Shifting Wealth and the Consequences of Rising Food Prices on Social Cohesion:

A Diagnosis and Policy Responses

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This version: January 2011

Preliminary version (not to be cited)

Abstract

This paper analyses the social consequences of the food price rises that have been witnessed since 2007-8. The paper looks at some of the policy options to address this serious challenge to social stability rather than discuss the causes of the price rises. The paper argues that solutions need to go beyond the provision of adequate social protection and safety nets - distributional questions also loom large in any solution, in terms of avoiding the negative impacts of land-grabs, and re-examining thorny questions such as land reform. The paper frames the discussion in the context of the increasing roles of emerging countries (e.g. Brazil, China, India, Indonesia) in global food systems.

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Introduction

For many developing countries, because of the large share of the poor still living in rural areas and at least partially dependent on agriculture, a path of more inclusive growth is dependent on faster agricultural growth and development. We are used to consider this statement as a truism for the many poor developing countries in Africa - and, to a less degree, in Latin America - but, contrary to popular perceptions, it is also true of the large emerging Asian countries. India is a good example of this - it is less urbanised than most other developing countries (approximately 30%), and rapid growth has so far been focussed on urban areas and the manufacturing and service sector. Yet approximately 55 percent of the labour force is still working in agriculture while contributing approximately only 18 percent of GDP (Bardhan, 2010:43). According to official data, 45 percent of the Chinese labour force is still concentrated in the agricultural sector.

In 2010, a total of 33 countries suffer from chronic food insecurity, 16 of which have been in this position for a decade or more (FAOa, 2010). After decades of failed agricultural policies, many low- and middle-income countries have become net importers of food. Africa was a net food exporter in the 1970s, but became a net importer by the early 1990s. The 2007-08 food price rises affected the availability of staples in many countries in Asia and Africa and led to riots in Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, Mauritania and Senegal among others. Price volatility is also a problem from the point of view of fiscal management and macroeconomic balance for both exporters and importers.

Despite these trends, for the past two decades both developing country governments and donors have effectively withdrawn from the countryside (Green, 2008). Aid to agriculture dropped from 11.4% of all aid in 1983-84 to 3.4% in 2004-05. Total aid to agriculture amounted to more than 4 billion USD in 2008 and 2009, representing roughly 3.5% of total official development assistance (OECD, 2010a). Between 1980 and 2004, spending on agriculture as a share of total government expenditure fell in Africa (from 6.4% to 5%), in Asia (from 14.8% to 7.4%), and in Latin America (8% to 2.7%).

Thus the social and economic inclusion of the poor in many developing countries is still largely dependent on the dynamics of agricultural development. The extent to which agricultural development is politically and socially an extremely sensitive issue was put in sharp relief by recent riots in many developing countries. Since the sharp food price rises in 2007-8, riots in developing countries provoked by these price rises have received much media attention. Although the underlying cause of the riots in many cases may be complex, and not simply attributable to food prices (food price rises may just act as a detonator of disturbances which reflect deeper social grievances), it does suggest that it is an issue that policymakers cannot afford to neglect. Moreover, the response cannot be limited to simply looking for short-term (often unsustainable) solutions (for example, increasing subsidies), but rather need to focus on the long-term underlying problems of agricultural production and development. Distributional issues

loom large in any durable solution to the problem – we need to look at issues of access to land, of social protection systems,

A few recent examples put these ideas in context. In early September 2010, police in Mozambique arrested 142 people over riots that led to 13 deaths. The strain on household budgets in the capital had been building for weeks.[1] The price of bread had risen from by 40 percent. The increase in bread prices came amid rocketing world prices for wheat. Facing such acute popular anger over the rise in the cost of living, the Mozambican government announced on September 7th that it would reintroduce expensive food subsidies.

Yet ironically, at the national level at least, Mozambique's own cereal harvest had been good in 2010, with the staple crop of maize being down just 3% on the bumper yield of 2009, according to by FAO/WFP (2010).[2] Another important irony is that FAO in its 2010 report had recently cited Mozambique as a success story.

> *Since the signing of the peace accords in 1992, Mozambique has enjoyed a period of remarkable stability and has become a success story in terms of economic growth and poverty reduction. According to the World Bank, economic growth averaged 8 percent a year between 1996 and 2008. Since 1992, agricultural output has grown by 5.6 percent a year, mainly as a result of expansion of the area cultivated but also in part because of growth in the agricultural labour force and increases in productivity* (FAOb, 2010:43).

Yet this was obviously not enough to be able to avoid the crisis and rioting. Guaranteeing food security in low income countries is clearly a complex challenge, and it is quite likely that it will become more so over the coming decade.

Although the media has generally treated food riots as a new phenomenon, as a response to unprecedented high prices, civil disturbances caused by food shortages are of course anything but new (Table 1). Throughout history, food shortages have been a persistent cause of social unrest. When peoples' lives and well-being are literally at stake, clearly it does not take much to cause shortages or price increases to provoke civil unrest. And, as is so often the case, it is the poor who are usually most vulnerable. Guaranteeing food security thus needs to be a priority to any government which aspires to creating a socially cohesive society.

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[1] It is notable that it was not purely food price rises, but rather a conflation of events which made the situation so serious. In February 2008 rioting had also broken out in several poor areas of Maputo in reaction to a 50% increase in public transport fares. In serious clashes between rioters and police, three people were killed and over 100 injured, and numerous shops and business premises were looted or burned down. These were the first riots in the capital since 1994. Similarly, in early August 2010 the price of oil derivatives rose by 8% in line with the government's policy of gradually withdrawing fuel subsidies, which proved to be a large fiscal burden (April 2010, Economic policy). Electricity tariffs rose by 13% imminently.

[2] Regionally, however, there had been pronounced differences in output, which reemphasises the importance of local food production. This is discussed further in the section "*High Food Prices: A Blessing in disguise?"*

Table 1: Food Riots throughout Recent History

The Egyptian 'Bread Riots' of 1977	Riots took place in most major cities in Egypt in January 1977, a spontaneous uprising by hundreds of thousands protesting against the termination of state subsidies on basic foodstuffs. As many as 800 people were killed, and the protests were only ended with the deployment of the army.
The 1989 food riots Argentina	Between May and June 1989, during the final period of Raúl Alfonsín's presidency, a series of riots and related episodes of looting in stores and supermarkets took place. The riots were provoked by a combination of rampant hyperinflation and food shortage, and were associated with legal protests and demonstrations.
2007 West Bengal food riots	Riots caused by shortage of food and widespread corruption in public distribution system erupted in September 2007 in the Bankura district, but later spread to other districts. The police opened fire to quell the mob.
Haiti food riots 2008	On April 12, 2008, the Haitian Senate voted to dismiss Prime Minister Jacques-Edouard Alexis after violent food riots hit the country. The food riots caused the death of 5 people. Prices for food items such as rice, beans, fruit and condensed milk had gone up by 50 percent since late 2007. As of February 2010, post-earthquake Port-au-Prince is almost entirely reliant on foreign food aid.
Mozambique 2010	Despite a good harvest at the national level, food and fuel price increases and local scarcity lead to riots in Maputo, whereby 12 people were killed and many hundreds injured.
Algeria, January 2011	Although ostensibly about rising food prices, the crisis was popularly associated with underlying grievances regarding high unemployment and political freedoms. Similar disturbances have occurred in Tunisia and Jordan, the former leading to the ultimate overthrow of the government of President Ben Ali, in power since 1987.

Source: Own Elaboration

In this paper, we will not discuss the factors which have produced a sharp observer will increase in global food prices over the last 3 to 4 years - that has been discussed this extensively elsewhere (see, *inter alia*, Heady and Fan, 2010). Instead, we focus on the consequences, particularly in terms of its social impact. We will then discuss some of the main policy options that can be used to address this serious

challenge. What will be the consequences to low-income countries of the increased roles of countries with growing economic and purchasing power (e.g. Brazil, China, India, Indonesia) in global food systems?

Shifting Agricultural Potential – and What It Means for Food Security

Though difficult to quantify with precision it seems clear that *Shifting Wealth* has had a large impact on global food security, and is changing the dynamics of global food production. It does this through both impacting on the supply and demand side. Clearly many other factors are also in play, including the rise in biofuels, climate change, underinvestment and low productivity in agriculture, etc. but as noted in OECD Development Centre (2010), rapidly increasing incomes in many emerging markets are changing global patterns of demand, raising the prices of higher protein foods such as meat and fish, and creating demand for other kinds of food products (Kharas, 2010).

As income levels rise in developing countries, so it is expected that demand for meat will tend towards the per capita consumption rates of 115kg per year in the USA and 80kg per year in the UK (Royal Society, 2009). In China alone, meat consumption has more than doubled in the past 20 years, and is projected to double again by 2030 (Scherr and Sthapit, 2009). Shifting consumption patterns combined with population growth have led to estimates that food production will be required to dramatically increase to meet growing consumption needs in the future (Lobley and Winter, 2010).

On the supply side, traditionally attention has been focused on temperate producers of agricultural products, particularly northern Europe and North America. This has been one of themes that has impacted on global trade negotiations, leading to a blockage in the Doha Round. There is a broad consensus that agricultural protectionism in high-income countries has had a negative impact on the development of agriculture in the developing world (see, inter alia, Aksoy and Beghin, 2005). There has also been a lot of focus of late on the state of traditional agricultural producers and their role in precipitating the sharp food price rises seen in recent years. Thus in 2010, drought and firestorms in Russia were largely blamed for provoking a sharp increase in prices in September 2010. The dramatic shift towards the production of biofuels is also often invoked as a cause of price rises – in the USA, for instance, 40% of the maize crop is now sold as an input for biofuels.

However, it is often not appreciated the extent to which the emerging markets now dominate global food production. In absolute terms, China is by far the largest agricultural producer in the world, followed by India. Even at market exchange rates, the value of the United State's (the largest OECD producer) agricultural production is only approximately a third as large as that of China (Table 2). This outcome is of course in part the consequence of both China and India being the world's most populous countries. But it is also in part the result of explicit policies to ensure national food-self sufficiency – policies which themselves are likely to break down as demand outstrips supply, and these countries run up against serious constraints in terms of the amount of

available arable land. Previous policies of food self-sufficiency have actually resulted in a situation whereby, despite their large production bases, these countries were inward looking and hardly impact on global food markets (Bello, 2009). Large developing countries such as India and China have studiously avoided depending imported foodstuffs, actively promoting their own food security (though that does not mean that they still have large numbers of malnourished people within their frontiers).[3]

Table 2: The World's Largest Agricultural Producers (2008- blns US$)

Rank	Country	Amount	Rank	Country	Amount
1	China	489	11	Italy	46
2	India	202	12	Spain	44
3	United States	183	13	Mexico	41
4	Brazil	106	14	Pakistan	33
5	Russia	84	15	Argentina	32
6	Indonesia	74	15	Germany	32
7	Turkey	64	15	Thailand	32
8	Japan	63	18	Iran	29
9	France	57	19	Australia	26
10	Nigeria	54	20	Philippines	25

Source: The Economist, 2010

Notes: low- and middle-income countries are indicated in red,

With *Shifting Wealth* all that is about to change. Not only are these countries making greater demands on global markets, but their production is increasingly influencing global prices in a way that would not have been considered possible ten years before. One example are soya markets. China has become the world's leading importer of soya beans for cattle feed. During the decade 1994 to 2004, world trade in soy beans double, and 70% of the global increase in exports went to China, where meat production shot up from 45,000,000 to 74,000,000 tonnes. Agribusiness in Brazil and Argentina rush to fill the demand, with the two countries providing more than two thirds of the increased global exports of soya beans.

This brings us to another type of emerging market producer which merits especial attention – the highly productive and competitive producers like Brazil and Argentina. In a whole host of agricultural commodities, Brazil is a major exporter, including soya (where Brazil has a global market share of almost 40 percent), chicken

[3] Most industrialised countries have also aggressively promoted national food security. In Europe, the Common Agricultural Policy was set up expressly for this purpose (and succeeded in meeting this objective, though critics would say at an excessively high cost). Similarly, developed countries like Japan and the United States agriculture have heavily subsidized their agricultural sectors. Back in July 2001, President George W. Bush was extremely explicit about the goal of national food security: "*Can you imagine a country that was unable to grow enough food to feed the people? It would be a nation that would be subject to international pressure. It would be a nation at risk. And so when we´re talking about American agriculture, we´re really talking about a national security issue*."

(30 percent), `coffee (30 percent), beef (20 percent), orange juice (80 percent), and tobacco (20 percent).

Figure 1—Share of global crop production (%), 2008

Source: Food and Agriculture Organization of the United Nations (FAO), FAOSTAT database (Rome, 2010).

Collectively then, these countries are reshaping global food production and patterns. China and India, as well as Brazil, play a dominant role in the global production of food products, including staple crops such as wheat, maize, and rice (Figure 1 and Table 3). It is remarkable, for instance, that between 1990 and 2004, China increased vegetable production every two years by the equivalent of the total vegetable output of California (Bardhan, 2010:44). China and India are the world's largest producers of wheat and rice and, along with Brazil, were among the top five producers of maize in 2008. Their production and productivity growth have a critical impact on global food security (Fan and Brzeska, 2010).

Table 3: Major Producers and Consumers of Wheat, 2008-9 ('000 tonnes)

Top 10 producers			Top 10 consumers		
Rank	Country	Amount	Rank	Country	Amount
1	EU27	151200	1	EU27	124750
2	China	112500	2	China	104620
3	India	78600	3	India	72600
4	United States	68000	4	Russia	39800
5	Russia	63800	5	United States	34310
6	Canada	28600	6	Pakistan	23070
7	Ukraine	25900	7	Turkey	17830
8	Pakistan	21500	8	Egypt	16440
9	Australia	20900	9	Iran	15770
10	Turkey	17000	10	Ukraine	12830

Source: The Economist, 2010

Total net grain imports are still modest for the Asian giants. China is surprisingly self-sufficient in food. Beginning in 2004, a new round of subsidies and tax reductions promised to put the national government in the position of providing net support for

agriculture for the first time since 1949. In fact, China imports bulk land-intensive products (such as wheat (the most important), corn, cotton and soybeans). The one bulk item that China exports is rice. However, China has rapidly expanded its exports of labour-intensive horticultural products (vegetables, flowers, fruits and canned and processed foods). Clearly, international trade in agricultural products is advantageous for China, making use of its differential in factor endowments.

Nevertheless, as Naughton (2007:Chapter 12) stresses, since it is the largest agricultural producer in the world, it is crucial that productivity continues to increase. "*Were China to enter international grain markets to the extent that, say, Japan and Taiwan have, considerable upset would be caused by dramatic price increases*."

Thus China has become a global player in agricultural trade, the consequence of developments in the domestic relationship between industry and the culture, between the countryside and the city. The government's explicit policy of food self-reliance is changing, and with it China's impact on global agriculture. There are several reasons for this (Bello, 2009:86-89):

1. As mentioned earlier, the transition from a largely cereal diet to greater meat dependence may necessitate ever greater imports not only of soya beans but other grains as well as animal feed.

2. China's liberalisation of its agricultural trade, particular foods joining the World Trade Organisation in 2001, has increased the country's dependency on the global food market. A study of global trade liberalisation found that the farmers who would lose most are in China, with potential losses of 75 billion US dollars (van der Mensbrugghe and Beghin, 2005).

3. Production is beginning to hit ecological limits. Arable land continues to shrink in China, from 130 million hectares in 1996 to 121.8 million hectares in 2006." (OECD, 2009:90). Expanded use of fertiliser has brought about decreasing returns and soil quality has eroded. Meanwhile, water shortages, particular in the North China plain, which produces a large share of China's wheat corn and other heavily irrigated crops, have worsened. Water scarcity contributed to grain production in northern China falling by 50 million tonnes between 1998 and 2004. The area affected by serious soil erosion has increased to include around 38 percent of the entire country, and the area of desert is increasing at the rate of around 2,500 square km per year. Nearly a quarter of China's rivers fail to meet its own irrigation standards, and significant levels of pesticide residues are found in more than half of the foods grown in the suburbs of major cities. China's emissions of organic water pollutants are as large as those of America, India, Russia and Japan combined (Nolan, 2007:134).

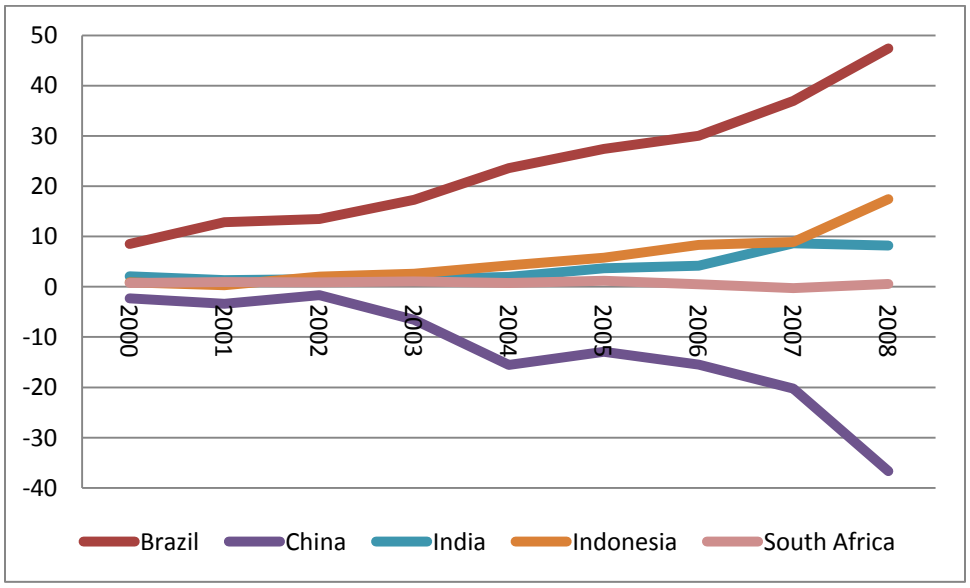
4. There has been a decreasing spending on agricultural infrastructure and technological research. Although in absolute terms spending has continued to increase, Chinese agricultural research has been declining since the 1980s - the country's public investment on agricultural research is now one of the lowest in

relation to GDP in the world. Investment for agro-technological extension has also dropped. Poor maintenance of irrigation and flood control facilities have contributed to China's relatively low average per hectare crop yield and agricultural productivity.

5. Urban residential, commercial, and industrial orations have rapidly been taken over the land - between 1990 and 1997, for instance, the average yearly loss of farmland stood at 657,000 hectares a year. Moreover, it is a process that has been speeding up, with 4.1 million hectares taken out of cultivation between 1996 and 2002. In other words, cultivated land area between 1996 and 2002 fell from 130 to 125.9 million, or a net loss of 3.16% in just seven years. China's intense and growing population means that the amount of arable land per person is among the lowest in the world, standing at only around 0.10 hectares, compared with a world average of 0.24 hectares. The average quality of farmland is falling due to the conversion of high quality land, especially in Eastern China to industrial and residential use (Nolan, 2009:134).

The results of these trends are in the agrofood balances shown in Figure 2 – the sum of exports of all agricultural products minus agricultural imports. India still maintains a net balance, but China has slipped rapidly into a negative overall agrofood balances.

Figure 2: Agrofood Balances, Brazil, China, India, Indonesia and South Africa (2000-2008, blns US$)



Source: UNCTAD, 2010

The rise of the Asian drivers is likely to impact on agriculture in the rest of the developing world through other channels apart from their impact on global markets. Four principal channels can be identified (Kaplinsky et. al., 2009). Through their impact on global supply and demand, the Asian drivers will affect of trade flows and flows of foreign direct investment to agriculture in other developing countries. They will also

impact on agricultural sector developments through aid flows and agricultural development cooperation. For example, the rapid expansion of China's and India's agricultural research systems and increased commitment of the Chinese to offer training opportunities for greater south-south cooperation in research and human capital building. Chinese firms have already invested in sugar and tea production in Mali, and recently an Indian IT firm diversified into flower production in Kenya and Ethiopia for the export market to Europe. Malaysian firms have sent teams to West Africa to explore the scope for investing in palm oil production in the region. While SSA countries would also like to expand sales of processed agricultural products (rather than just raw agricultural products) to the expanding Asian markets, to date they have faced tariff escalation for processed product in these markets similar to what they have historically have faced in the OECD countries (Staatz and Dembele, 2007:22).

The three emerging countries, particularly Brazil and China, have experienced robust and sustained productivity growth in the agricultural sector since the 1970s, with technological change and agricultural research (alongside macroeconomic stability and institutional reforms) playing important roles. Despite the aforementioned declines in the relative share of expenditures to agricultural research and extension services in China since the 1980s, all three emerging countries have increased their agricultural spending in absolute terms since the 1980s and have invested heavily in their public agricultural research systems. As a result, they accounted for 41 percent of the developing world's public agricultural research and 19 percent of global agricultural research and development (R&D) spending in 2000, the last year for which global comparisons are available.

The technologies and know-how from these emerging economies have the potential to spill over to other developing countries. China has already set up many demonstration stations in Africa, and Brazil has introduced several initiatives to transfer Brazilian technologies to Africa. As well as increasing public sector and donor support of R&D in agriculture, partnerships with countries at the technological frontier such as Korea or Brazil could help in addressing this deficit in developing countries. The state-owned Brazilian enterprise Embrapa, for example, hopes to "transfer and adapt" the know-how in pest resistance and yields gained through its 41 research centres. It has already extended its technical expertise to several African countries, including Angola, Ghana, Kenya and Mozambique, while others have expressed a desire for technical aid for improving sugar-cane productivity and producing ethanol efficiently (OECD PGD, 2010).

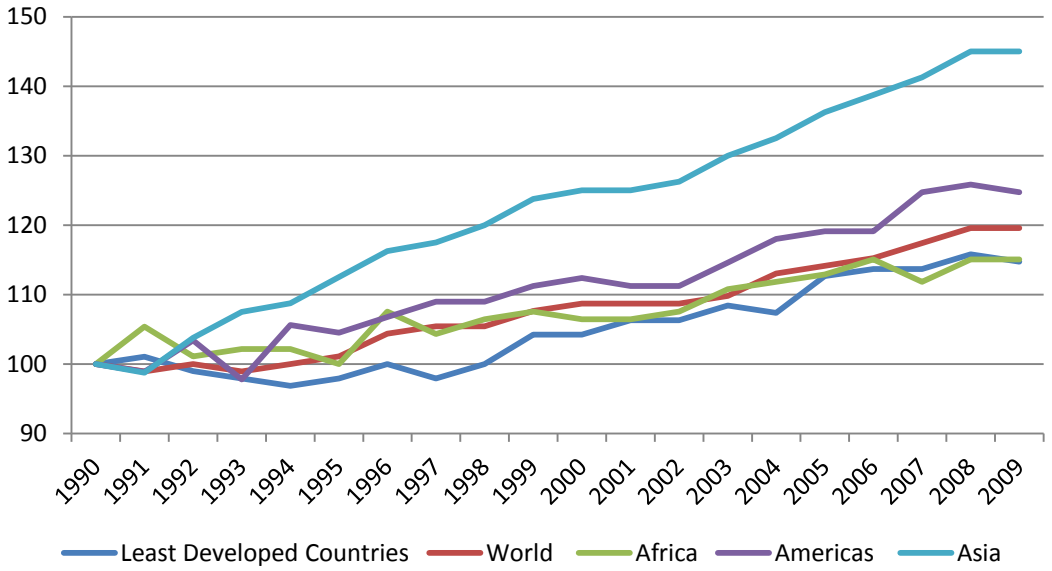
A Deteriorating Global Environment for Food Security

The Food and Agriculture Organization of the UN (FAO) defines 82 countries as low-income food deficitary countries, meaning that they import food to a greater calorific value than the food they export. Many of these countries are poor ones, with low levels of human development and little capacity to buy their food needs on international markets. Developing countries are now expected to adopt appropriate 'coping strategies' (e.g. social 'safety nets', or accumulating larger foreign exchange reserves)

while little attention to the underlying causes of instability. Hopefully, the recent collapse in prices will bring policy responses to these crucial questions into focus once more.

Despite this worrying backdrop, and contrary to popular impressions, experts recognize that food production on a global level has not only kept pace with population growth – indeed, it has surpassed it (Figure 3). Since 1980, according to FAO data, global food production per capita has expanded more than 20 percent. At the global level, therefore, there should be no 'scarcity' of food.

Figure 3: Global Food Production per capita, FAO Index 1990-2009 (1990=100)



Source: FAOSTAT

Asia is the best performer of all, food production per capita having risen by nearly 45 percent between 1990-2006. Even Africa and the LDC group of countries have substantially higher food production per capita now *vis-à-vis* the situation in 1990 (though it is interesting to note that food production per capita has tailed off in recent years).

The Malthusian idea that the growth of the population would outstrip the ability of the land to support it has thus far proven false at a global level, even if at a regional level we can see quite clearly that low-income countries are indeed struggling to keep pace with the demands for food production for a rapidly expanding population. At the same time, the consensus opinion on what causes food shortages (and, in its extreme manifestation, famines) has been much influenced by Amartya Sen and the concept of 'entitlements' – the idea that the poor can become malnourished and even die of hunger simply because their access to food is constrained through, say, a collapse in their source of income.

Clearly, the idea that there is sufficient food in the world - simply that it is badly distributed - is a powerful one. But the question is how to redistribute food on a global level? Food aid has been much criticised – it can create dependency, undermine local food production; distort consumption patterns away from traditional crops, etc. The point is also often made that it benefits big corporations rather than really benefiting the poor. While recognizing the importance of Sen´s insights, it is still true that famines can be associated with localized failures in the food production system. For instance, Eastern, Northern and Southern Ethiopia are currently affected by severe drought, yet the West of the country is largely unaffected. It is misleading, therefore, to suggest that distribution is the key issue. Local food availability decline (FAD, to use Sen´s terminology) can still play a major role in explaining famine and hunger.

Regional variations and inequalities are thus another important factor to take into account. Take, for instance, the Mozambique situation in 2010. Aggregate figures mask wide regional variations in food output and food security, a situation that is normal for a country as large as Mozambique that encompasses widely different agro-climatic zones. The main food surplus-producing areas of northern Mozambique experienced large increases in crop output, with maize up by 12%, while in the centre output was down by 4%. In the south, which has much poorer agricultural potential but greater reliance on off-farm incomes, production fell by an alarming 38%. Production in the south and centre was negatively affected by drought in the early season, particularly in coastal areas, although rainfall was adequate or above normal in the north (EIU, 2010). Although the good national harvest has put downward pressure on food prices, this has been more than offset by the higher cost of imported foods, owing to the metical's weakness and the withdrawal of subsidies. Mozambique imports some 300,000 tonnes of wheat for consumption, making the country vulnerable to fluctuations in international prices (Schutter, 2010).

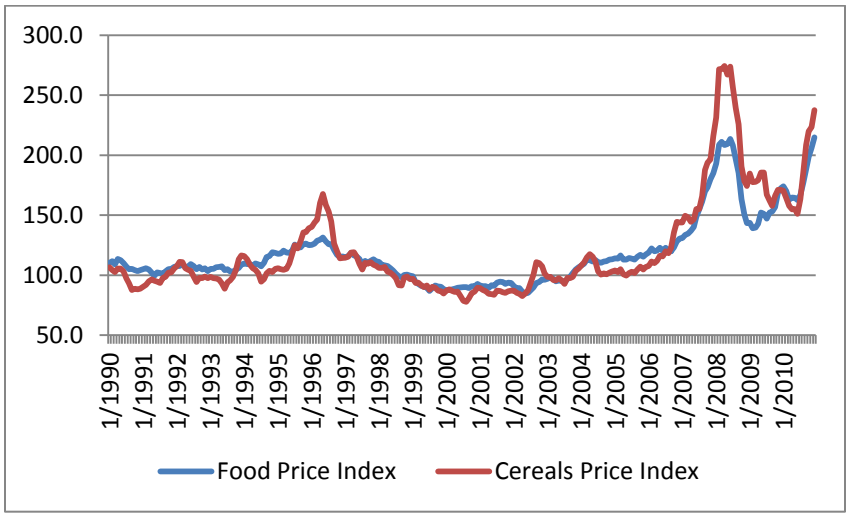
Moreover, Mozambique's maize surpluses in the north primarily Nampula provinces are largely exported either to neighbouring countries or on to international markets (EIU, 2010). The great distances from Maputo and the south the largest food markets in the country to the surplus-producing areas of the north have led to large variations in price. Domestically-produced food in and around the capital is typically twice as expensive as in the north. Consequently, it has often been cheaper to supply Maputo by imports from South Africa, although the local currency's recent weakness against the rand has made this a less viable alternative.

‘Missing markets’ are a major challenge in many African countries. Ethiopia is a key example, whereby serious food deficits in some regions simultaneously occur with food surpluses in others. Efforts to set up a national commodity exchange was one important policy response to this problem. The Ethiopian government decided in December 2005 to establish an Ethiopian Commodity Exchange, saying it would transform Ethiopian agriculture and bring real progress toward the country’s poverty reduction and rural growth objectives. On January 18, 2008, the exchange was opened and launched its first membership registration. The exchange trades six crops, including coffee, wheat, and maize, both on a physical trading floor in Addis Ababa and electronically.

Increasing food insecurity has also been related to the declining investments in agriculture worldwide, and has prompted renewed interest in agriculture, evidenced by the recent launch of a Global Agriculture and Food Security Program by the World Bank and other donors in April 2010, and calls for a 'new green revolution' to drive development in Africa (e.g. UNCTAD, 2010).

After the serious food prices of 2007-8, prices again spiked in 2010, surpassing at the beginning of 2011 the peak of 2008 (Figure 4). Although these figures reflect dollar prices, and are thus impacted by the real depreciation of the dollar (and hence overestimate the impact of the food price rises in domestic currencies), the rebound in prices is still large and potentially extremely problematic. The consensus opinion is that prices will remain at a permanently higher plateau than the levels prevalent in the late 1990s or early 2000s. The price spike of 2007/2008 was the result of structural imbalances in the world food chain and not just temporary fluctuations like bad weather or government mistakes (The Economist, 2009). These imbalances have not gone away: food demand is still rising because of changing appetites and rising incomes in emerging markets; biofuels are still competing with food crops for available land; yield growth in cereals has been declining.

Figure 4: Monthly Food Price and Cereals Price Indexes, 1990-2010

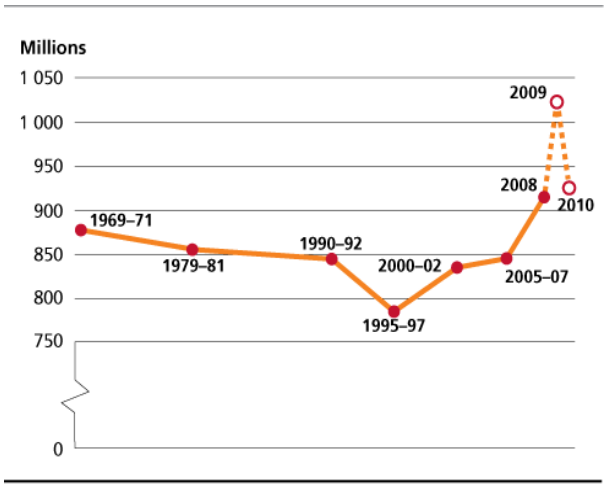


Source: www.fao.org

This has had serious consequences in terms of malnutrition. After decades of improvements, the number of undernourished people (in millions) in the world has been rising rapidly since the mid 1990s. Even as a proportion of total population, hunger started rising in the middle of the last decade. Rural poverty has also been increasing in many countries. The pressures are not likely to subside over the coming decades. The World Bank (2008) estimates to meet projected demand (based on a combination of rising population and changing dietary preferences) global cereal production will have to increase by nearly 50% and meat production by 85% between 2010-30. In addition the burgeoning demand for biofuels and animal feeds that since the production of staple foods. Not only must yields rise (there is relatively little spare land, and the remaining

forests must be conserved) but they must do so sufficiently rapidly and cleanly to compensate other negative trends, such as climate change salinisation and deterioration in soil fertility (Green, 2009:132).

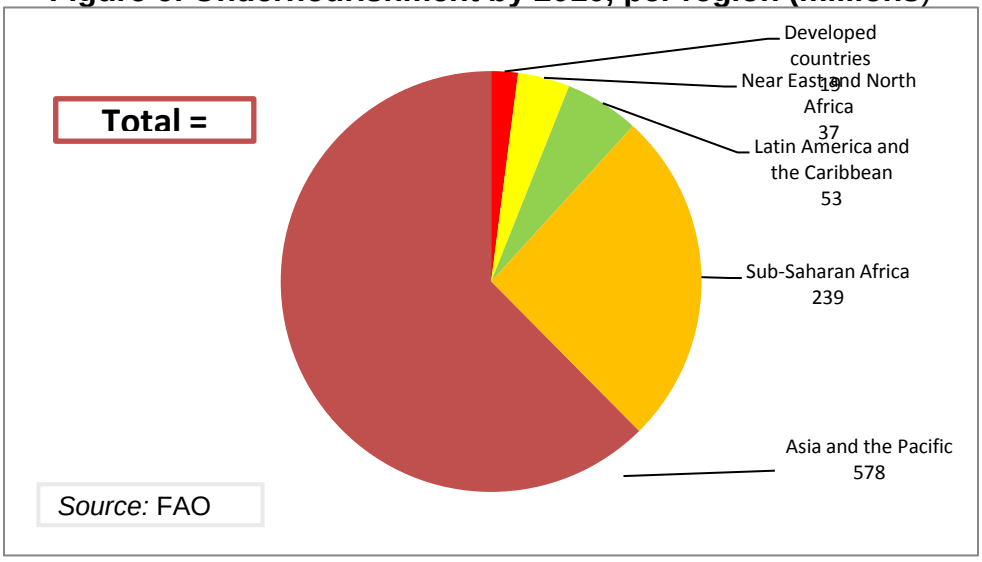
Figure 5: Numbers of malnourished people, FAO Estimates, 1969-2010



Note: Figures for 2009 and 2010 are estimated by FAO with input from the United States Department of Agriculture, Economic Research Service. Full details of the methodology are provided in the technical background notes (available at www.fao.org/publication/sofi/en/). *Source:* FAO.

The global crisis of 2008/9 hit Asia particularly hard (percentage increase in malnutrition in 2009). This reflects the extent to which, contrary to common perceptions, Asia is still the continent with the largest share of its population living under a dollar a day – although Asia has been booming over the last decade, in South Asia there is still the largest concentration of undernourishment.

Figure 6: Undernourishment by 2010, per region (millions)



High Food Prices: A Blessing in Disguise?

Despite the current serious concerns regarding food prices, a number of *a priori* reasons exist to welcome higher food prices compared with historically low prices that were prevalent in the 1980s and 90s. As the Economist (2009) puts it;

> " *the food price spike of 2007 2008 shocked to governments out of their quarter-century of neglect. The World Bank and many rich countries have doubled the money they put into poor countries farming. In the poor countries themselves, agriculture has gone from being a sideshow for the government - something the Minister of Agriculture does - into its main event, which everyone needs to worry about. This is as it should be: farming is far away the single most important economic activity in most poor places*."[4]

Moreover, structurally low (and fluctuating) prices for their agricultural products have in the past caused poor countries enormous difficulties in terms of macroeconomic management. To cite just one practical example of this, when coffee prices are high, Ethiopia gets about two-thirds of its export revenues from coffee; 1997 was one such year and its exports of unroasted or ´green´ coffee were worth $350 million. Four years later, when the international price had collapsed, they came to just $127 million, or 64 percent less. Another four years on, the prices were recovering, and Ethiopia´s green coffee exports had nearly tripled again in value to $353 million[5]. Faced with enormous pressures to repay debt through foreign exchange earnings, price volatility has had an extremely negative effect on the capacity of sub-Saharan countries to finance and rationally plan expenditures and investments in essential areas like health and education as well as agricultural development.

The social problems that emanate from these trends, in terms of employment and income for poor households, can be truly alarming. Cocoa, for instance, provides livelihoods for 14 million rural workers on big plantations, and for a further 2.5 million. Coffee provides income for some estimated 25 million workers worldwide. In Uganda (where approximately a quarter of the population depends on coffee in some way) earnings in the year from June 2001 dropped by 30 percent, despite maintaining a more or less constant volume of exports.

In the current situation, we are confronted with a very different problem, in terms of a period of prolonged high prices. The reality is that the impact of price changes can be very mixed. The rural poor are not a homogenous class, a uniform group of people in

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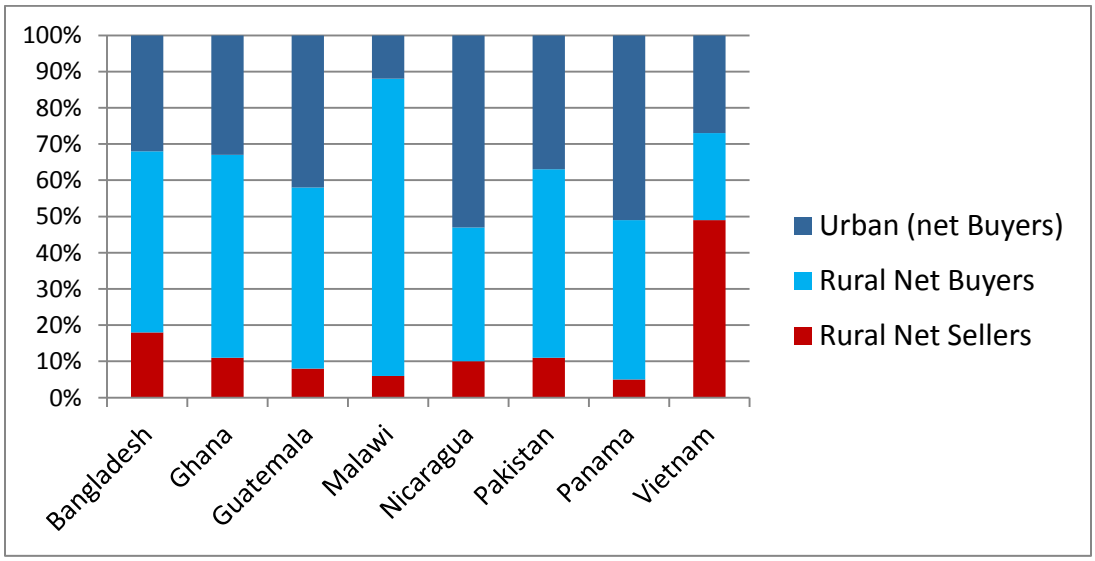
[4] Indicative of this relative neglect, the World Bank (2008) produced its first annual report on the theme of agriculture in 25 years.

[5] Lines, Thomas (2008), "Making Poverty – A History", Zed Books, London, page 70.

similar circumstances facing similar problems. Those classified as poor may include casual agricultural wage workers, unionised plantation workers, deficit food farmers who supplements self provisioning with food purchased in the market from wages and as part-time labour is, small peasants producing cash crops and other workers such as fisherman herdsman and Artisans. These diverse groups of people will be affected differently and will respond differently to rising food prices (Griffin, 1999: 136).

For instance, surveys in Ethiopia, Kenya, Mali, Mozambique, Rwanda, Senegal, Somalia, Tanzania, Zambia, and Zimbabwe between the mid 1980s and 2002 found that in no country were more than half of the smallholders net sellers of staples; the modal figure is closer to one-third. In Ethiopia only 25% of smallholders were net sellers of either *teff* (the local staple) or maize, and only 25% were net sellers of maize in Mozambique. Up to 72% of smallholders were net buyers of maize and *teff* in Ethiopia; in the other countries, the number of net buyers ranged from 30% to 67%. Depending on the country, from 5% to 40% of the smallholders neither bought nor sold staples (Christiaensen and Demery, 2006, Jayne, et al., 2006c, Weber, et al., 1988). Data from household surveys in Ghana, Nigeria, Malawi and Madagascar found similar patterns, with the amount of land owned being the strongest correlate of net sales position (Zezza, et al., 2006). In Ethiopia, approximately a fifth of smallholders can produce only 50% of their families' caloric needs from their plots, although these households are primarily agricultural (World Bank, 2005b) [all cited in Staatz and Dembele, 2007].[6]

Figure 7: Urban/Rural Net Buyers and Sellers of Food Staples

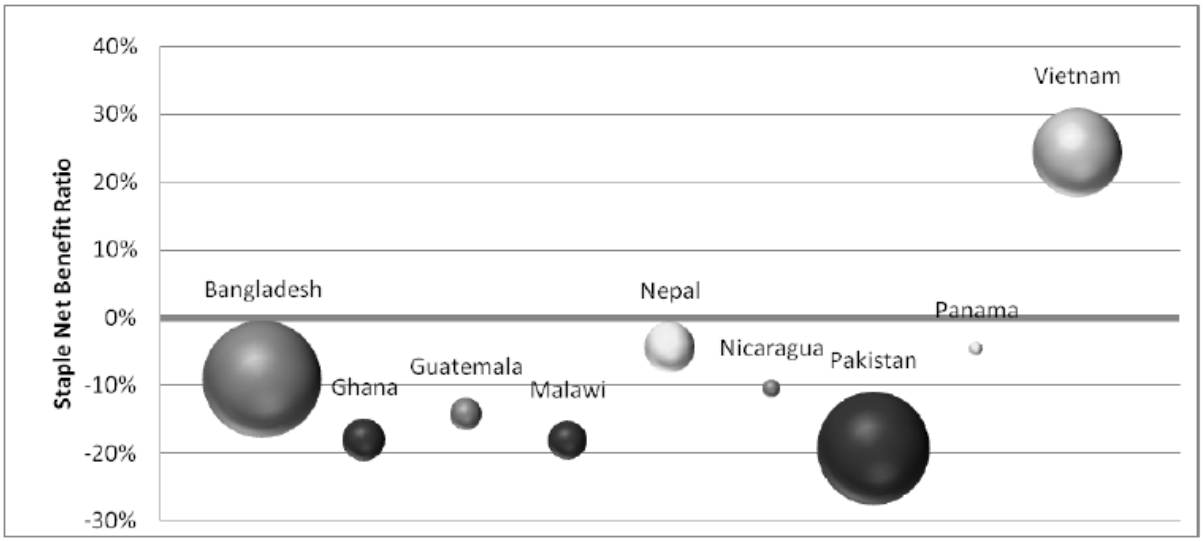


OECD (2010b) uses a methodology based on Zezza et al. (2008), whereby the goal is to estimate, at the household level, the welfare shocks that are induced by price shocks. The author values a household's welfare shock as the immediate effect of a

[6] See also the World Bank (2007:109).

price variation on the value of the household's incomes and expenditures. For prices of agricultural commodities, this means the welfare effect is valued as the increase in the value of the commodity a household is producing; minus the increase in the amount it spends to consume that same commodity (which is different from "economic surplus" measures). The author adopts the assumption that the household does not have time to adapt the quantities it will produce or consume, denominating this the "immediate welfare effect" (following Zezza et al. [2008]).From this, the 'staple net benefit ratio (NBR) is derived.[7]

Figure 8: Staple net benefit ratio (NBR) of the rural sector



Bubble size is proportional to the size of the rural population of the countries. Colours are red for values lower than -15%, orange between -15% and -5%, yellow if negative but above -5%, and green if positive.

Does all this mean that higher prices for food are bad news for poor countries? It certainly presents some serious challenges for many countries. However, arguably, the situation prevalent in the 1980s and 1990s, with historically low prices whereby small holders in many developing countries were unable to eek out a living on the income

[7] More formally, this implies that

$$\frac{\Delta w}{x_0} = \frac{\Delta p^p}{p_0^p} P - \frac{\Delta p^c}{p_0^c} C$$

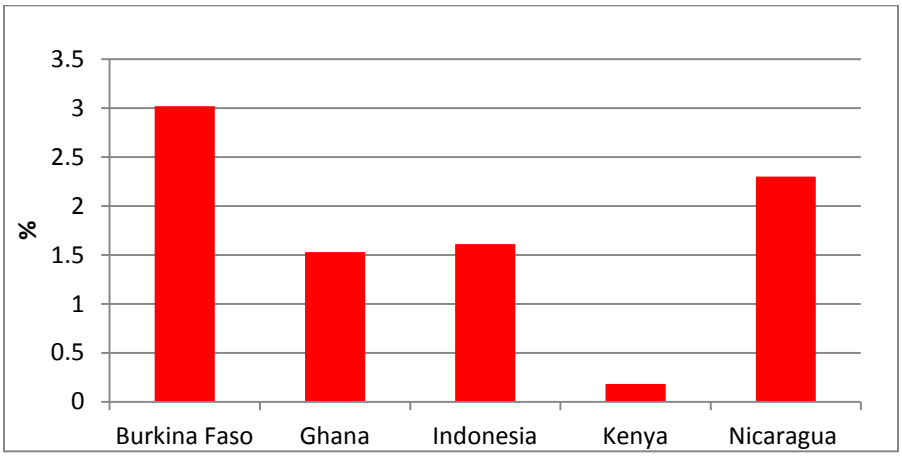
Where Δw is the first order approximation of the change in welfare of the household, and x_0 the houshold's income before the shock (approximated by total expenditures, hence the letter of choice). *P* and *C* are, respectively, the values of the household's production and consumption, both as shares of x_0. p^p is the producer price and p^c the consumer price (initial price levels are subscripted by 0). Given the lack of reliable price data, producer and consumer price are assumed to be equal in our analyses, and denoted by *p*. This yields the simpler expression:

$$\frac{\Delta w}{x_0} = \frac{\Delta p}{p_0}(P - C)$$

from their land, and many were pushed into poverty, undermined the viability of almost any kind of strategy for rural development.

Arguing about what is the *right* price for food is a bit like the proverbial exercise of counting the number of angels on a pin – there is no one right answer. But it does seem reasonable to suggest that a well-designed policy response to higher prices could benefit many developing countries with large segments of the population working in the agricultural sector. Moreover, it is worth noting that, compared to 2007-8, this time the price rises have not been constrained to just food, but all agricultural commodities, including the main tropical exports; cocoa, coffee and tea, cotton, palm oil, sugar and rubber. As Wiggins (2010) points out, often much of the production comes from small farmers in low income countries. Higher prices mean windfall gains for them, gains that are likely to be spent on local goods and services, with strong multipliers in additional jobs and incomes for others on low incomes. On balance, Wiggins shows that the aggregate effects could be quite large for some developing country exporters of agricultural exporters, even once the higher food import bill is factored into the calculation.

Figure 9: Potential Net Gains from Rising Agricultural Prices, 2009 (% of GDP)



Source: Wiggins, 2010

One of the major consequences of food price rises has been a growing distrust in market-based solutions. When Thailand and Vietnam, the world's two largest rice exporters, banned rice exports in 2009, the Philippines (the world's largest importer) concluded that the international grain trade could no longer be trusted to supply its needs. Fearing what might happen as a result of India's poor harvest this year, the Philippines in the past two weeks has concluded contracts to buy 1.5 million tonnes of rice- equivalent to 5% of the total annual trade in the grain. This is panic buying driven by mistrust. In turn India is negotiating directly with Thailand and Vietnam for rice, which would further reduce the tradable supply of an already thinly traded commodity.

The large land grabs in Africa and Asia are also signs of mistrust in world markets. Food importers which can afford it - like Saudi Arabia, Kuwait, China, South

Korea - have opted to grow food on land they own or control board rather than imported from international trade. This too has distributional implications, as will be discussed later in this paper. Trust in grain market seems weak among the industrial countries too. Western countries share the blame for the failure to complete the Doha round of trade talks. They have switched their subsidies from production-linked to rural development subsidies. But the overall level of subsidies to the countryside have come down only moderately.

Against this backdrop, the most striking trend is to move away from food security towards food self-sufficiency as a goal of national policy. The Philippines says it hopes to grow 98% of the rice needs by next year. "Indonesia must struggle to reach food self-sufficiency" said President Yudhoyono in 2008, while announcing some big increases in seed fertiliser and credit subsidies. Senegal imports 80% of its rice putting this small African nation in the top 10 food importers. Rocked by food riots in 2008, the government responded with what it called the " great offensive for food in abundance", and promised to become self-sufficient in staples. Others with the same policy include China, Malaysia, Colombia and Honduras.

Food Crises, Macroeconomic Causes and Effects

Food crises can in principle have major macroeconomic implications. The first among these is that sharp increases in food prices can exacerbate inflation (food weighting in CPI basket is 10-20% in high income countries, but one third in China, 46% in India, and over 50% in Nigeria, Vietnam and Bangladesh), hence affecting monetary policies. World Bank (2009) estimates that nearly 2/3 of total income spent on food in the poor urban population of the developing world (Nomura, 2010).

In principle, for food import dependent countries food price rises (like any exogenous increase in prices) are deflationary, not inflationary. If there are increased expenditures on one set of imported goods (in this case food), *certeris paribus* there will be decreases expenditures on other items. Thus as long as monetary policy does not accommodate these exogenous price rise, then the overall net impact is deflationary, reducing other expenditures. However, the assumption that monetary authorities will not respond to exogenous price increases is a bold one, and not born out by historical experience – in line with monetarist approaches, it is equivalent to saying that 'cost-push' inflation cannot exist if monetary authorities do not accommodate it.

Fiscal balances may also deteriorate sharply due to interventions, e.g. Indonesia spends 3% of government budget on consumer subsidies, Food Corporation of India (FCI) distributes food through Public Distribution System (PDS) to the poor, food subsidies likely to exceed $12bn in 2010. India currently pays out more in subsidies for agricultural inputs than it does in education spending.[8] In Malawi direct program costs to

[8] The important caveat here is that such apparently large subsidies need to be put in the context of the large relative size of agriculture in the national economy. Thus whereas as a share of government expenditures or GDP, these amounts seem large, producer support measures for India are in fact about in line with the average when measured as a share of agricultural ouput (Going for Growth, 2009).

government and donors were just less than US$91 million before the food crisis, subsidiescomprised 40 percent of the Ministry of Agriculture budget, more than 5 percent of the national budget (Dorward et al. 2009). With the rise in fertilizer prices, fertilizer subsidies constitute a significant threat to the fiscal balances of the government. In Nigeria fertilizer subsidies made up 50–70 percent of federal government expenditure during 2000–05, so rising costs were once again a significant drain on the public coffers (Mogues et al., 2008) [9] Exchange rates may also depreciate in import-dependent countries, leading to higher inflation, deteriorating growth, while strengthening currencies of food exporters, with the attendant risk of Dutch-disease effects (Nomura, 2010).

Aksoy and Ng (2008) give a more nuanced picture of the macroeconomic impact. They recalculate both food and general agricultural net import bills for low-, middle-, and high-income countries, but they disaggregate within each category by oil exporters, conflict states, small islanders, and remaining countries. Once the three special groups are omitted, the average low- or middle-income country has gone from being a net food importer in 1980/81 to being a net food exporter in 2004/05.[10] In fact, only six low-income countries have food deficits that are more than 10 percent of their imports, so most net food- importing developing countries are marginal net food importers. Finally, Aksoy and Ng (2008) also attempt to identify countries with considerable potential to switch from being net exporters of nonfood agricultural products to net exporters of food. Of course, this switch is much less relevant to the short-term impacts of the crisis, because switching from cash crops to food production takes a considerable amount of time and may be prohibitively costly.

The conclusions derived from this is that the impact of the food crisis on macroeconomic stability is commonly overstated, and pales in comparison with, for instance, the repercussions of high oil prices. Indeed, oil import costs are 2.5 times larger than food imports for low-income countries and twice as large for middle-income countries. Consistent with this observation, IMF (2008a) simulations confirm that in the absence of policy responses, the impacts of oil prices are considerably larger than those of increases in food prices. The study estimates that for 33 net food-importing countries with available data, the adverse balance-of- payments impact of the increase in food prices from January 2007 to April 2008 is 0.5 percent of 2007 annual GDP (US$2.3 billion, or 0.2 months of 2008 imports of goods and services). During the same period, the impact of the increase in oil prices in 59 net oil-importing countries is estimated to be 2.2 percent of GDP (US$35.8 billion, or 0.7 months of 2008 imports of goods and services). Moreover, IMF (2008a) also finds that further oil price increases in 2008 and 2009 would have had much larger adverse effects on foreign reserves than would equal rises in food prices (cited in Heady and Fan, 2010).

[9] Nigeria is of course much better off fiscally because of the oil boom (Heady and Fan, 2010: 77).

[10] However, Africa still contains a large number of oil exporters and conflict states, as well as other exceptions, meaning that most African countries (35 of 47) are still net importers of food, even though most are also net exporters of all agricultural goods (32 of 47).

The basic truth is therefore that no country, however food import dependent, suffers when its income per capita is sufficiently high. It is the combination of high net food import dependence and low income which makes countries especially vulnerable to sharp upward shifts in prices. Part of the solution to resolving the problem of food insecurity thus resides in reducing a whole set of vulnerabilities which afflict low-income countries. The international financial architecture has evolved in such a way that low-income countries are highly vulnerable, principally through three channels:

- Destabilising capital inflows
- Volatile exchange rates
- Boom and bust in commodity prices

The three sources of instability are interlinked. Some low-income countries even have negative savings rates, and so are dependent on capital inflows (especially aid) simply to maintain consumption. Others, despite relatively fast growth, have continued to be highly dependent on foreign capital inflows. The dependence on foreign savings, combined with volatile exchange rates and sharply fluctuating commodity prices means that many low-income countries have been struggling to manage their integration into the global economy. Food security in such circumstances is a chimera – investment in agriculture is low or negligible, and the ability to finance imports of food is seriously constrained.

Nomura (2010) provide an interesting exercise in assessing whether countries are vulnerable or not. NFVI is calculated as 100-(0.25*GDP per capita + 0.5*net food exports – 0.25*share of food in expenditure). To make the countries comparable, all the values have been normalized by subtracting them from the mean and dividing by standard deviation. By construction, the higher the value of the NFVI for a country, the higher is its vulnerability to rising food prices.

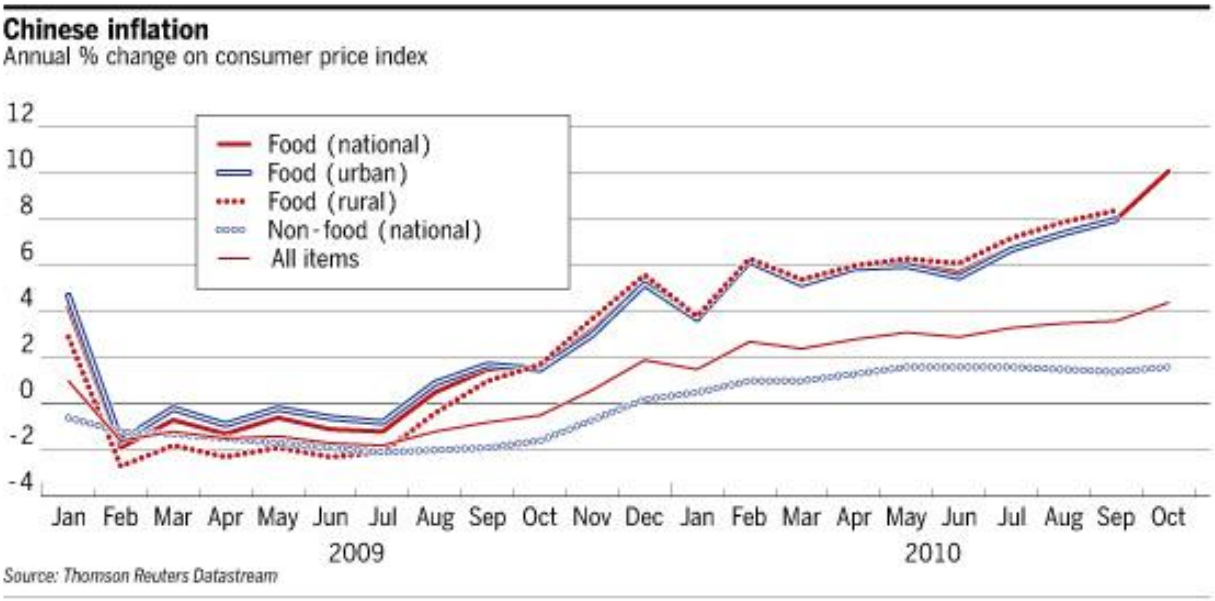
Table 4: Nomura food vulnerability index

		NFVI	GDP per capita	Household spending on food	Net food exports
Rank	**Country**	**Index**	**Current prices US$**	**% of total consumption**	**(% of GDP)**
1	Bangladesh	101.5	497	53.8	-3.3
2	Morocco	101.3	2769	63	-2.1
3	Algeria	101.3	4845	53	-2.8
4	Nigeria	101.2	1370	73	-0.9
5	Lebanon	101.2	6978	34	-3.9
6	Egypt	101	1991	48.1	-2.1
7	Sri Lanka	101	2013	39.6	-2.7
8	Sudan	100.9	1353	52.9	-1.3

Source: Normura, 2010

As argued in PGD 2010, therefore, it may be that the indirect channels of influence of 'shifting wealth' are sometimes more important than the direct ones. Food price inflation is important, not so much because of the way in which it affects domestic prices and consumption (though this is undoubtedly important), but rather on how it is currently impacting on China (Figure 10). This has the potential to affect monetary policy globally. This kind of impact is less tangible and more difficult to quantify than the direct impact of food price rises in other parts of the developing world, but may have a deeper and longer-lasting impact.

Figure 10: Chinese Inflation



Pending Questions regarding Land ownership

One of the fundamental causes of social inclusion in many developing countries are unresolved questions related to land rights. In Latin America, landholding remains very unequal in many countries: in Brazil 1% of rural landowners possess half of farmland (although that figure includes large tracts of Amazonia that are unsuitable for agriculture) (Reid, 2009:226). In India, the Gini coefficient of distribution of land in terms of land ownership in rural India was 0.74 in 2002 (Bardhan, 2010:51).

Land ownership has been a consistent source of conflict across the world. In countries such as Brazil, Bolivia, India and Paraguay, democracy has seen the emergence of powerful movements of landless would-be farmers. Brazil's Movimento Sem Terra (MST) is one well-known example. In the mid-1990s the MST attracted the sympathy of many urban Brazilians who saw it as a symbol of their country social injustice. Conflict between the MST and landlords has been frequent - and in all more than 1000 activists have been killed in Brazil in the past two decades (Reid, 2009:227). Even in Africa, where land rights are often portrayed as being customary systems with

relatively open, negotiable and adaptive landholding and land use, there is a growing body of evidence suggests this is only part of the story, and the instances of intensifying competition and conflict over land, of deepening rifts between and within kin-based, ethnic and regional groups, and of expropriation of land by local and non-local elites beg for closer attention (Peters, 2004:270).

Yet whereas in the 1950s, 1960s and 1970s, land reform was high on the international agenda, in the 1980s and 1990s, the issue almost disappeared. The consensus opinion shifted towards the idea that it was counterproductive and politically dangerous to pursue a significant land reform. While there has been a lot of support for land reform programmes when this entails the privatization of state-held land holdings (i.e. in countries such as China and Vietnam), support for land reform became much more ambiguous when it related to private land holdings, whatever the historic circumstances under which land tenure was originally structured. The standard policy prescription has been to combat insecure property rights, poor contract enforcement, and stringent legal restrictions which limit the performance of land markets, creating large inefficiencies in both land and labor reallocation and reinforcing existing inequalities in access to land (de Soto, 2000).

But clearly, where the underlying ownership structure is inequitable, enforcing existing property rights alone is not enough. As discussed by the World Bank (2007:9),

"*Land reform can promote smallholder entry into the market, reduce inequalities in land distribution, increase efficiency and be organized in ways that recognize women's rights. Redistributing underutilized large estates to settle smallholders can work if complemented by reforms to secure the competitiveness of beneficiaries - something that has been difficult to achieve. Targeted subsidies to facilitate market based land reform are used in Brazil and South Africa, and lessons must be derived from these pioneering experiences for potential wider application*".[11]

In the middle of the 20th century, the possibility of redistributive land reform was politically facilitated by rising urbanization and the growing importance of urban relative to rural elites. Between 1945 and 1950 almost half of the human race found themselves living in countries undergoing some kind of land reform- of the communist type in Eastern Europe and, after 1949 China, as a consequence of decolonisation in the former British Empire and as a consequence of Japan's defeat, in Japan and Taiwan and Korea. The Egyptian revolution of 1952 extended its range to the Western Islamic world: Iraq, Syria and Algeria followed the Cairo example. The Bolivian revolution of

[11] It is worth noting that even in the extremely controversial case of land reform in Zimbabwe, a recent DFID-funded study (Scoones et. al., 2010) suggested that the reform has not been the unmitigated disaster commonly portrayed in the media. Since 2000, land reform has resulted in the transfer of around 8 million hectares of land across 4,500 farms to over 160,000 households, representing 20 per cent of Zimbabwe's total land area, according to official figures. If the 'informal' settlements, outside the official 'fast-track' programme are added, the totals are even larger. While production of wheat, maize, tobacco, coffee and tea has declined, other crops such as small grains, edible beans and cotton have increased or remained steady. Overall it is a very mixed picture. A core group of 'middle farmers' - around half of the population in the Masvingo study area - are generating surpluses from farming.

1952 introduced it into South America, the first time since the Mexican Revolution in 1910 (Hobsbawn, 1994: 355).

The United States-mandated land reform in post-war Japan was an immense success in terms of raising yields. Korea and Taiwan, Japan's former colonies, engineered their own land reforms to rival those of North Korea and China. Land reform was also at the heart of the Chinese Communist revolution and the Maoist revolution in North Korea. Vietnam mobilise popular support for land reform, and Bengall, a stronghold of the local Indian comics party succeeded in redistributing land to the poorest peasants. Other developing countries, such as Egypt's in the Philippines, tried their hand at equalising landholdings with little success (Amsden, 2007).

In some cases, Chile for example, alliances between the peasantry and urban-based, social democratic movements formed the political foundation for land reform. Yet the results were largely disappointing. By the late 1980s, de Janvry and Sadoulet (1989) were lamenting the “lost game of Latin American land reform” because of the lack of significant redistribution and the growing influence of medium and large farmers on the state as Cuban-style threats diminished. Land reform did not usher in the hoped-for transformation of social and economic inequalities in Latin America. Nor, for the most part, did they generate the kind of vibrant smallholder sectors that were so important in East Asia’s dynamic development path. However, the reason was not because land reform was in principle ill-conceived. Rather, major land reform efforts were often poorly designed—notably where ill-fated production cooperatives were emphasized—and more fundamentally were “incomplete” (de Janvry and Sadoulet 2002).

The predominance of first authoritarian and then economically liberalizing democratic regimes further contributed to the lack of interest in radical land reform in the 1980s and 1990s. As a measure of international opinion, the World Bank’s 1990 World Development Report on Poverty judged land reform to be good for poverty reduction in principle, but to rarely be feasible outside the exceptional circumstances of colonial action or revolution (World Bank – Breaking with the Past, 2003).

One of the more comprehensive recent land reforms was the one embarked upon by the Cardoso government in light of the persistent conflicts between the MST and landowners. Between 1995 and 2002, some 20,000,000 hectares -a territory the size of the Benelux countries - were redistributed 635,000 families. The government created the land Registry, introduced a tax on idle land and approved a summary procedure for its expropriation. The program was continued by the Lula administration.

Whether program was a success or not is much debated. While the MST complained that the pace of land distribution was not sufficiently fast, others raised concerns that it might be going too quickly. Beneficiaries faced all the problems of small-scale family farming. For instance, at Pirituba, an MST settlements in upstate São Paulo, some farmers make only US$150 per month a dozen years after moving on to the land (although they grow much of their own food). Some of the MST members were recruited from the ranks of the urban unemployed and had no background or experience in farming. The risk is that land reform becomes a disguised welfare program- and a more expensive one than Bolsa Familia, the government’s main

targeted antipoverty programme. The Cardoso administration spent US$7 billion on land reform in his first term alone. Yet for all this, there is still considerable evidence that small-holder agriculture can be efficient. A World Bank report on agriculture in Argentina, Brazil, Chile, Colombia and Ecuador showed that small farmers were 3 to 14 times more productive per acre than their larger competitors (cited in Bello, 2009:13).

Evidence from Vietnam is similarly supportive of the productivity of small-holdings. Freeing up Vietnam's agricultural land markets has been termed one the most radical land reforms in modern times (Ravallion and van de Walle, 2008). The first major step was taken with the introduction of 1988 Land Law. That law called for individual households to be assigned the use rights to some 80% to 85% of the country's agricultural land area – comprising about 4 million hectares. In the initial phase of implementation, farm households were granted conditional rights to use private land for a period of 10-15 years.

In 1993, the government took the second big step towards privatization of land rights with the introduction of a new land law and issuance of land use certificates. Although land still remained the property of the state, under the new law usage rights could legally be transferred, sold, leased, bequeathed and used as collateral for loans. The duration of tenure rights was extended to 20 years for the production of annual crops and to 50 years for perennials. Vietnam's land titling process was one of the most ambitious ever attempted in the developing world both in scale (nearly 11 million land titles had been issued to rural households by the year 2000) and the speed with which it was implemented (Do and Iyer, 2008). Not surprisingly, these dramatic changes in land tenure rights have attracted much attention from development economists resulting in the publication of numerous economic studies in recent years (see Cervantes-Godoy and Dewbre, 2010).

Patterns of ownership have been shown to be of crucial importance in terms of social outcomes. A comparison between export-oriented agriculture in Chile, Guatemala, and Paraguay by Carter, Barham, and Mesbah (1996) provides insight on the question of who benefited from agroexport booms. They found that outcomes were contingent on initial conditions, types of crops, patterns of support, and the induced processes of structural change. In Chile, for example, the agro-export boom was dominated by medium to large farmers, in part due to the information, packaging, and marketing requirements of fruit production. With new pressure on the traditional crops grown in the smallholder sector, there was a substantial level of selling out to larger farmers, with almost 60 percent of the *parceleros* who had received land under the Pinochet land reform selling their land by the late 1980s. This exclusionary pattern in terms of landownership was partly offset by the rapid growth in employment on the larger farms, but the new jobs were mostly seasonal and paid stagnant or declining wages.

In contrast, in the Guatemalan highlands smallholders have been the main actors in the boom in winter vegetable crops. These crops are 50-300 percent more labour-intensive than traditional crops. In this case, changes in land ownership involve transfers from medium to smaller producers. This pattern is interpreted as being due to four factors: the high levels of labour interactivity required in the production process

(where smallholders have an advantage); an initially highly fragmented land ownership structure in this part of Guatemala; contractual linkages with processors that also facilitated working capital; and the ability of farmers to pursue self-insurance strategies by mixing exports with food crops.

In Paraguay, both the pattern of initially adopting soya and wheat and the induced structural changes were exclusionary. This was because of a prevailing mixture of technical factors (some crops require less labor interactivity), economic institutions (smallholders lacked the means to access working capital), and initial land allocation processes (the frontier region had relatively large land allocations and a land market that facilitated unequal agrarian change).

The different channels of land ownership are also profoundly gender-biased in many regions (Deere and Leon 2001), and the lack of control of land also has a knock-on effect on access to other resources such as irrigation, livestock or agricultural extension services. For example, in Latin America, data from 2000 shows that the female share of documented landowners was only 29.7% (Deere, Alvarado and Twyman 2010). A recent research paper in UNDP reported that women own less than 5% of land in the South Asia region (Kumar 2010).

Ultimately, as Hobsbawn has stressed, then, the strongest economic case for land reform rests not on productivity but on equality (Hobsbawn, 1994:356). While income inequality was at its highest in Latin America, followed by Africa, it was unusually low in a number of Asian countries were very radical land reform had been imposed under the auspices, or by, the American occupying forces: Japan, South Korea and Taiwan. Observers of the industrialised entrance of these countries naturally speculated how far they have been assisted by the social economic advantages of this situation, just as observers of the much more fitful advance of the Brazilian economy, always on the verge of, but never achieving its destiny as the USA of the southern hemisphere, have wondered how far it has been held back by the spectacular inequality of its income distribution - which inevitably restricts the domestic market through industry. Indeed, the striking social inequality of Latin America can hardly be unconnected with the equally striking absence of systematic agrarian reform from so many of its countries.

The Development Potential and Risks of 'Land grabs'

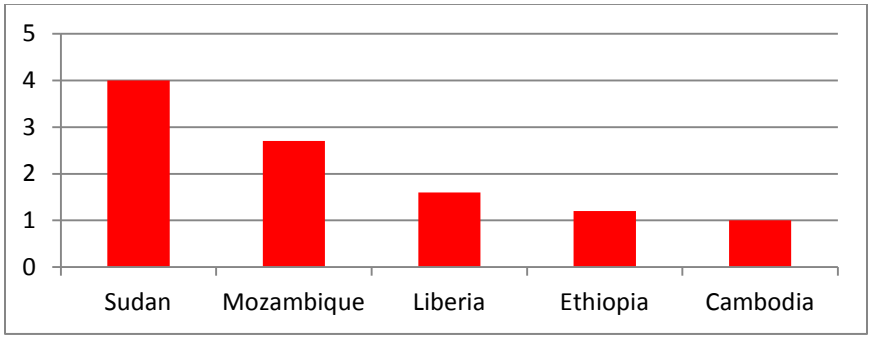
In 2009 between 15m and 20m hectares of farmland purchased in poorer countries by foreigners for some $20bn-$30bn since 2006 (IFPRI, 2010). Although portrayed as a new phenomenon, in some sense large scale land purchases replicate the *modus operandi* of colonial agriculture, in the sense that landholdings are turned over explicitly to foreign owners for the purpose of export crops. It is precisely for this reason that they are so politically sensitive. To cite one example, the Ethiopian/Saudi Arabian businessman A'l-Amoudi has purchased 2,500 acres of land near Awassa, to the south of Addis Ababa, for greenhouses, on a lease for 99 years. His Saudi Star company plans to spend $2-billion acquiring and developing 1.25 million acres of land in Ethiopia. It is already growing wheat, rice, vegetables and flowers for the Saudi market

and expects eventually to employ more than 10,000 people. Clearly, the potential for job creation is large, as is the possibility that these projects hook up production with international markets, bringing in an important source of foreign exchange.

Benefits from foreign investments can potentially spill over into the domestic sector in a synergistic and catalytic relationship with existing smallholder production systems and other value chain actors such as input suppliers (CFS, 2010:5). The fact that many developing countries are seeking to attract inward investment suggests that many governments see these benefits as desirable and real. Benefits should arise from capital inflows, technology transfer leading to innovation and productivity increase, upgrading domestic production, quality improvement, employment creation, backward and forward linkages and multiplier effects through local sourcing of labour and other inputs and processing of outputs and possibly an increase in food supplies for the domestic market and for export.

Figure 11: Officially recorded land transfers, 2004-9,

(millions hectares)



Source: Committee on World Food Security (2010: 5)

However, there are also a lot of associated risks which governments cannot afford to ignore. According to one critic (Buffet, 2010), "*these deals will make the rich richer and the poor poorer, creating clear winners who benefit while the losers are denied their livelihoods.*" The World Bank, too, has some important reticences on these points: *"Investors are targeting countries with weak laws, buying arable land on the cheap, and failing to deliver on promises of jobs and investments."*[12] The assumption that agricultural land is available that is 'empty, 'unused', 'idle', or 'wasteland' is an underlying factor in much investor interest in acquiring land. It is an impression often driven by host governments, such as those of Mozambique, Tanzania and Indonesia, who have attempted to quantify such land available within their borders in an effort to attract investors. The Ethiopian government, for instance, proclaims that "*Ethiopia has [187 million acres] of fertile land, of which only 15% is currently in use—mainly by subsistence farmers… Investors are never given land that belongs to Ethiopian farmers*." A total of three million hectares of "idle" land in Ethiopia is expected to have been allotted by 2013—1/5 of cultivated area. E.g. Karuturi, a Bangalore-based Indian

[12] World Bank, leaked report, 2010: See FT, World Bank warns on 'farmland grab' by Javier Blas, July

company, has acquired more than 300,000 hectares 741,000 acres) of land in Gambella, Ethiopia.

Some Characteristics of Recent Land Purchases

- Main form of investment: land purchase or long-term lease
- Share of total land assets owned by foreigners is small
- Major investors: Gulf States, China, Republic of Korea
- Main target region: Africa, also Latin America
- Investors: mostly private sector, but governments involved
- Investment partners in host countries: mainly governments
- New focus: production of basic foods and animal feed

Source: FAO From Land Grab to Win-Win

According to Taylor and Bending (2009), however, this idea that only 'idle' land is going to be redistributed is challenged in all empirical studies of the phenomenon, noting that all usable land is very likely to be already occupied or used by local communities in a variety of ways important to livelihoods and food security, if not cultural identity. In particular, local populations who use the land for non-arable uses such as pastoralism or hunting and gathering are liable to be ignored. In their words, "*in addition to direct local usage, the ecosystem services provided by such lands to the wider population appear often to have been ignored. Virtually no large-scale land allocations can take place without displacing or affecting local populations."*

Another example of large-scale recent land purchases in Africa is the Libyan-backed *Malibya* development company in Mali, which has purchased 100,000 hectares of land under a 50-year lease agreed by the Malian and Libyan presidents. The project includes the construction of a forty kilometre long and 30 metres wide irrigation canal. It is one of the biggest canals in sub-Saharan Africa, recently completed by Chinese contractors, at an estimated $54.7m (£34.6m). The hope is that the new scheme will bring much needed irrigation and jobs to these desperately poor communities. Malibya has promoted its scheme as part of a bid to raise agricultural yields and improve food security. But local farmers risk losing their land and their livelihood, but perhaps the greatest risk of this project is the loss of water. Malibya claims that the new canal has the capacity for 11m cubic metres a day, 4bn cubic metres a year. This is reportedly twice the capacity of any other canal in the region, the concern being that neighbouring land will be deprived of water when stocks run low (Bunting, 2010).

Land acquisition has not only been a controversial issue in Africa. The most contentious issue in Chinese villages over the past few years has been the way in which local village official have taken away land from farmers, with highly inadequate compensation, to use for commercial development (Bardhan, 2010:50). This has been a lucrative source of 'extra-budgetary revenue' (now restricted), for local governments and

of corrupt deals between local officials and commercial developers, fuelling thousands of local disturbances and incidents of peasant unrest each year.

Similarly, in India, there have been many flashpoints of civil unrest in rural areas in the past few years when the government has tried to acquire land for industrial, mining (Bardhan, 2010:50-1). Highly inadequate compensation and inefficient and scanty efforts to resettle and redeploy farmers have been at the forefront of political debates and agitations.

Conclusions

It is surprisingly easy to think of technocratic solutions to resolve the food availability problem – by intensifying production using existing technologies (greater irrigation, more intensive use of fertilisers, pesticides, etc.) or by adopting new technologies (GMCs, or new varieties of crops) as proposed by Jeffrey Sachs and Pedro Sanchez for continents like Africa.[13] In countries like Ethiopia, for example, only an estimated 3 percent of arable land is irrigated. The scope for improvements is therefore enormous.

In this paper, however, we have argued that the major challenges are institutional and policy oriented, not technocratic. Distributional issues are key and this is ultimately tied up intimately with ideas about social inclusion. Without a major rethink in these areas, progress will be impossible in enhancing food security.

One final distributional issue not mentioned so far is that it will be difficult if not impossible to ensure global food security over the long term without introducing a certain discipline on consumption habits. The world has gone from a situation where people used to be grateful for meat and fish maybe once or twice a week to expecting meat and fish on a daily basis – and this is not just a Western phenomenon. As acknowledged earlier, the composition of the Chinese diet has changed dramatically towards meats and high-protein foods (for example, China now produces more pork than all the next nine largest producers in the world). Ultimately, such trends are not sustainable. High protein foods use much more land, and in a way which is much more inefficient, to produce calories than do equivalent vegetable products.

However, like with air-travel (which is a major pollutant for the environment and contributor to global warming), politically it is becoming difficult (if not impossible) for governments to put the genie of a protein-rich diet back in the bottle once it has escaped.[14] Ultimately, of course, reducing protein rich food sources has beneficial

[13] See, for instance, “Earth Institute's Jeffrey Sachs, Pedro Sanchez Address U.N. Goal of Eradicating Extreme Poverty By 2015 at Summit”, by Colin Morris. http://www.columbia.edu/cu/news/03/05/millennium_project_2015.html

[14] For instance, most Castellan people in Spain now consider that fish was always a mainstay of their diet. But it is really the product of better communications and large-scale governmental support of the Spanish fishing industry.

effects for health. So education could help. Relative price shifts away from protein rich foods and in favour of healthier grains might also help, but would be politically unpopular – the public in many countries have become sensitive to even small price shifts for luxuries which have come to be considered as necessities.

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