

C3 Reflections on globalisation, trade, food and health

In 2006, the Food and Agricultural Organization of the United Nations (FAO) reported that, despite declining rates of child undernutrition in many developing countries, the number of undernourished people in the world remained 'stubbornly high'. In 2001–03 there were an estimated 854 million undernourished people worldwide (FAO 2006). Since 1990–92 the undernourished population in developing countries has declined by only 3 million people. By contrast, the undernourished population fell by 37 million in the 1970s and by 100 million in the 1980s. Just a year earlier, the World Health Organization (WHO) noted the growing burden of chronic diseases caused in part by unhealthy diets and excessive energy intake. In 2005, 22 million children worldwide were overweight. The WHO predicts that by 2015 some 2.3 billion adults will be overweight and more than 700 million obese.

The WHO has also declared foodborne disease an urgent threat to health. According to the 2007 *World Health Report*, 'although the safety of food has dramatically improved overall, progress is uneven and foodborne outbreaks from microbial contamination, chemicals and toxins are common in many countries.' The extent to which foodborne diseases affect health in developing countries is not fully known, but it is clear that contaminated food affects millions of adults and children every year.

While these global public health problems take on different forms, they are all linked to the production and consumption of food. And while what we eat is ultimately affected by what we do or do not place in our own mouths, there are far larger forces at work. One of these is 'globalisation', a process promoted as a solution to world food problems.



IMAGE C3.1
How will rising food prices affect nutrition of consumers and producers?

The promise of globalisation

Back in the 1970s, state-led intervention in the food and agriculture sector was, according to the theories of neoclassical economics, falling short. In Europe and North America, subsidies were leading to surpluses, so damaging the international market for agricultural products from developing countries. In developing countries, government procurement of agricultural outputs by state marketing boards (to stabilise prices) and the use of trade barriers (to protect domestic food production) were creating ‘inefficiencies’ by reducing incentives for productivity growth and raising prices. At the same time, because agriculture was seen primarily as fuel for industrial growth rather than as a source of economic growth and development itself, ‘discriminatory’ policies such as low food prices and land taxes were applied to agricultural producers (Hawkes 2006a). Moreover, millions of people were experiencing food insecurity and undernutrition.

The solution, it was purported, was to reduce or remove state involvement, encourage privatisation and liberalise the agricultural sector. This would shift the sector away from national or regional systems of food self-sufficiency towards a global model. Privatisation, more open trade and export-led growth would lower the costs of production and consumer food prices, prevent fluctuations in food supply and increase farmers' incomes. The net result supposedly would be a food system more responsive to market demands, and more capable of producing food and ultimately leading to greater food security (Babinard and Pinstrup-Andersen 2001). It would also produce a greater and better variety of foods, thus improving diets. Meanwhile, international agreements on food standards would help countries upgrade their national food safety systems and result in better health protection and improved confidence in exported food products on world markets.

That was the promise of globalisation. And the idea prevailed.

In low- or middle-income countries (LMICs), it started with the structural adjustment programmes of the World Bank and the International Monetary Fund (IMF). Countries experiencing balance-of-payments problems were loaned money on condition that they introduce reforms, notably the liberalisation of trade, investment and the financial sector, and the deregulation and privatisation of nationalised industries. Throughout the 1970s and 1980s, many countries opened up their markets by dismantling state food marketing monopolies, reducing subsidies on agricultural inputs (e.g. on fertilisers) and lowering barriers to trade and investment. The globalisation of food and agriculture had begun.

The pace of change speeded up when free-trade agreements became the focus of policy development in agriculture. In 1994, food and agriculture were for the first time included in a multilateral trade agreement, the Agreement on Agriculture. The Agreement pledged countries to open their markets by reducing tariffs, non-tariff barriers, export subsidies and domestic agricultural support.

The 1995 Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) further reduced trade barriers by encouraging countries to adopt the same or equivalent food safety standards. The Technical Barriers to Trade Agreement obliged countries to ensure that national regulations, voluntary standards and conformity assessment procedures – including those affecting food – would not create unnecessary obstacles to trade.

As markets opened up and the role of governments shrank, private property rights were strengthened. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) expanded the scope of private property rights on food products, including patents on seeds, and

copyright on certain food identities with a geographical basis (for example, champagne) was similarly strengthened.

The dual-track process of liberalisation and strengthened private property rights that handed increasing power to the corporate food industry was also pursued through regional and bilateral agreements. Regional trade agreements were signed at a rate of fifteen per year in the 1990s (FAO 2004). The result of these reforms on the volume of trade was dramatic.¹

World agricultural trade increased from US\$243 billion in 1980–81 to US\$467 billion in 2000–01, representing an annual rate of increase of 4.9 per cent in the 1980s, and 3.4 per cent in the 1990s (Ataman Aksoy 2005). For an average developing country, food import bills as a share of gross domestic product (GDP) more than doubled between 1974 and 2004 (FAO 2004). The share of agricultural production that was exported was also increased, from 19 per cent in 1971 to 40 per cent in 2003 (FAOSTAT 2005).

Importantly, the pattern of food trade also changed:

- Food imports into developing countries increased far faster than into developed countries. While gross food imports into developed countries grew by 45 per cent between 1970 and 2001, they grew by 115 per cent into developing countries (FAO 2004).
- There was a large increase in the exports of certain high-value foods from developing to developed countries. Non-traditional agricultural exports, such as fruits, vegetables and flowers, have grown. The amount of fruit and vegetable imported by developed countries increased from 41.1 to 119.2 million tonnes between 1980 and 2003 (FAOSTAT 2005). For fish, developing countries now account for about 50 per cent of world export values, up from 37 per cent in 1976 (Allain 2007).
- There has been a significant variation in the rate of trade between different foodstuffs. The amount of trade in cereals declined relative to higher-value products such as seafood, fruits and vegetables. Whereas cereals once dominated international food trade, they now comprise less than 50 per cent of total agricultural imports by developing countries (FAO 2004). The amount of trade in processed foodstuffs also increased far more rapidly than raw agricultural commodities, largely as a result of increased exports from developed countries (Rae and Josling 2003).

Liberalisation and the growth of TNCs

An important process of trade liberalisation has been the growth of foreign direct investment (FDI) – a long-term investment made by individual, government or enterprise in one country into an enterprise in another.

BOX C3.1 How trade liberalisation has encouraged the growth of transnational food corporations

- FDI into the food industry was the key process by which TNCs formed and grew by enabling companies to buy, sell and invest in other companies in other countries.
- The commercialisation and privatisation of state food monopolies (pushed heavily by the World Bank) also opened up opportunities for investment by the private sector.
- FDI into the service sector, the streamlining of dispute settlement mechanisms, as well as stronger and broader intellectual property rights, created a better business climate and increased access to capital and technology, which further encouraged investment by TNCs.
- More liberalised cross-border trade and FDI facilitated 'global vertical integration'. This describes the process of TNCs buying and contracting companies and services involved in all aspects of the production, processing, distribution and sale of a particular food, thereby bringing the entire food supply chain under its control.
- Greater liberalisation of cross-border trade also facilitated 'global sourcing', which is when a company searches for inputs, production sites and outputs where costs are lower and regulatory, political and social regimes favourable. Both vertical integration and global sourcing enable TNCs to cut costs and create safeguards against the uncertainty of commodity production and product sales – thus stimulating further growth of TNCs.

There were a total of 232 international agreements containing investment provisions as of 2005, and the number of bilateral investment treaties rose from 181 to 2,495 between 1980 and 2005 (UNCTAD 2000, 2006). FDI is particularly important to food because it enables companies (usually in North America, Europe and Japan) to buy foreign affiliates in other countries, thus leading to the formation of transnational corporations (TNCs). FDI in the food processing and retailing industries has been key to the growth of transnational food corporations, alongside a range of other trade-related policies and incentives (Box C3.1).

The growth of transnational food corporations has been one of the most transformative processes of food globalisation. These corporations have affected the whole food supply chain: the seeds that are planted in the fields, the fertilisers and pesticides applied to the foods, the production, processing and manufacturing of these foods, and the way they are sold and marketed to consumers. TNCs are now leading traders of food.

The FDI that enabled TNCs to grow and function occurred in three waves, all of which continue today. The first major phase of FDI in the food supply chain occurred in the 1960s–70s when agribusinesses invested abroad in trading and processing raw commodities (e.g. cereals, oilseeds) for export. Most of these mainly US-based agribusinesses, such as Cargill, Con Agra and Archer Daniels Midland (ADM), then continued to expand into different processing activities, foods and geographical regions.

Take the case of Cargill, now present in sixty-six countries. One of its earliest expansions was into Argentina, where it invested in grain trading and animal feed in the 1960s. The company is now the largest Argentine agrifood exporter and the second largest Argentine exporter overall, dealing not just with grains but with oilseeds, poultry, peanuts, olive oil and beef (Cargill 2007). Cargill entered China in the early 1970s and currently sells grains, oilseeds, sugar, fruit juices, meats and other commodities and operates twenty-five companies and joint ventures. The company continues to expand, now affecting much of the food eaten by much of the world. As they once famously commented: ‘We are the flour in your bread, the wheat in your noodles, the salt on your fries. We are the corn in your tortillas, the chocolate in your dessert, the sweetener in your soft drink. We are the oil in your salad dressing and the beef, pork or chicken you eat for dinner.’

The second wave of FDI, in the 1980s, was into the manufacturing of highly processed foods – for example, snacks, baked goods, dairy products, soft drinks (Hawkes 2005). Largely through the purchase of foreign affiliates, FDI from US-based food manufacturers alone grew from US\$9 billion in 1980 to US\$39.2 billion in 2000 (Bolling and Somwaru 2001). The result was successful: sales from foreign affiliates increased from US\$39.2 billion to US\$150 billion in the same period, and TNCs from both the US and Europe became market leaders in their core brands – such as Lay’s potato chips and Nestlé ice cream.

Beginning in the 1990s, FDI penetrated supermarkets. FDI from US-based supermarket chains grew to nearly US\$13 billion in 1999, up from around US\$4 billion in 1990 (Harris et al. 2002). Leading retailers are now larger than leading food manufacturers in terms of sales (Table C3.1). In Latin America, it is estimated that supermarkets increased their share of the retail market from 10–20 per cent to 50–60 per cent between 1990 and 2000. In China, the supermarket sector is growing at a rate of 30–40 per cent sales growth per year (Hu et al. 2004) The food retail market is becoming more concentrated everywhere through the process of mergers and acquisitions. In 2004, Wal-Mart was estimated to have 6.1 per cent of the global grocery market, with the French company Carrefour at 2.3 per cent. As a result, more people are buying more food in supermarkets relative to smaller

TABLE C3.1 **World's largest packaged food manufacturers and food retailers, by sales** (US\$ billion)

Food manufacturers		Packaged food sales, 2005
1.	Nestlé (Switzerland)	50.3
2.	Kraft (US)	39.2
3.	Unilever (UK/Netherlands)	37.0
4.	PepsiCo (US)	26.8
5.	Danone (France)	21.1
Food retailers		Total sales, 2006
1.	Wal-Mart Stores (US)	312.4
2.	Carrefour (France)	92.6
3.	Tesco (UK)	69.6
4.	Metro Group (Germany)	69.3
5.	Kroger (US)	60.6

Sources: Hendrickson and Heffernan 2007; Euromonitor 2007.

stores, and supermarkets have emerged as dominant players in the food system (Murphy 2006; Vorley 2003). The increase in the value of food sales through supermarkets, especially in developing countries, is also enabling transnational supermarket chains to maintain and grow their profit margins, so further increasing their power in the global food supply chain.

Importantly, the degree of 'transnationalisation' of the world's largest food manufacturers and retailers has grown significantly since the early 1990s. Between 1990 and 2001, the foreign sales of food-related TNCs within the world's largest 100 TNCs rose from US\$88.8 billion to US\$234.1, with total foreign assets rising from US\$34.0 billion to US\$ 257.7 billion. The foreign assets of Nestlé increased from US\$28.7 billion in 1992 to US\$65.4 billion in 2003 (UNCTAD 2006; Hawkes 2005). The degree of transnationalisation of food-related TNCs is also high relative to other TNCs (UNCTAD 2006, 1995).

Food, globalisation and health

What of the promise of globalisation to improve food-related health? Has it increased food availability, lowered food prices for consumers and boosted

the incomes of the rural poor? Has it led to better food safety? Is there now more and better food available at lower prices?

The effect of trade liberalisation on food availability, prices and agricultural incomes has been uneven and context-specific. Trade liberalisation has both increased and decreased food availability, depending on the balance between production, imports and exports. In the most comprehensive assessment of the national impact of trade reform on food security to date, the FAO found enormous differences in the effects on food availability between countries. While in China, per capita supplies of the principal nutrients grew significantly in the post-reform period, rates of change were very modest in Malawi, and in Tanzania they declined (FAO 2006).

The effect on food prices has been equally complex and dependent on the nature of trade reform, the domestic context, and the roles of the private and public sectors. Furthermore, the effect has varied between prices paid to agricultural producers for their products (farm-gate prices) and those paid by consumers (food retail prices). Thus, when lower food prices may have benefited poor consumers (because food was cheaper), they would have had the opposite effect on agricultural households (because they received a lower price for their products). For agricultural households, then, 'trade reform can be damaging to food security in the short to medium term if it is introduced without a policy package designed to offset the negative effects of liberalization' (FAO 2006).

And have food consumers benefited from lower retail prices? Again, the outcome has proved context-specific and by no means certain because lower farm-gate prices may have simply benefited the processors, manufacturers and retailers who purchase the raw commodities, rather than being passed on to consumers. There are surprisingly few data on this issue. What is clear is that despite trade reforms, food prices are now increasing as a result of rising demand from India and China, climate change and diversion of food for biofuels.

Has any of this affected undernutrition? Food availability is one factor in explaining the prevalence of undernutrition. It is estimated that increased food supplies have resulted in significant reductions in malnutrition since the 1970s despite population increases over the period (Smith and Haddad 2001). And retail food prices are critical to consumers who spend a high proportion of their income on food. An important question for the coming years will be how rising food prices will affect nutrition among both food consumers and producers. Concerns are being raised that rising food prices will place the poor at greater risk of malnutrition. But there are also positive implications if poor agricultural households receive higher prices for their products. The balance of effects on producers and consumers remains to be seen.

Moreover, it is important to note that in developing countries the majority of moderate and severe cases of underweight among children below 2 years are primarily caused by inappropriate weaning practices and a high vulnerability to infectious diseases. These primary causes are in turn affected by maternal education, access to health care, sanitation and water. Thus, how trade liberalisation affects these underlying determinants is as important as its effects on the food supply, if not more.

One of the infectious diseases most associated with malnutrition among infants is diarrhoea. And this can often stem from unsafe food. How has the promise of globalisation fared here?

Globalisation is often regarded as a danger to food safety since traded food can introduce new hazards and spread contaminated food more widely. But this is largely a developed-country concern owing to increasing imports of perishable foods from developing countries. There have been some highly publicised cases such as the *Cyclospora*-related illness from Guatemalan raspberries in the US in 1996 (Unnevehr 2003). Although serious when they do occur, such cases remain fairly infrequent and tend to deflect attention away from the far more serious problem of foodborne disease in developing countries.

Most developing countries have weak food regulation systems. The need to adhere to the SPS Agreement presented an opportunity for countries to upgrade their national food safety programmes with some assistance from international and bilateral agencies. In theory, this would improve consumer protection. But the theory has yet to be translated into a reduced burden of foodborne disease for the world's most vulnerable. Rather than focusing on food consumed by the poorest sectors of society, the process of improving standards has focused on where the profit lies for TNCs: foods for export to developed countries as well as foods sold in supermarkets in developing countries. The process is driven by regulations set by developed countries and transnational supermarkets. In developed countries, the range of food safety regulations is wider than ever despite the SPS Agreement (Josling et al. 2004). And globally, more stringent standards have been set by transnational supermarket chains.

Take the case of Kenyan fish exports to Europe. Although there are domestic standards in Kenya, the European Union imposes stricter hygiene and phytosanitary standards on imported fish. As a result of the costs incurred, the final product has become more expensive for the domestic market and little effort has gone into setting and enforcing domestic safety standards. Thus, 'the costs of producing high-quality fish for export largely fall to local communities, while they also bear the cost of consuming unwholesome fish' (Abila 2003).

TABLE C3.2 **Domestic availability and import quantity of vegetable oils, 1980 and 2003**

		1980	2003	% change
Domestic availability (million tonnes)	developed countries	20.6	37.9	84.0
	developing countries	20.8	65.1	213.0
Import quantity (million tonnes)	developed countries	7.1	21.2	198.6
	developing countries	6.0	28.6	376.7
Calories available (per capita/day)	developed countries	310.9	421.7	35.6
	developing countries	132.6	239.1	80.3
Imports (as % of domestic supply)	developed countries	34.5	55.9	62.3
	developing countries	28.8	43.9	52.3

Source: FAOSTAT 2005.

Much of the emphasis on standards has not even been on safety, but on 'quality'. Take the case of the transnational supermarkets operating in Latin America. The main standards imposed by these supermarkets relate to size and appearance, not safety. One study found that just two countries, Brazil and Costa Rica, imposed and enforced food safety standards for fresh produce, whereas supermarkets in all countries imposed quality standards on producers (Berdegue et al. 2003). The privatisation of food safety and quality standards has favoured the relatively small set of more commercialised suppliers to supermarkets. The smaller producers with less capital to meet the standards set by the supermarkets have found themselves relegated to waning and unprofitable markets, again, compromising their income.

Has, then, globalisation fulfilled its promise of bringing greater food variety and choice at lower prices? Processes of globalisation have indeed been able to deliver this in urban areas, as well as in rural areas with access to transportation networks and electricity. But with it has come a new health epidemic: obesity and diet-related chronic diseases because trade liberalisation has increased the availability and lowered the prices of high-calorie, nutrient-poor foods.

Take the case of vegetable oils. Over the past twenty-five years, leading vegetable oil producers – Argentina, Brazil, the United States, Indonesia and Malaysia – implemented policies to facilitate exports. With a more favourable investment environment, TNCs such as Bunge, Cargill and ADM increased their processing capacities through acquisitions and expansions. In Brazil, by the end of the 1990s, the five largest TNCs owned about 60 per

cent of total crushing capacity (Schnepf et al. 2001). In China, the majority of soya beans are now processed in facilities subject to foreign investment.

At the same time, key importing countries like India and China have reduced import barriers (Hawkes 2006b). As a result, vegetable oil exports and imports have soared (Table C3.2). And as imports increased, vegetable oil prices fell, driven by lower costs of production in exporting countries (FAO 2004). The result has been a greater consumption of vegetable oils. Between 1989/91 and 2000/02, calories available from soya oil per person per day increased from 27 to 78 in China, and 11 to 48 in India (Hawkes 2006b). And overall, between 1982/84 and 2000/02, vegetable oils contributed more than any other food group to the increase of calorie availability worldwide. Vegetable oils can thus clearly be implicated in rising dietary fat intakes worldwide. The hydrogenation of vegetable oils for use in processed foods has also led to the increase in consumption of the heart-deadly trans-fats.

The market for highly processed foods has also been profoundly affected by trade agreements. Consider the case of Mexico (Hawkes 2006b). The North American Free Trade Agreement (NAFTA), signed by Mexico, the US and Canada in 1994, contained key provisions designed to facilitate foreign investment. A consequence of these more liberal investment rules was a rapid acceleration of FDI from the US. In 1993, US FDI into the Mexican food processing industry was US\$210 million. Five years after NAFTA, the US invested US\$5.3 billion in the Mexican food industry, nearly three-quarters of which was in the production of processed foods. FDI clearly stimulated the growth of the processed foods market in Mexico.

Between 1995 and 2003, sales of processed foods (e.g. soft drinks, snacks, baked goods and dairy products) expanded by 5–10 per cent per year. In 1999, processed foods contributed 46 per cent of the total energy intake of children aged between 1 and 4, including a disproportionately large amount of saturated fat (Oria and Sawyer 2007). At the same time, obesity and diabetes have risen to epidemic proportions: the prevalence of overweight/obesity increased from 33 per cent in 1988 to 62.5 per cent in 2004, and over 8 per cent of Mexicans now have diabetes, which the WHO estimates costs the country US\$15 billion a year.

Mexico's example is typical: annual sales growth of processed foods has been far higher in developing countries than in developed countries (Table C3.3). Sales of processed products, now criticised in Western markets for their ill-health affects, are now soaring in developing countries. Between 1997 and 2002, average annual sales growth of carbonated soft drinks was 1.4 per cent in the United States, compared with 8.8 per cent in China,

TABLE C3.3 **Growth in retail sales of packaged foods, 1996–2002**

Country group	Per capita retail sales of packaged foods, 2002 (\$)	Retail growth of packaged foods 1996–2002 (%)	Per capita growth of packaged foods (%)
High income	979	3.2	2.5
Upper middle income	298	8.1	6.7
Lower middle income	143	28.8	28.1
Low income	63	12.9	11.9

Source: Euromonitor 2007.

7.9 per cent in India, 7.8 per cent in Indonesia and 6.2 per cent in South Africa (Gehlhar and Regmi 2005).

Food: a public health priority

It is easy to argue about the technical outcomes of globalisation policies and processes on food-related health. Food availability goes up and down. Prices change this way and that way. Food becomes more or less safe. Incomes rise for some and fall for others. Regulations and standards have uneven effects. Though it is possible to see positive and negative in all these machinations, something is fairly clear: globalisation has not lived up to its promise. Thus far, it has failed to create a food market that provides healthy and safe food for all. Too many people are still suffering from undernutrition; foodborne disease is only becoming a more serious problem; the burden of obesity and diet-related chronic diseases is ever greater.

There are two possible ways forward. One is to make globalisation work better. This is the approach taken by the multilateral institutions, which recommend programmes to help farmers access international export markets and supermarkets, capacity-building for food safety regulation, and safety nets for the poor (though they tend to be silent on the issue of obesity). A second is to fight food globalisation. Groups of farmers and landless peoples the world over are, for example, pursuing the concept of ‘food sovereignty’ – that is, the ‘right of peoples to define their own food, agriculture, livestock and fisheries systems’ – in contrast to having food largely subject to international market forces. Whatever way, given how integral food is to our health, the health community needs to act. Healthy food production and consumption should be a global public health priority.

Note

1. As agricultural trade has increased, so has the volume of agricultural production, notably of the higher value products, which have also experienced the fastest rates of increase of trade. Indeed, between 1982 and 2002, the highest annual percentage rate of increase was for vegetables (4.2%) and oilcrops (3.8%), followed by meat (2.8%), fruit (2.4%), and fish (2.4%), with the lowest rate for cereals (1.1%).

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