and addressing them will involve tangible costs. But costs and uncertainties should not obscure their important implications for the food security, health, and nutrition of the world's poor. Deteriorating environmental conditions may reinforce vicious cycles of conflict over resources and humanitarian crises, and the poor will pay the higher price for delays.

International health issues. Global surveillance and prevention of the spread of infectious diseases must also continue, which requires strengthening the global outbreak alert and response network established by WHO in April 2000 and building national capacity for epidemic alert and response. Regarding food safety issues, it is necessary to build capacity for epidemiological tracking and mapping of food-related diseases; to improve data collection efforts; to improve the collaboration between Ministries of Agriculture and Ministries of Health; to establish a preventive and comprehensive approach to reducing the risk of food-borne illness throughout the food system; and to join efforts between industrialized and developing countries to develop such systems.

However, better international conditions will not be enough without a solid policy and institutional domestic framework in developing countries. Globalization does not substitute for appropriate national policies. On the contrary, to fully benefit from trade liberalization, access to new technology, and other aspects of globalization, it is of

paramount importance that developing countries develop appropriate national policies. These should include stable macroeconomic policies, open, efficient and competitive markets, good governance and the rule of law, a vibrant civil society, and programmes and investments that eliminate discrimination and expand opportunities for all, with special consideration for disadvantaged groups, particularly poor women. Pro-poor policies become even more important as the at-risk groups are exposed to the competitive forces, risks, and opportunities brought about by globalization. Internal peace and reconciliation are a prerequisite in conflict-torn countries. Within that framework, countries need to develop efficient and equitable health systems. A detailed review of the domestic policy alternatives to attain that objective is presented in WHO (2000).

The latest wave of globalization has helped create enormous wealth at the world level. But still too many are not sharing in it. The persistence of poverty, hunger, and disease amidst affluence is an avoidable moral tragedy and a drag on the world economy. These problems can be addressed, if humanity, particularly those that are better off, can summon the political will to do so.

Table 1. : Life Expectancy at Birth, by Income Group and Region, 1960–98

(Years)

	1960	1970	1980	1990	1995	1998
Europe and Central Asia	65	68	68	69	69	69
East Asia	39	59	65	68	68	69
Latin America and the Caribbean	56	61	65	68	69	69
West Asia and North Africa	47	53	59	64	67	67
South Asia	44	49	54	59	62	62
sub-Saharan Africa	41	44	48	51	52	49
Developed countries	70	71	74	76	78	78
Developing countries	45	56	58	63	65	62
World	50	59	62	66	67	64

Source: Unicef (2000); World Bank (1999).

Table 2: Child Mortality by Region, 1960, 1990 and 1998

(per 1,000 live births)

	1960	1990	1998
Europe and Central Asia	101	40	35
East Asia	201	57	50
Latin America and the Caribbean	154	53	39
West Asia and North Africa	241	76	66
South Asia	239	135	114
sub-Saharan Africa	261	180	173
Developed countries	37	9	6
Developing countries	216	104	95
World	193	94	86

Source: Unicef (2000).

Table 3: Growth rates of real GDP/person

	1820–70	1870–1913	1913–50	1950–96
China	0.0	0.6	-0.3	3.3
India	0.1	0.4	-0.3	1.1
Indonesia	0.1	0.8	-0.1	2.9
Africa	0.1	0.4	1.0	1.2
Latin America	0.2	1.5	1.5	1.8

Source: Crafts (2000) and the references in it.

Table 4: Growth Rates and Variability

Annual Growth Rates(%)	**1960s**	**1970s**	**1980s**	**1990s**
East Asia & Pacific	4.6	7.2	7.4	7.3
Latin America & Caribbean	5.3	5.9	1.9	3.2
Middle East & North Africa	na	6.5	1.9	3.7
South Asia	4.2	3.1	5.8	5.4
Sub-Saharan Africa	4.9	3.9	2.2	1.9
Europe & Central Asia	na	na	1.8	-2.8
Least developed countries (UN classification)	na	na	2.5	3.1
World	5.5	4.1	2.9	2.4
Coefficient of Variability				
East Asia & Pacific	1.27	0.26	0.26	0.46
Latin America & Caribbean	0.38	0.28	1.56	0.60
Middle East & North Africa	na	0.73	0.81	0.57
South Asia	0.64	1.14	0.25	0.33
sub-Saharan Africa	0.39	0.83	1.12	1.00
Europe & Central Asia	na	na	2.39	1.55
Least developed countries (UN classification)	na	na	0.34	0.67
World	0.12	0.40	0.43	0.39

Source WB; last year 1998.

Table 5
Health Care Financing and Service Provision, by Stage of Economic Development
(Percentage shares relate to proportion of population in each category of coverage)

	Stage I		**Stage II**	**Stage III**
	Poor countries	Low-income countries	Middle-income countries	Higher income countries
	per capita GDP (below 1800)*	Per capita GDP ($1801-5000)*	per capita to GDP ($5001 to $12000)*	Per capita to GDP ($12,001 and above)*
General revenue financed + donor assistance	Public health, disease prevention Public health services (clinics, hospitals) (50-60%) (40-50%)		Public health service (20-40%)	NHS (U.K., N.Z.) Medisave + Catastrophic Insurance (Singapore)
Social insurance	For civil servants and employees of large firms	(10-20%)	Social insurance (30-60%)	Direct provision NHI (Canada, Australia); Indirect provision Bismarkian Social Insurance (Germany, Japan)
Private Insurance	Negligible	(5-10%)	Private Insurance (15-40%)	Managed care + medicine (U.S.)
Self-pay	Private hospitals and clinics Pharmacists Indigenous providers (35-45%) (20-40%)		Self-pay (15-25%)	Self-pay (15-25%)

Note: Per capita GDP on a 1997 purchasing power parity basis.
Source: Hsiao (2000).

Figure 1

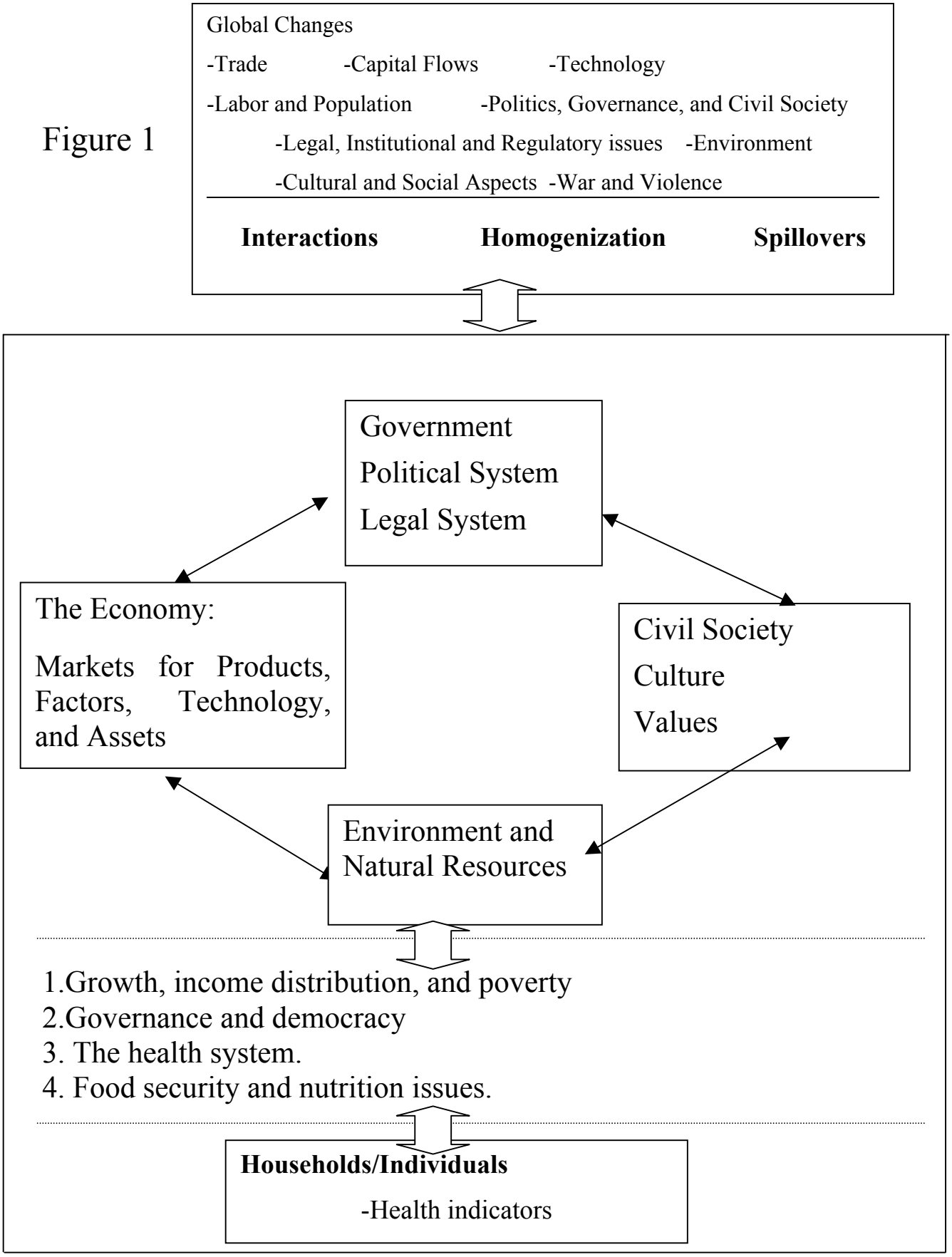
Global Changes
-Trade
-Capital Flows
-Technology
-Labor and Population
-Politics, Governance, and Civil Society
-Legal, Institutional and Regulatory issues
-Environment
-Cultural and Social Aspects
-War and Violence
Interactions
Homogenization
Spillovers
Government
Political System
Legal System
The Economy:
Markets for Products, Factors, Technology, and Assets
Civil Society
Culture
Values
Environment and Natural Resources
1.Growth, income distribution, and poverty
2.Governance and democracy
3. The health system.
4. Food security and nutrition issues.
Households/Individuals
-Health indicators

Figure 2 Globalization and Health Systems