



# The end of cheap rice

## A cause for celebration?

Steve Wiggins and Sharada Keats

### Policy recommendations

- After more than 30 years of decline as a result of the Green Revolution, rice prices have more than doubled since 2000, rising by almost 120% in real terms.
- Restocking among major producers and shifts in trade policy have played their part in recent price increases, but are only part of the story. The more fundamental drivers of increased prices are the higher costs of fertiliser, diesel, and labour as rural wages rise in parts of Asia.
- Rising rural wages are good news, with potentially far-reaching benefits for poverty reduction in Asia, given that an estimated 1.3 billion of Asia's poor and vulnerable people depended on rural labouring for their livelihoods in 2008.
- But more costly rice is a problem for poor and vulnerable groups that do not share in the benefits of economic growth, both in Asia and in Africa, where coastal cities have become accustomed to cheap rice imports.
- The threat posed by higher rice prices calls for social-protection policies to guard against price shocks. In the longer run, however, the rise in rice prices presents an opportunity for African farmers.

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For more than three decades, from the early 1970s to the early 2000s, the price of rice on domestic and world markets fell (Figure 1). As a result of the Green Revolution, the supply of rice out-paced population growth, as improved seed, fertiliser use and irrigation spread across Asia (Figure 2). Productivity rose and unit costs fell. Therefore, despite rising demand for rice from growing populations and higher incomes, prices fell in real terms.

By the turn of the new century, the seemingly inexorable reduction in the costs of rice production and in its price had come to be taken for granted. From 2002, however, the price began to rise: slowly at first, then dramatically during the price spike of 2007-2008 when panic among governments, traders and consumers, who variously banned exports and overstocked in a tight market, led to a tripling of rice prices on world markets.

Yet when calm returned to the rice market in mid-2008 and new crops were harvested, the international price of rice was considerably higher than it was a few years before. Five years after the spike of 2007-2008, that price remains perched at around \$170 per tonne in constant terms above previous levels. This represents a 64% increase, with the potential to add between \$1.70 and \$3.40 a week to the food bill of rice-consuming households. Prices have risen despite production that has slightly outstripped the growth in consumption over the past five years.

### What has changed since the early 2000s in rice markets?

Some of the reasons for the higher prices are temporary – primarily, policies that respond to the circumstances of the moment. Since the shock of 2007-2008, three major rice-producing and trading countries have increased their public stocks of rice: China, India and Thailand. Grains that might have been supplied to the markets have disappeared into storage. In 2006-2007 these three countries held 50 million tonnes of rice in store, out of a world total of 75 million tonnes: by 2011-2012 these figures had increased to 80 million and 105 million tonnes respectively, according to estimates by the US Department of Agriculture of ending stocks for marketing years. Over five years, an extra 30 million tonnes had gone into store.

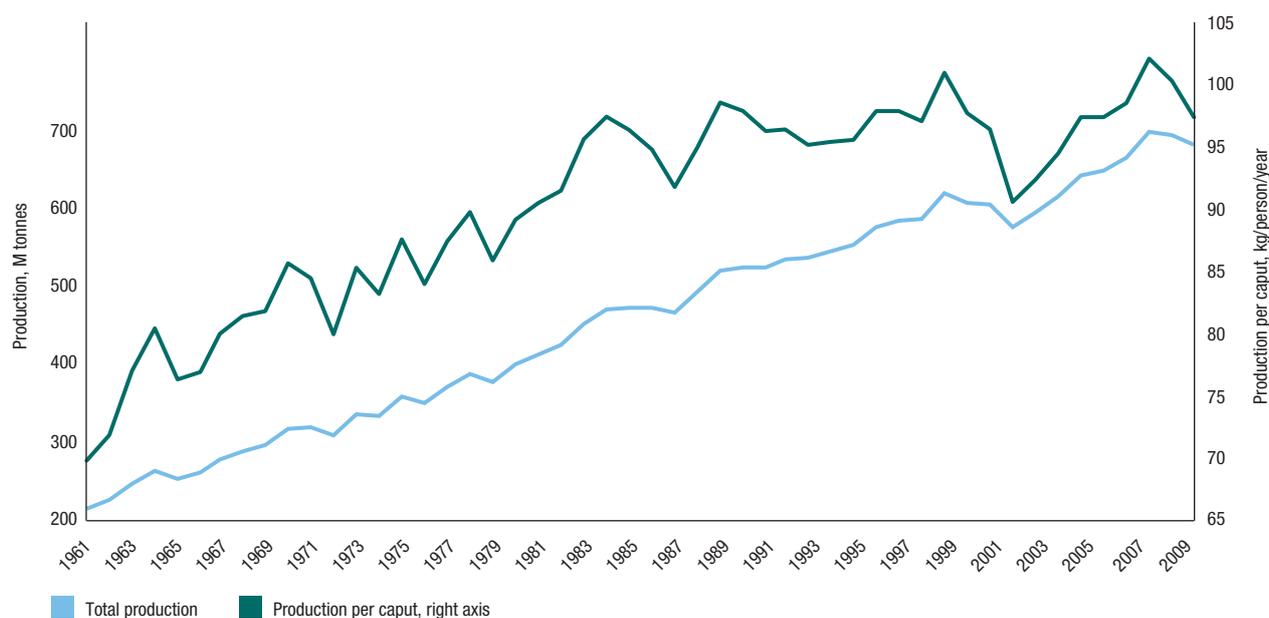
Trade policies and patterns have also changed for some of the main actors on world rice markets. India imposed severe restrictions on rice exports from late 2007 to 2011. Thailand's paddy-pledging programme, which buys in rice from farmers, lifted its prices in 2011 to well above the world-market level, so that grains that would have been exported have been diverted to public stores. China, a country that has long tried to be self-sufficient in rice, has in the past two years begun to import substantial amounts of rice, mainly from neighbouring Viet Nam. Asia's economic success, which has resulted in currency appreciations against the US dollar, has also played an important role. The rising value of Thailand's *baht* has deterred exports, while the appreciation of China's  *yuan* has encouraged imports.

Figure 1: Rice prices on the world market at constant 2007 prices, 1970 to 2010



Source: Data from IMF, deflated by the US consumer price index.

**Figure 2: Rice production, world, 1961 to 2010**



Source: FAOstat data.

Changes in stocks and trading patterns affect prices in the short run, but they are not necessarily trends that will continue. There is a limit, for example, to how much rice can be stored.<sup>1</sup> Once the granaries are full, and traders adjust to new patterns of exports and imports, world prices might be expected to fall back towards the levels seen in the mid-2000s.

One change, however, carries longer-lasting implications. It seems the costs of producing rice are rising significantly, as shown in Figure 3 for China, in relation to the production of Indica and Japonica rice. To some extent, increased rice supplies are coming from less-favoured areas with higher costs of production. Rising oil prices have, in part, increased costs of fertiliser and machinery operations but, just as importantly, the cost of farm labour is rising in parts of Asia. Evidence of this can be found for India (Figure 4), for Thailand and, above all, for China. Rural China began to see labour shortages after 2003, after which wages began to rise substantially, doubling in real terms over the next four years (Zhang et al., 2010). Reports suggest that wages have continued to rise since 2008.

The rise in rural wages is, barring economic catastrophe, a trend that has long been awaited in Asian development. As wages rise, however, so do the costs of production — albeit mitigated to some extent by opportunities to use more machinery. The increase in rice prices seen in the past decade is, therefore, probably a step change, heralding the end of cheap rice on the world market.

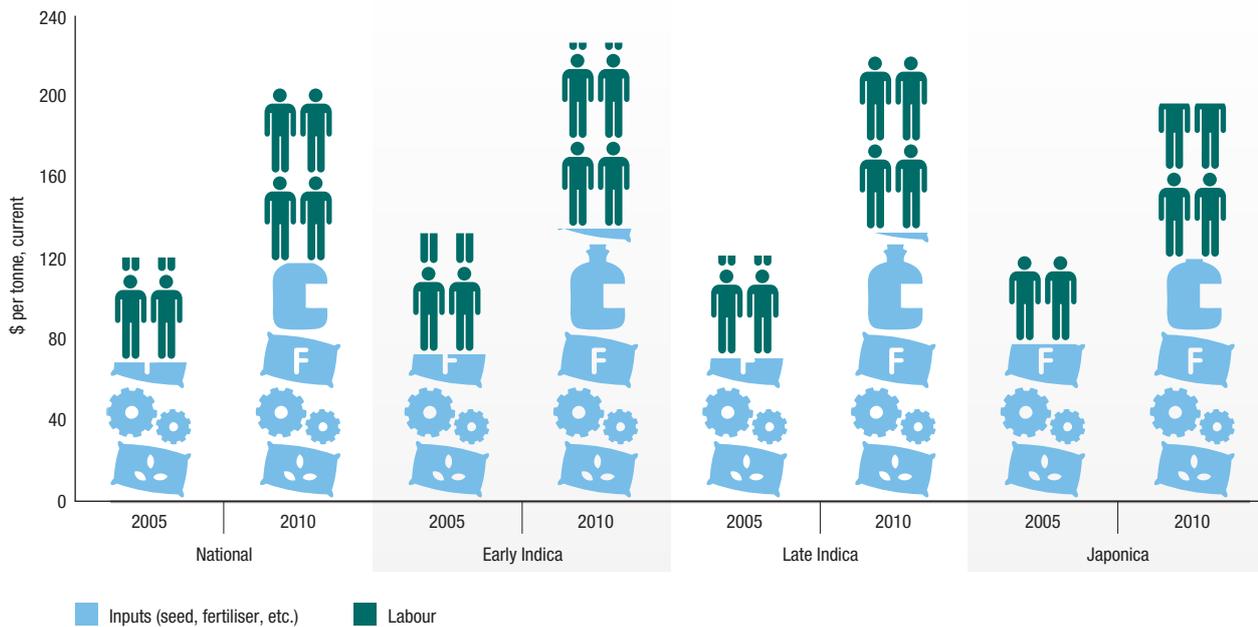
### Implications of the end of cheap rice

For consumers who are poor and for whom rice is their daily staple food, this is bad news. Not so much within those Asian countries where wages are rising, however, as many of those on low earnings will have seen those earnings rise by more than the cost of rice. Evidence from India suggests that this applies strongly to the rural poor, who rely heavily on farm work for their livelihoods (Jacoby, 2013).

Two groups, however, may suffer. One consists of poor people in parts of Asia who have not benefited from economic growth and rising wages: this includes those who live in regions that are lagging behind their growing national economies, such as China's western provinces and India's semi-arid Deccan. The other group consists of consumers who rely on imported rice for their staple diet in parts of Africa, and above all in coastal West Africa where urban consumers have grown accustomed to relatively low-cost rice imports from Asia.

Adjustments will take place. The Asian poor may migrate to areas where there are better-paid jobs. West Africans on low incomes may switch to consumption of locally-produced alternatives, such as cassava, yam, millet and sorghum. Such a switch in demand would give an added stimulus to African farmers to produce more for their domestic markets. It would also encourage attempts to raise rice production in West Africa, assisted by the release of higher-yielding Nerica varieties. If the end of cheap rice from Asia helps West Africa to fulfil its

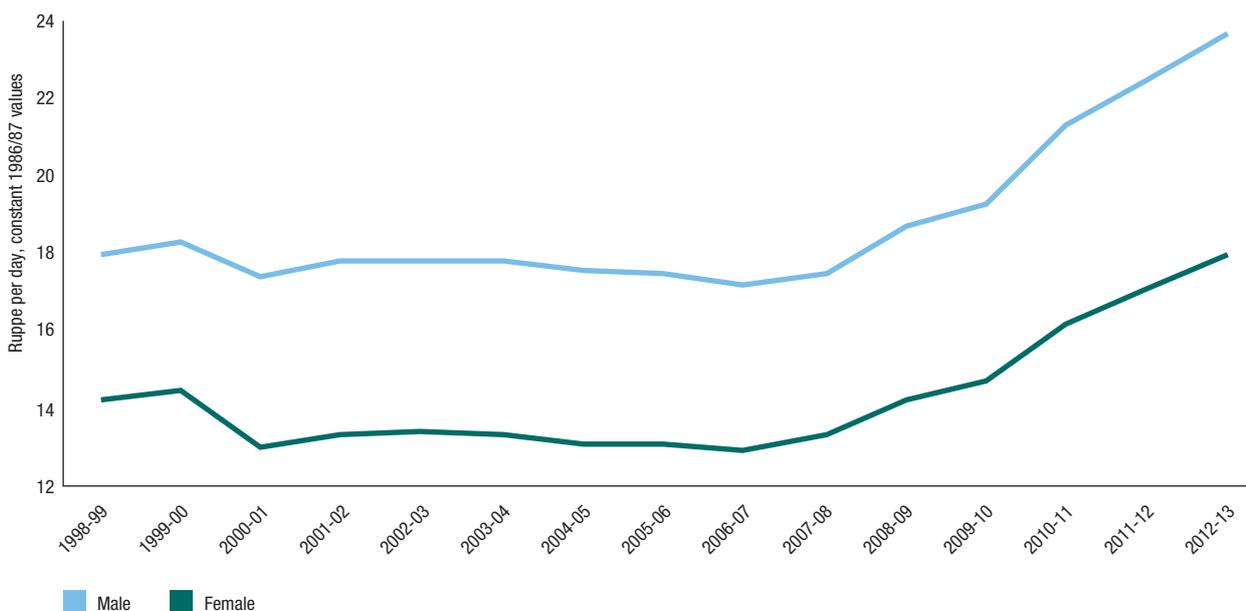
**Figure 3: Increased costs of rice production in China**



Source: Production costs from Professor Jikun Huang, converted at official exchange rates to US dollars.

Notes: Cost increases are exaggerated in US dollars, owing to appreciation of the yuan against the dollar. Variable costs per tonne of paddy rose by 41% from 2005 to 2010 measured in yuan, but by 71% measured in US dollars. Indica rice is grown in Southern China, while Japonica is grown in northern China, particularly the Northeast.

**Figure 4: Rising rural wages in India since 2007, constant rupee/day, 1986-1987 value**



Source: Data from India Labour Bureau, presented in Usami (2012), updated from the Labour Bureau site.

Note: In 1986-1987 a US dollar was worth 6.4 rupees in purchasing power parity.

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undoubted potential in rice production, that will be no bad thing in the long run.

The bigger story here, however, concerns the rising wages in parts of rural Asia. Why are they rising? Although it remains to be confirmed, it seems that labour shortages are emerging, at long last, as urbanisation and the growth of manufacturing industry create jobs and tempt rural workers away from the land. For centuries across Asia, rising populations have meant that there has been a reserve army of labour in rural areas that would work for low wages. Urbanisation and industrial growth, however, are beginning to provide alternatives to low-paid farm work. Farmers who need to hire help have to pay more if they are to get the labour they need.

Cheap rice may have ended, but perhaps more importantly, so too have poverty wages on the land – at least in some parts of Asia. This calls for celebration.

### Policy implications

Asia is seeing rapid economic and social changes. While many will benefit, there will be losers among those unable to get better-paid jobs but who see their costs of living increasing. Social safety nets need to be in place to assist those who miss out, at least temporarily, on increased prosperity. There are welcome signs of increasing coverage and effectiveness of large-scale social assistance programmes in many parts of Asia. India has the National Rural Employment Guarantee Act (NREGA) that has offered additional public employment since 2006, and a new food security bill is being debated that would extend food benefits to the poor and vulnerable. Since 2002, the number of people in China reached by social insurance has soared, from 282 million in 2003 to more than 1,000 million in 2010. (Huang Zuhui, 2010). In 2011, China unveiled a new programme for rural poverty reduction, extending social protection from urban to rural people, including medical

cooperatives, pensions, and minimum living-standard guarantees (Zhu, 2011). Poverty lines have been raised to entitle more of the poor to job training, discounted loans, and jobs on public rural-infrastructure projects (AFP, 2011).

More changes in rice production in parts of Asia may well be coming, as environmental imperatives come into play, including conserving water, avoiding felling forests or converting wetlands, reducing emissions from flooded fields of paddy and controlling the use of agricultural chemicals. This may well mean that some rice-producing areas have to switch to less intensive methods with lower production. To keep up world rice supplies, more rice will, therefore, be needed from other areas. This would present opportunities not only in Latin America, but also in Africa where the first goal would be to replace Asian imports by domestic production, then to export rice from those parts of Africa that have high potential for rice production, such as parts of humid coastal West Africa.

These potential changes to rice cultivation increase the value of having a range of technical options to allow farmers to adjust to changing opportunities and environmental limits. Some technical options may reap private profits and we can expect to see the major agricultural corporations invest in the necessary research. Most of these technical advances, however, will be public goods and will therefore require an active public research effort. This means that various key bodies need adequate investment, including the International Rice Research Institute (IRRI), the Africa Rice Center and the national agricultural research systems of current and potential rice producers. Compared to the potential gains, the costs of research have proved low. Policy-makers now need to have the courage to invest sufficiently in this vital research.

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## Endnotes

1. Thai policy-makers were, as of mid-2012, grappling with the problem of what to do with the 12-16 million tonnes of rice in public stores.