

Globalization, global public goods, and health

David Woodward,¹ Nick Drager,¹
Robert Beaglehole,¹ and Debra Lipson¹

INTRODUCTION

Globalization is one of the characteristics that define the beginning of the 21st century. Yet, there is no single agreed definition of what it is, and there are widely divergent views of what it means in terms of its economic and social repercussions, including its impact on health. What is clear is that it is a multidimensional process encompassing economic, social, cultural, political, and technological components, and that it defines much of the environment within which health is determined.

This paper focuses on economic globalization, which is a key element of the globalization process as a whole, a major driving force behind it, and a critical determinant of its impact on health. It provides a description of the key linkages between globalization and health, as presented in Woodward et al. (1), and introduces the concept and possible applications of global public goods for health as a pro-health counterpart to the globalization process.

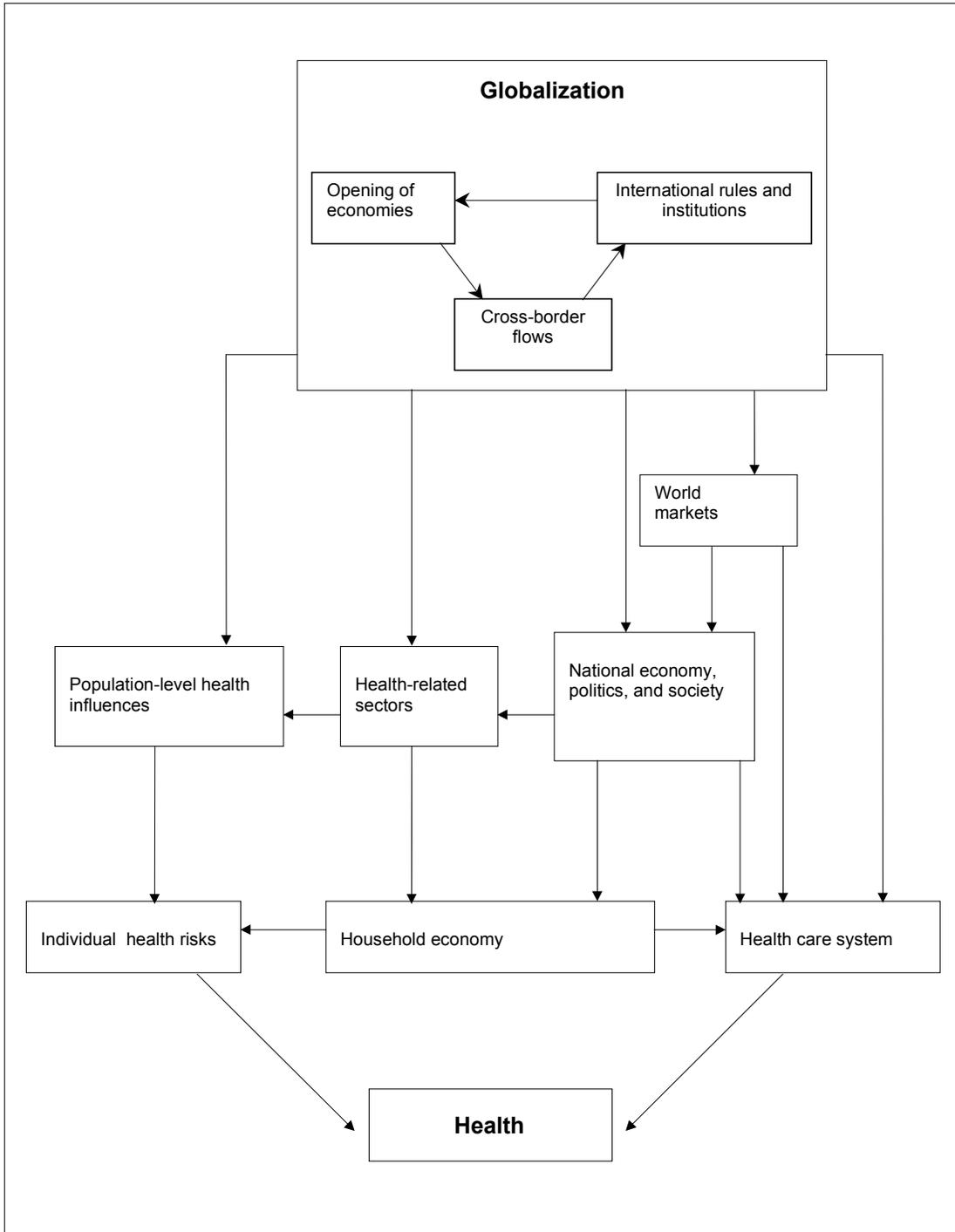
THE GLOBALIZATION PROCESS

Economic globalization encompasses three components connected by an essentially circular relationship. The increasing cross-border flows of goods, services, capital, people, information, and ideas have created pressure for the development of international institutions and rules regulating national policies towards such flows. These, in turn, have contributed to the opening of national borders, thus promoting a further increase in the level of cross-border flows (Figure 1).

This is a dynamic, evolving process. World trade in goods and services grew by 8.6% per year between 1991 and 1999, 3.3% per year faster than output growth (2). Both figures represent a marked acceleration from the 1980s. The value of trade in commercial services grew by around 6% per year in the 1980s and 1990s and increased its share in total world trade from 15.6% in 1980 to 18.9%, in 1999 (3, 4).

The nature of financial flows to developing countries was transformed

¹ Department of Health in Sustainable Development, World Health Organization, Geneva, Switzerland.

Figure 1. Impact of globalization on health

during the 1990s (5). Net loans and grants from official sources including the IMF fell by more than half between 1990 and 2000 and net commercial lending excluding bonds fell almost to zero. Over the same period, foreign direct investment made to acquire or add to a lasting interest in an enterprise, equity investment (in shares), and bond issues increased by factors of 7, 13, and 25, respectively (6). As a result, the proportion of net financial flows going from the public sector in developed countries to the public sector in developing countries fell from 56% in 1990 to 9% in 2000, while those going from the private sector to the private sector, which were only 18% in 1980, rose from 38% in 1990 to 82% in 2000. The share of direct and equity investment increased from less than 6% to nearly 80%. This shift has led to a skewing of the distribution of international financial flows away from Sub-Saharan Africa and towards larger and better-off developing countries in Latin America and East and South-East Asia.

Temporary movements of people via travel and tourism have also increased recently, but legal international migration has been selective and is unlikely to have kept pace with the growth of international trade and financial transactions. This relatively slow growth contrasts markedly with the last major period of globalization, which took place from 1870 to 1914. At that time migration, particularly from Europe to the Americas, was a major feature. However, some developed countries are now increasingly open to the immigration of people with skills that are in short supply locally, such as health and information technology professionals.

The creation of new institutions has assisted and supported the increase of global economic integration. The World Trade Organization (WTO), responsible for the new set of rules governing world trade, was established to promote freer trade. The 1994 General Agreement on Tariffs and Trade, updated during the Uruguay Round of trade talks, can affect the international flow of health goods or products. Its provisions allow countries to ban the import of products, if necessary to protect public health, as long as such bans are not applied in ways that discriminate between countries of origin or between domestic and foreign-made products, and do not restrict international trade any more than is necessary to achieve their public health objectives.

There are four other WTO multilateral trade agreements that have particularly important implications for public health. One is the agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS), which sets the minimum standards of protection for intellectual property rights including patents, copyrights, trademarks, and industrial designs. Though intended to strengthen incentives to create new knowledge, it may make patented drugs less affordable and accessible to developing countries. It also raises issues concerning the desirability of treating knowledge as a global public good and of decreasing the knowledge gap between countries, while skewing research, e.g. for pharmaceutical development, towards the health needs of the rich rather than the poor. Questions are also being asked about the “patentability” of traditional medicines that have been in the public domain for centuries as well as of new drugs, diagnostic agents, and therapies

resulting from the application of biotechnology.

Another agreement, on the application of Sanitary and Phytosanitary Measures (SPS), affects national policies for food safety. To apply measures more restrictive than the international standards set by the Codex Alimentarius Commission, a country must show scientific evidence of risks to health, although the Agreement does allow countries to implement provisional measures in the absence of conclusive scientific evidence. Current discussions center on whether precautionary measures should be taken to protect health even when scientific evidence suggests, but does not prove, that traded foods constitute a risk for health. One particular concern is the effect of unnecessarily strict food safety conditions on the export prospects of developing countries: a recent World Bank study (7) estimates that new European Union (EU) standards on aflatoxins will save one life per two years in Europe, but reduce African exports by US\$ 700 millions per year. The latter is likely to have a considerable effect on health through its impact on poverty and nutrition.

On the other hand, the Agreement on Technical Barriers to Trade (TBT) has implications for the production, labeling, packaging, and quality standards of pharmaceuticals, biological agents, foodstuffs, and other consumer products. The TBT Agreement stipulates that products must be compared to “like” products without considering production methods or practices, and this creates a potential bias against the adoption of health and safety regulations if they add to production costs.

The health sector is also affected by the General Agreement on Trade in Services (GATS), as it covers the movement of consumers and providers across borders to receive and supply health care, foreign direct investment in health, and the emerging areas of e-commerce and telehealth. GATS provides WTO Members with substantial flexibility to decide which service sectors to liberalize. If a country permits market access to any foreign service provider, it must treat providers from all trading partners equally. GATS exempts “service supplied in the exercise of government authority,” which covers services supplied neither on a commercial basis nor in competition with other suppliers. This is assumed to exempt government health providers and government social health insurance schemes from GATS rules.

GLOBALIZATION AND HEALTH RISKS

The spread of communicable disease, whether foodborne or not, illustrates the direct effects of globalization on health. The growth in international travel, with more than two million people crossing international borders every day, has helped carry diseases into new areas. The increased trade in live animals and animal products has increased the spread of foodborne disease and led to new human diseases, for example, bovine spongiform encephalopathy and variant Creutzfeldt-Jacob disease, and the introduction of Rift Valley fever into Saudi Arabia and Yemen.

The increasingly globalized production and marketing of cigarettes has a major adverse health impact. Transnational tobacco companies,

while exploiting the potential for growth in tobacco sales in the developing world, have been among the strongest proponents of tariff reduction and open markets. Trade openness is linked to tobacco consumption; the bilateral agreements negotiated between the United States of America and several Asian countries under threat of sanctions in the 1980s resulted in an overall increase in the demand for tobacco, with a greater effect in poorer countries (8). WTO Member governments retain the ability to implement the legal and regulatory tools that constitute a comprehensive tobacco control policy, provided they apply equally to all tobacco products regardless of country of origin. However, countries vary greatly in their political willingness and capacity to implement these policy measures, and this willingness may be increased or reduced by market opening. (9, 10).

TRADE IN HEALTH SERVICES AND HEALTH SECTOR INPUTS

Trade in health services is minimal, particularly when compared to other traded services. However, this trade may grow rapidly as information and communication technology make it easier—for example, through e-health—and as health systems are liberalized and entry barriers are lowered. This may facilitate access to high-level services by the better off; but it may also divert human resources from public services to more profitable, private services for the elite or foreign markets, thus reducing staffing levels, lowering staff quality, and/or raising salary costs for the public sector. Cross-border electronic communications offer potential benefits, particularly in terms of professional training, continuing medical education,

information sharing, and disease surveillance and response, although its impact is restricted by limited internet-connectivity in most developing countries.

Trade in health sector inputs affects health services by influencing their availability and prices. The lowering of barriers to imports of goods such as drugs, medical equipment, and other consumables may reduce their prices. Conversely, the price of drugs, vaccines, and other patented inputs may be increased by the monopoly granting effects of the TRIPS Agreement. Although the TRIPS Agreement is intended, in part, to increase the incentives for research, the emphasis of medical research remains directed much more towards the more profitable developed-country markets (11).

The international mobility of health professionals also has important implications for health services, as the “brain drain” from many developing countries has created or exacerbated shortages. There are reportedly more Bangladeshi nurses in the Middle East than in Bangladesh and there are major outflows of physicians from India, South Africa, and Cuba, and of nurses from the Philippines and Jamaica. The economic costs of training professionals that subsequently emigrate is substantial, estimated to be tens of millions of dollars for South Africa alone (12).

GLOBALIZATION, THE NATIONAL ECONOMY, AND HEALTH

National economic performance affects health mainly through changes in household incomes, government expenditure, the exchange rate, and prices. All of these are interrelated, as

well as being influenced by globalization. Income is important because of its effects on public sector resources available for health and its effects on the nutrition and health related behaviours of households (especially low-income households). Economists generally assume that opening the economy stimulates economic growth at the national level, and that this growth contributes to poverty reduction. Several cross-country studies have supported the link of international trade or openness with growth (13-16); but the reliability of these results is limited by methodological weaknesses (17).

The contribution of growth to poverty reduction depends critically on the distribution of the associated increase in incomes. One World Bank study (18) has suggested that the poor participate equally in growth during economic opening; but its methodology, too, has been questioned (19). A recent WTO study (20), while assuming the openness-growth-poverty linkage, nonetheless suggested eleven circumstances—most of them commonplace in low-income countries—in which poverty reduction would not occur.

Economic globalization has resulted in divergence between economies—faster growth in the richest and slower growth in the poorest—and has been blamed for increasing inequality within countries and slower poverty reduction in low-income countries (21-23). Even in those countries that have attained rapid growth during the recent phase of globalization, the adverse effects of financial crisis have partly reversed the associated poverty reduction (6). Besides its effects on economic growth, globalization has a potentially important influence on exchange rates

and government finances, which in turn affect prices, incomes, and resources available for public services.

While the effects of globalization on health are strongly influenced by its impact on the national economy, health is also an important constraint on the successful integration of developing countries into the global economy. Human capital and productivity are keys to competing in international markets and attracting investment, but ill health reduces both, through the absence of adults from work and of children from school, and their impaired performance when present. Ill health also increases poverty as earnings diminish due to work-related absence and reduced productivity, and to the costs of medical treatment. This, in turn, reduces the productivity and performance of all household members in both work and school through the effects on nutrition, particularly reduced calorie intake and iron deficiency. These problems are most acute in low-income and least developed countries, contributing to the skewing of benefits of globalization away from them. Ensuring the effectiveness of basic health sectors and the provision of key health interventions—essential drugs, vaccination programs and other low-cost preventive measures—is therefore an important element in broadening the potential benefits of globalization.

CROSS-SECTORAL EFFECTS

Other sectors are important to health because of their roles as

- producers of health-sector inputs (for example, pharmaceuticals, medical equipment, and consumables, construction of health facilities, education of health professionals, and others);

- producers and promoters of goods with favorable or unfavorable effects on health, such as foods, infant formula, tobacco, alcohol, and cleaning products;
- influences on environmental risk factors (for example, pollution, vectors, workplace health and safety, etc); and
- contributors to the key determinants of health, such as employment and education.

The pattern of the results of globalization on different sectors is very complex, differing markedly not only between sectors, but also between the same sectors in different countries. Service sectors such as education and environmental protection are affected primarily through impacts on resource constraints affecting public expenditure and input costs. Like health, education is also affected through the effects of changes in income and poverty on the demand for education. In productive sectors, the effects are much more variable, depending critically on economic circumstances and the competitiveness of production.

GLOBAL PUBLIC GOODS FOR HEALTH

An important response to the increasing global consciousness associated with globalization is the concept of global public goods. It offers the potential both to improve the health effects of globalization itself and to provide broader benefits to health worldwide. A public good is a good—or, more accurately, a service—that is nonexcludable and nonrivalrous in consumption: once provided it is available to all, and consumption by one person does not prevent others from consuming it. The classic

historical example is the service provided by a lighthouse, but the concept subsequently extended to such public health services as water and sanitation systems, health education, and information.

The objective of the global public goods agenda promoted by the UNDP (24) is to extend the concept of public goods from its historical locus at the local and national level to the global level. That is, it seeks to identify services which, when provided globally, confer greater benefits than when provided at the national level, through their cross-border effects.

While there are a number of conceptual and practical problems in identifying global public goods, there are many possible examples in the field of health. Some of these are intrinsically linked to the globalization process, in that they act through the institutional framework and international rules that govern it. Examples include the proposed Framework Convention on Tobacco Control, initiated by WHO, which would control the promotion, marketing, and trade activities of tobacco companies (25); changes to the international rules governing intellectual property rights to secure an optimal combination of incentives for research and development of products to deal with the most important global health problems, with the affordability of these products to those who would benefit from them; and international rules to limit adverse environmental health effects of economic activity.

However, global product goods in the area of health extend far beyond the field of globalization, as conventionally defined. An example is polio eradication; it is nonexcludable

in the sense that only universal eradication confers the full benefits of savings on preventive programs and the prevention of reinfection; and it is nonrivalrous in consumption in the sense that, once polio is eradicated, all will benefit. Other examples of this type include development and dissemination of knowledge based on the best practices for disease prevention and control, and international coordination of efforts to reduce antimicrobial resistance.

CONCLUSIONS

Globalization, a key feature of the world at the beginning of the 21st century, will continue to be a critical influence on health for decades to come. To secure the health improvements that are possible, we must therefore ensure that the globalization process, in all its dimensions, contributes to health promotion rather than to its deterioration. This means managing globalization to minimize its potential adverse effects on health—both direct and indirect—and to maximize its health benefits. Ultimately, it means designing international rules and institutions explicitly to promote and support those national policies and activities which will optimize health outcomes, particularly in those countries in greatest need.

However, this objective requires a much greater understanding of the globalization process, of the channels through which it influences health, and of how these effects are mediated by the particular characteristics of different countries and households. It also requires both a systematic consolidation of what we already know, and a considerable and well-targeted research agenda to fill the gaps in our knowledge.

REFERENCES

1. Woodward D, Drager N, Beaglehole R, Lipson, D. Globalisation and health: a framework for analysis and action. *Bulletin of the World Health Organization* 2001, 79:875-881.
2. International Monetary Fund (IMF). *World economic outlook*. Washington DC: IMF; September 2000.
3. World Trade Organization. World merchandise trade by selected region and economy, 1980-99. Geneva: WTO: 2000. http://www.wto.org/english/res_e/statis_e/webpub_e.xls
4. World Trade Organization. World trade in commercial services by selected region and economy, 1980-99. Geneva: WTO; 2000. http://www.wto.org/english/res_e/statis_e/servic_e.xls
5. Woodward D. Drowning by numbers: the IMF, the World Bank and North-South financial flows. London: Bretton Woods Project; 1998.
6. World Bank. *Global development finance, 2001*. Washington DC: World Bank; 2001.
7. Otsuki T, Wilson J, Sewadeh M. Saving two in a billion: a case study to quantify the trade effect of European safety standards on African exports. Washington DC: World Bank; 2000. (Mimeo).
8. Taylor A, Chaloupka FJ, Guindon E, Corbett M. The impact of trade liberalisation on tobacco consumption. In: Jha P, Chaloupka F, eds. *Tobacco control in developing countries*. Oxford: Oxford University Press; 2000.
9. Vateesatokit P, Hughes B, Ritthphakdee B. Thailand: winning battles, but the war's far from over. *Tobacco Control* 2000;9:122-127.
10. Zatonski W, McMichael AJ, Powles JW. Ecological study of reasons for sharp decline in mortality from ischaemic heart disease in Poland since 1991. *British Medical Journal* 1998; 316:1047-1051.

11. Global Forum for Health Research (GFHR). *The 10/90 report on health research, 2001*. Geneva: GFHR; 2000.
12. Bundred PE, Levitt C. Medical migration: who are the real losers? *Lancet* 2000;356: 245-246.
13. Dollar D. Outward-oriented developing economies really do grow more rapidly: evidence from 95 LDCs, 1976-85. *Economic development and cultural change* 1992; 40:523-544.
14. Sachs J, Warner A. Economic reform and the process of global integration. *Brookings Papers on Economic Activity* 1995;1:1-95.
15. Edwards S. Openness, productivity, and growth: what do we really know? *Economic Journal* 1998;108:383-398.
16. Frankel JA, Romer D. Does trade cause growth? *American Economic Review* 1999;89:379-398.
17. Rodriguez F, Rodrik D. Trade policy and economic growth: a skeptic's guide to the cross-national evidence. Harvard University; 1999. (Mimeo).
18. Dollar D, Kraay A. Growth is good for the poor. Washington, DC: World Bank Development Research Group; 2000. (Mimeo).
19. Weisbrot M, Baker D, Naiman R, Neta G. Growth may be good for the poor—but are IMF and World Bank policies good for growth? Washington DC: Center for Economic Policy Research; 2000. (Mimeo). (www.cepr.net/response_to_dollar_kraay.htm)
20. Winters LA. Trade and poverty: is there a connection?. In: Ben-David D, Nordstrom H, Winters LA. *Trade, income disparity, and poverty*. Geneva: World Trade Organization; 1999 (Special Study No. 5).
21. United Nations Conference on Trade and Development (UNCTAD). *Trade and development report, 1997: globalisation, distribution, and growth*. New York: UNCTAD; 1997.
22. Woodward D. Effects of globalization and liberalization on poverty: concepts and issues. In: United Nations Conference on Trade and Development (UNCTAD). *Globalization and liberalization: effects of international economic relations on poverty*. New York: UNCTAD; 1996.
23. Woodward D. *Globalization, uneven development and poverty: recent trends and policy implications*. New York: Social Development and Poverty Elimination Division, United Nations Development Programme; 1998. (Working Paper No. 4).
24. Kaul I, Grunberg I, Stern MA. *Global public goods: international cooperation into the 21st century*. New York: Oxford University Press-United Nations Development Program; 1999.
25. Taylor AL, Bettcher DW. WHO Framework Convention on Tobacco Control: a global 'good' for public health. *Bulletin of the World Health Organization* 2000; 78:920-929.

OTHER BIBLIOGRAPHY

- Organization for Economic Cooperation and Development (OECD). Deflators for resource flows from DAC Countries 1966-1998 (1997=100). Development Assistance Committee, OECD; 2000. www.oecd.org/dac/xls/deflators.xls.
- Organization for Economic Cooperation and Development (OECD). Net ODA flows (in current U.S. dollars) from 1950 to 1998. Development Assistance Committee, OECD; 2000. www.oecd.org/dac/xls/longtermODA.xls.
- Organization for Economic Cooperation and Development (OECD). Recent trends in official development assistance to health. Paper presented at the Third Meeting of the Commission on Macroeconomics and Health, Paris, 8-10 November, 2000.

