

Managing the Price of Food

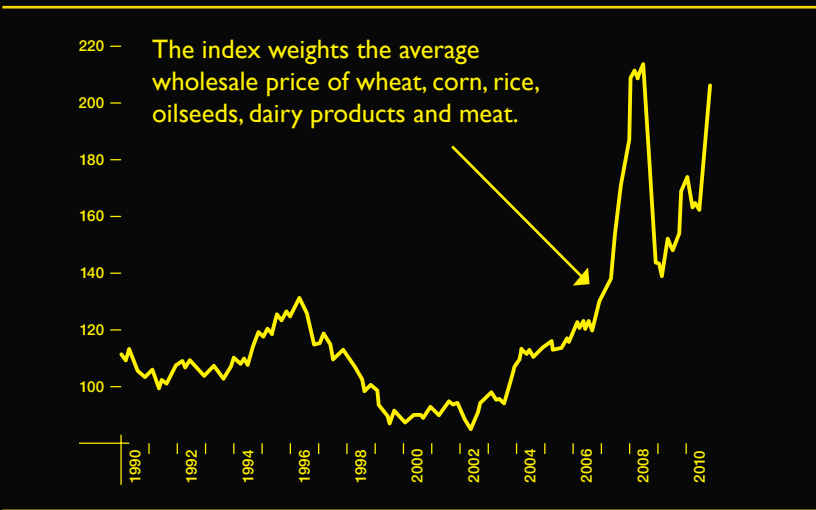
Rising food prices are a direct consequence of the global food supply failing to keep pace with demand. The world needs a new 'green revolution' with scientific advances that can deliver higher yields and improved management practices to run large-scale hi-tech farms effectively.

Food price inflation in the UK is currently 5%, just two years on from peaking at 12.8%. The UN's Food and Agriculture Organisation's (FAO) benchmark food price index (see Figure 1) suggests 2007 was an indication of an upward shift in global food prices and the UN's Millennium Development Goal to halve the proportion of hungry people in the world's poorest countries by 2015 has suffered the embarrassment of numbers continuing to rise. These are not random events - they reflect a fundamental change in global food markets. After a generation in which the affordability of food steadily improved, the trend has now been reversed.

A recent report by Chatham House (the Royal Institution of International Affairs) on the future of food, opens with the words: "What we had thought of as abundant food supply is anything but ... the global system as currently operated will reach breaking point unless action is taken." Higher food prices are a direct consequence of global food supply failing to keep pace with demand. In developed countries this puts stress on disposable incomes with adverse effects for other sectors of the economy. In developing countries it threatens the pace of development and in the world's poorest countries it results in hunger and malnutrition.

The challenges faced by the world's food system are summarised in Figure 2. Many food experts believe that the global demand for food will double over the next 40 years due partly to the world's population rising to 9.2 billion; but primarily because of rapid economic development and its associated reduction in poverty.

Figure 1: FAO Food Price Index



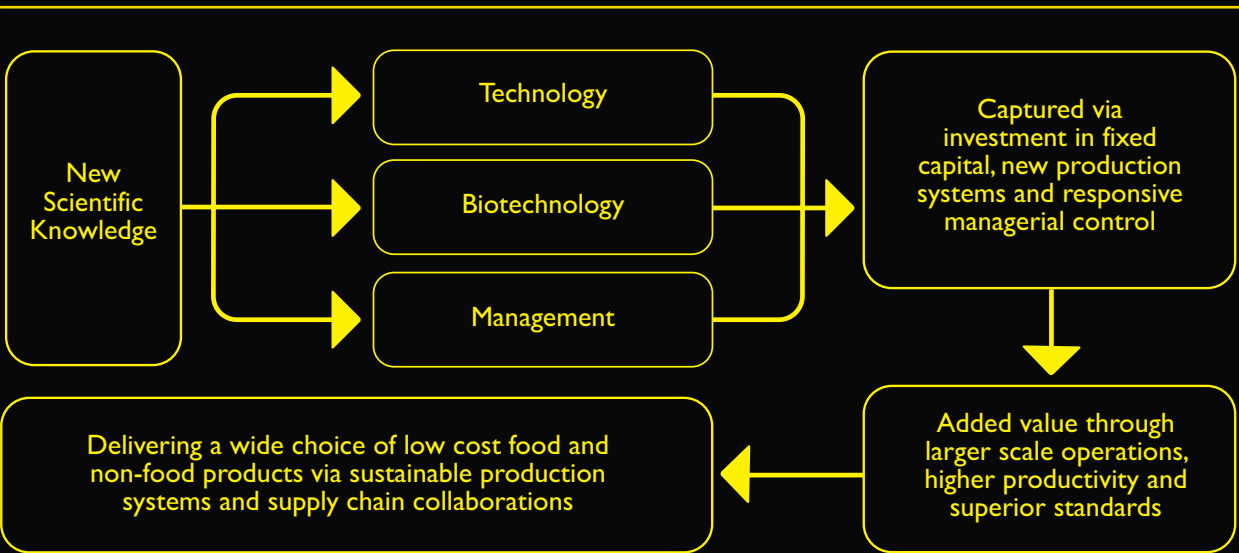
Source: UN's Food and Agriculture Organisation (FAO)

Figure 2: Seven challenges to global food production

Issues	Concerns	Challenges
Demand drivers		
1. Substantial rise in the world's population	Annual global per capita grain production has declined	Many developing countries are struggling to meet their population's demand for food
2. Nutrition transition as per capita incomes rise	Global demand for meat and dairy products rapidly rising	Continue upward pressure on world food and grain prices
Supply challenges		
3. The dependency of food production on energy	Energy prices have risen and are expected to rise further	Rising production costs plus increasing diversion of arable land from food to biofuels
4. Severe limits on the area of agricultural land	The per capita area of cultivated agricultural land has declined	Underlying productivity growth – particularly for grains – is slowing
5. Global supply of water failing to match demand	Agriculture production heavily dependent on fresh water	Agricultural trade to compensate limited by failure to reach WTO agreement
6. Stress of climate change on agricultural production	Identified as a cause of crop losses in recent years	Will contribute to the more rapid spread of crop and animal disease
7. Rural populations are declining as a proportion	Global harvests already dependent on migrant labour	Rising urban populations will become reliant on a reduced rural population for their food

Source: Author's summary based on Chatham House report 'Food Futures: Rethinking UK Strategy'

Figure 3: The importance of management



As per capita incomes rise above \$2 a day, diets include more meat and dairy products. The FAO expects demand for meat in developing countries to more than double by 2050 and this will require a complementary increase in the production of grain for animal feeds.

The situation outlined in Figure 2 is echoed in a 2009 study from the Royal Society which argued that only solutions "underpinned by science and technology are feasible". In essence, the challenge is to greatly increase total factor productivity. That is, not only will farmers have to significantly increase the output they get from each hectare of land; but they will also have to achieve this by using less water and energy per unit of output.

The world needs a new 'green revolution' with scientific advances that can deliver higher yielding plant and animal varieties while reducing demands on the world's resources. However reliance on technology and in particular biotechnology will not be sufficient.

Figure 3 shows how the value inherent in new scientific knowledge can only be captured if managerial ability keeps pace.

Never has an industry cried out more loudly for 'creative destruction'; namely, the replacement of large numbers of small scale, badly managed enterprises with fewer, larger scale skilfully managed farms. That there are enormous economies of scale in farming is beyond dispute and the wide range of yields, quality and unit costs in all agricultural sectors testifies to the scope for improved efficiency. Large scale enterprises can afford and justify higher levels of investment; they can more easily spread risk; and deliver the lowest unit production costs.

With so much dependent on management, it is pertinent to ask why farming is a neglected area in business schools? Three reasons come to mind. Firstly, in developed nations agricultural policy is implicitly viewed as a social policy.

High levels of support have the effect of overriding market forces, thereby protecting inefficient enterprises and critics soon find they are grappling with politics rather than economics. Secondly, in the world's poorer countries there are very few alternatives for farmers who would need to leave the land to make way for larger scale farms. Anyone advancing the need for structural change is at best likely to be viewed as heartless. Thirdly, agriculture lacks the glamour of transnational organisations and higher value, diversified products.

This neglect is a serious oversight. Feeding the world is the greatest priority and the growing demand for food will require much improved management skills in agriculture. This is where business schools have an important role to play. We have much to offer in helping the world's food system adapt to this new era. **MF**

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