

Chapter 1

Overview

This chapter provides an overview of developments over the period 2006 to 2008 in agricultural policies in seven emerging economies: two from the South American continent (Brazil and Chile); two from Asia (China and India); two from Europe (Russia and Ukraine) and one from Africa (South Africa). A separate chapter for each of the seven economies, providing in-depth analysis and commentary, follows this overview. The first section discusses developments in world food markets, with a particular emphasis on the significant increase in global agricultural prices. Policy responses to higher food prices, along with other significant policy changes and new initiatives are then described. The global spread of the seven economies, their net trade positions (net exporters and net importers) and their differing policy objectives provide for an interesting contrast in terms of government policy responses to the challenge of food price inflation. The third section examines changes in the level and composition of agricultural support since 1995-97, a period which coincides with the beginning of implementation commitments made under the Uruguay Round Agreement on Agriculture (URAA), and makes comparisons between these economies and with the OECD country averages. Finally, some policy conclusions are offered both in terms of specific responses to higher agricultural prices and the general direction of agricultural policy in these seven emerging economies.

Developments in world food markets

The first part of this section discusses the significant increase in international commodity prices, noting differences between commodities in terms of the timing and the extent of increases, and the contributing factors. The impact of higher food and fuel prices on inflation is discussed in the second part, and the variety of policy responses in the following section.

International commodity prices have risen dramatically

The period under review has witnessed a surge in international prices for some commodities, which began to rise sharply in 2006 initially for wheat and maize, and then for dairy products and oilseed crops (Figure 1.1). International market prices for these commodities more than doubled in nominal terms between the beginning of 2005 and the end of 2007, and continued to rise rapidly for some through the first six months of 2008. International prices for rice, which had been increasing at a slower pace, tripled between January and May 2008. However, prices for these commodities began falling in the second half of 2008 on the expectation of favourable crop harvests and because of a slowing world economy. In comparison, international prices for meat products, with the exception of poultry, have not shown such a dramatic rise although they were continuing to trend upward through the latter part of 2008. After peaking at the end of 2005, international prices of sugar declined during 2006 and 2007, but rose once again in 2008 due to concerns about the Brazilian harvest.

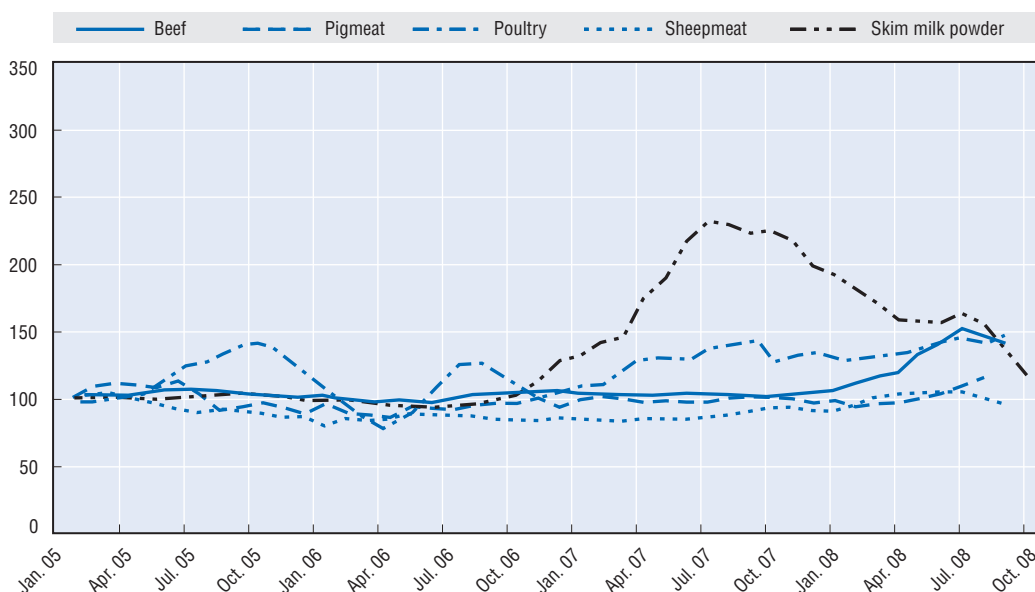
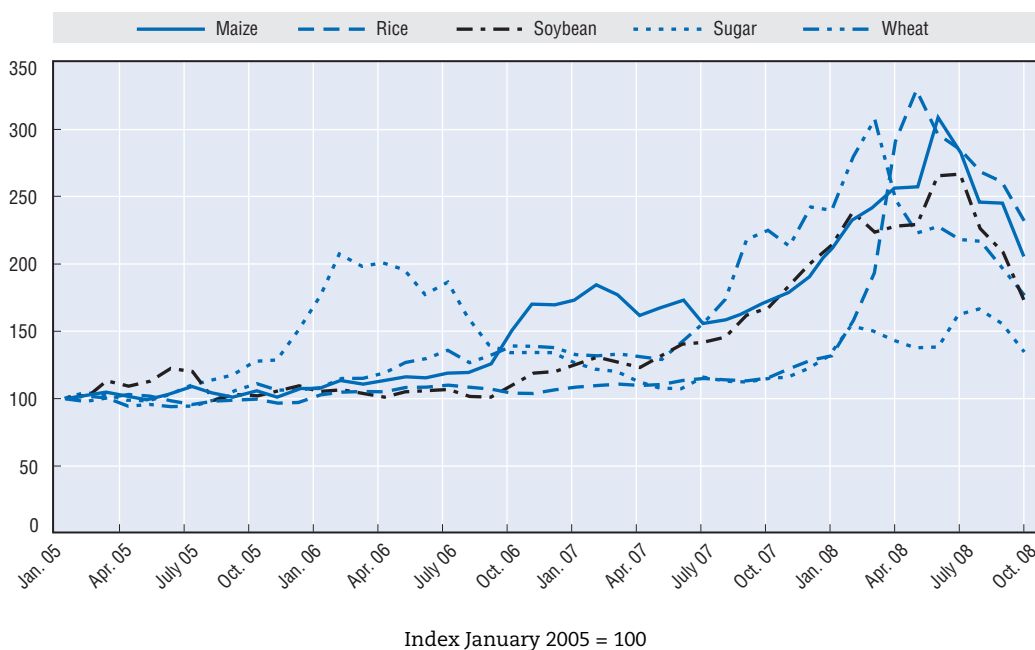
Price spikes, like price troughs, are not rare occurrences in agricultural markets, although periods of high prices tend to be short lived compared with periods of low prices. Further, the recent price spike is neither the only nor even the most important one to occur in the last 30-plus years. In inflation adjusted terms, peak prices in mid-2008 were well below the peaks reached in the early 1970s, and current prices remain much below these peaks, although above the historical trend.

The causes of the price spikes are complex and can be attributed to a combination of mutually reinforcing factors at play in international agricultural markets. Over the long term, demand for agricultural products has been steadily increasing, driven by consumption growth in emerging economies such as India and China, although most of the increase in consumption in these two countries had been met from domestic production. Demand patterns have also been changing, moving away from starchy foods towards more meat and dairy products, which is intensifying demand for feed grains and strengthening the linkages between different food commodities. While world cereal production increased on average by 2% per year between 1980 and 2007, the portion going to feed use has increased on average by over 3.5% per year.

The emerging biofuels market is a new and significant source of demand for some agricultural commodities such as sugar, maize, cassava, oilseeds and palm oil. Ethanol and biodiesel production rose rapidly in many parts of the world, partly in response to higher

Figure 1.1. **Changes in nominal international prices for selected agricultural commodities since 2005**

Index January 2005 = 100



Prices refer to monthly average.

Wheat: US No. 2 Hard Red Winter, f.o.b. Gulf

Rice: Thai white rice 100% B second grade, f.o.b. Bangkok

Sugar: I.S.A. daily price

Pigmeat: USA, pork, frozen product, export unit value

Sheepmeat: New Zealand, lamb, frozen whole carcasses, wholesale price, Smithfield (London)

SMP: Oceania, indicative export prices, f.o.b.


Source: FAO, FAOSTAT Database, 2008.

Maize: US No. 2 Yellow, f.o.b. Gulf

Soybean: US No. 1 Yellow, f.o.b. Gulf

Beef: Australian, cow beef, boneless, c.i.f. USA

Poultry: USA, Broiler cuts, export unit value

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oil prices which are making them more competitive. The implementation of public policies to support the biofuel sector further encouraged the demand for these feedstocks. Between 2005 and 2007, half the increase in world grain use went into biofuel production.

On the supply side, there were significant weather-induced production shortfalls in key commodity-exporting regions. Supply disruptions in major exporting countries can have important implications for export supplies and international agricultural markets even if they have little impact on global production. While total production of key traded crops (wheat, rice, coarse grains, rapeseed, soybean, sunflower seed, palm oil and sugar), measured in wheat equivalent terms, rose by almost 6% in 2007 compared to the 2003-05 average, production shortfalls of 20% in Australia and Canada, two major cereal exporters, contributed to tighter export supplies.

The short-term fall in supply followed a longer term decline in global stocks of wheat, rice and coarse grains, which have fallen steadily relative to use requirements since the mid-1990s and even more quickly since 2000. The stock-to-use ratio for these cereals, at 17% in 2007/08, was half the level of ten years ago and lower than at any time during the past 45 years. Very low stocks can make markets more vulnerable to shocks, contributing to price volatility and overall market uncertainty.

International market prices have also been affected by policies introduced by governments to reduce domestic inflationary pressures. In particular, the introduction of export restrictions and bans, such as those imposed by India and China on rice or by Russia and Ukraine on wheat, has restricted global supply and aggravated shortages. Unilateral actions by exporting countries prompted others to quickly follow suit, undermining trust in the market and leading to worse outcomes for all. The thinly traded rice market was particularly vulnerable to such actions, with the rapid increase in international rice prices heavily affected by government actions. Speculation and hoarding activities, fostered by low stock levels and ill-designed policy responses, also contributed to the rapid increase and volatility of food prices on both world and domestic markets.

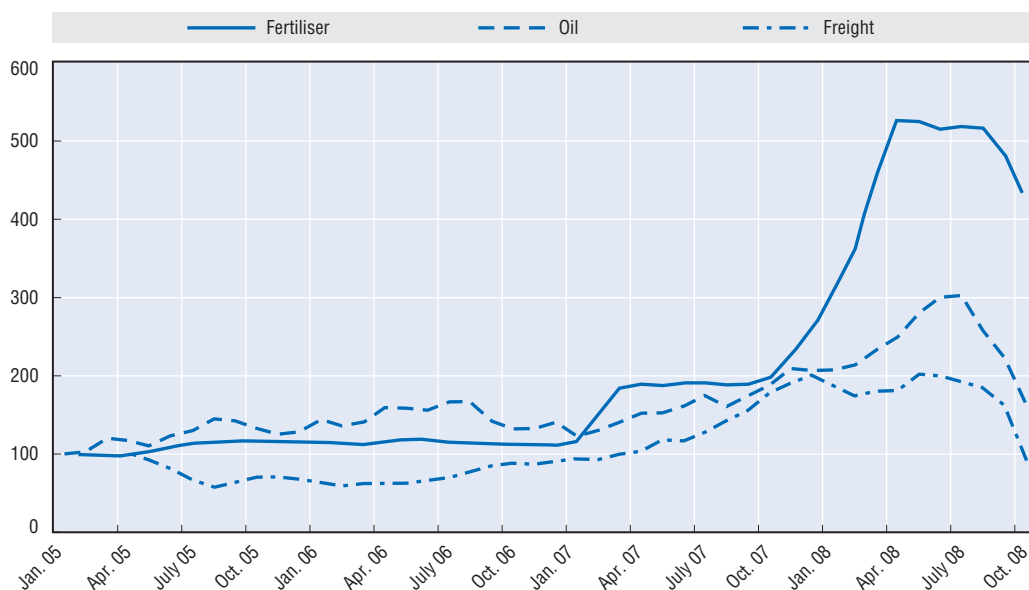
Higher prices for food and energy have raised inflationary pressures

The rapid growth of the world economy in recent years has strained the capacity of oil markets, resulting in an unprecedented price rise. Since 2001 the price of oil rose from USD 20 per barrel to a peak of around USD 150 in July 2008, with prices more than doubling between January 2007 and mid-2008 (Figure 1.2). The rise was initially demand driven, but more recent increases were fuelled by a combination of supply concerns and financial factors. Higher oil prices had a flow on effect into other costs. While freight rates fell during 2005, they too have more than doubled since the beginning of 2006. There has also been a steep rise in the cost of fertiliser. Oil prices fell sharply during the latter half of 2008, but are likely to remain volatile as markets assess the net balance of competing effects, such as the downward price pressure that may ensue from the financial crisis and the upward pressure from low stocks, limited spare capacity, supply disruptions and uncertainty over the exploitation of new reserves and the development of non-oil sources.

Higher global food and energy prices contributed to upward domestic price pressures in many countries, threatening past gains in stabilising prices. The 2007 edition of this report noted the impressive progress made by the emerging economies in bringing inflation under control during the period 2000-05. While staying within the “normal” range during 2006 and 2007, inflation rates rose during 2008 in all countries, but particularly in

Figure 1.2. **Changes in nominal prices for selected energy, fertiliser and freight costs since 2005**

Index January 2005 = 100¹



1. Except for freight for which April 2005 = 100.

Fertiliser: DAP, US Gulf, USD/tonne; Oil: UK Brent, USD/barrel; Freight: IGC Grain Freight Index.

Source: IMF, International Financial Statistics, 2008; International Grain Council, 2008.


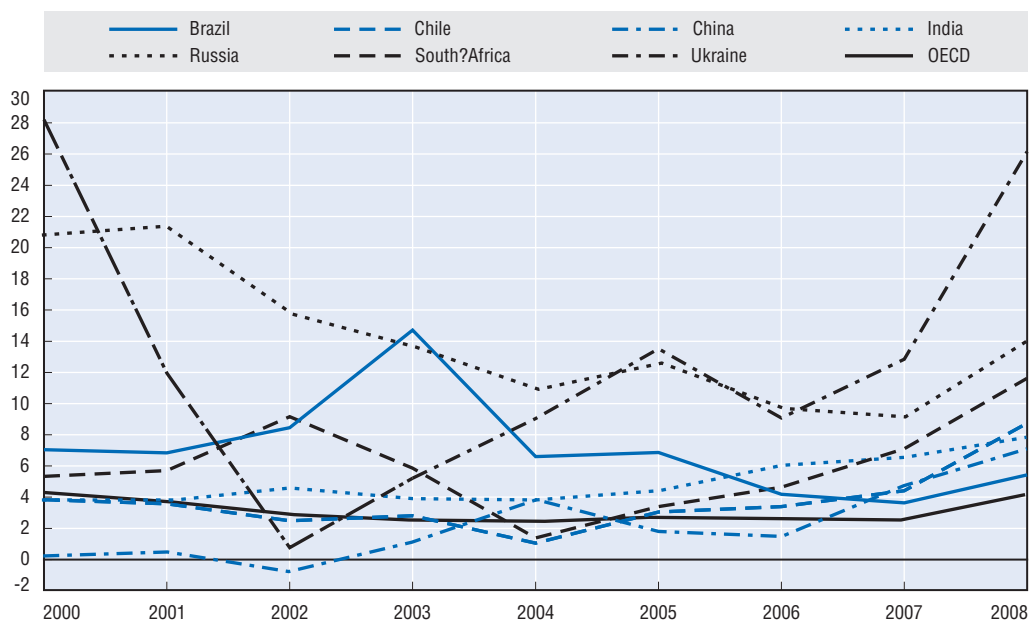
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Figure 1.3. **Inflation, consumer prices, annual average, 2000-08**

Per cent



The inflation rate for 2008 is the average for the nine month period January-September.

Source: OECD MEI Database, 2008; IMF, International Financial Statistics, 2008.

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Ukraine, Russia, South Africa and China (Figure 1.3). Some of these economies were affected by domestic food supply and demand imbalances. For example, in South Africa, domestic prices for wheat and maize (a staple food for most of the rural population) increased significantly because of bad harvests in 2006 and 2007. The long term impact will also be heavily influenced by the financial crisis which swept the world in the latter half of 2008 (Box 1.1).

The impact of higher prices on the wider economy is determined by a number of structural characteristics. At the country level, low income food importing countries that rely heavily on tradable cereals for their diets are the most vulnerable to global food price shocks. None of the seven emerging economies fit into this category. Nevertheless, within each country the sharp rise in prices for staple foods has a significant impact on the poor who are net food buyers. The poor experience a further deterioration of their dietary quality and nutritional intake, and the number of poor and hungry rises. Estimates of the global increase in the number of poor due to the food crisis are converging on a figure of around 100 million persons, an increase of 3%-5%.¹ According to the World Bank, this will

Box 1.1. Potential impacts on agriculture of the financial crisis

The impacts of higher food and fuel prices are likely to be compounded by the global financial crisis that developed in the latter half of 2008. While the outcome of various co-ordinated efforts by political leaders and their financial authorities to address issues of liquidity, solvency and recapitalisation is still unknown, the impact of the financial crisis may have a number of effects on agriculture. Directly it will:

- Reduce the availability of loans – lenders will want more equity and collateral before approving loans. This will not only affect producers but also processors, traders and retailers who rely on credit.
- Increase the cost of borrowing through higher interest rates.
- Reduce the level of foreign direct investment – which is crucial for the development of emerging economies.

In the context of the spreading recession, it will indirectly:

- Put additional downward pressure on prices – while this may be beneficial for consumers and reduce input costs for producers, it sends a signal to decrease production which may lead to future shortages in supply, increasing both the level and variability of prices.
- Put pressure on government budgets (through reduced tax revenue and higher borrowing costs) – this may lead to a reduction in expenditure on items not related to current concerns such as research and development, although expenditure on infrastructure may rise as governments try to stimulate economic recovery.
- Reduce the level of remittances – which can be an important source of finance for developing countries.
- Potentially reduce official development assistance – as OECD governments face increasing deficits, they may be tempted to reduce ODA spending.
- Increase pressure to raise protectionism – which would increase price variability on world markets and reduce trading opportunities.
- Reinforce an orientation towards self-sufficiency in food production – which would lead to a reallocation of resources away from their most efficient use.

be associated with an increase in the number of undernourished persons in the world from 848 million in 2004 to 967 million by the end of 2008 (WB, 2008a). Of the seven emerging economies, India is probably the most vulnerable, having a higher rate of undernourishment, above the world average of 14% of the total population.

While producers are likely to benefit from higher international agricultural prices, and to respond by increasing production, higher world prices do not necessarily translate directly into higher domestic prices. First, the degree of price transmission depends on several factors, including currency exchange rates, trade openness, the efficiency of markets and government policies for price stabilisation. The same factors play a role when international prices are declining, as observed for most agricultural commodities in the second half of 2008. Second, producers have faced increased production costs, in particular for energy based inputs (fuels, fertiliser, irrigation, freight charges, etc.). While the share of energy in the cost of crop production is around 4% in most developing countries, it is between 8% and 20% in some large countries such as Brazil, China and India. Labour costs are also increasing in some economies as workers demand wage increases to compensate for higher food prices. In addition, livestock producers have incurred significant increases in feedstock costs.

Main changes in agricultural policies

This section describes the major agricultural policy developments in the seven emerging economies during 2006-08. The first part describes the policy measures taken to reduce inflationary pressures associated with higher food prices and to address food security issues. The second part briefly outlines other major policy changes in each economy.

Government responses to higher food prices

Along with a large number of other countries, the seven emerging economies made various policy interventions in response to higher food prices. Table 1.1 summarises these different measures in terms of their orientation: whether policies are directly orientated to affect consumers, producers or trade. Of course, policies oriented to one group will have an effect on others. A number of these measures were introduced for just a limited period of time and are no longer in effect. They are described in more detail in the relevant country chapters.

- The most common policy response taken by the emerging economies – and also worldwide – has been to **reduce or suspend import tariffs** on food products. The products on which tariffs were reduced, and the time and quantity limit varied between economies, as well as the extent of the tariff reduction. For example, while Brazil has provided tariff-free access for 2 million tonnes of wheat, the MFN applied tariff is just 6%. Changes of this magnitude can be expected to make only a limited impact on inflation.
- The next most common response has been to impose **export barriers** in the form of export restrictions or export taxes. The measures imposed by India, Russia and Ukraine were particularly significant given the potential quantities involved. Export barriers are likely to lower domestic prices for the products concerned but have serious spill-over effects, impeding price signals to producers and decreasing supplies for importing countries.

Table 1.1. Policy measures taken by governments to reduce the impact of higher food prices

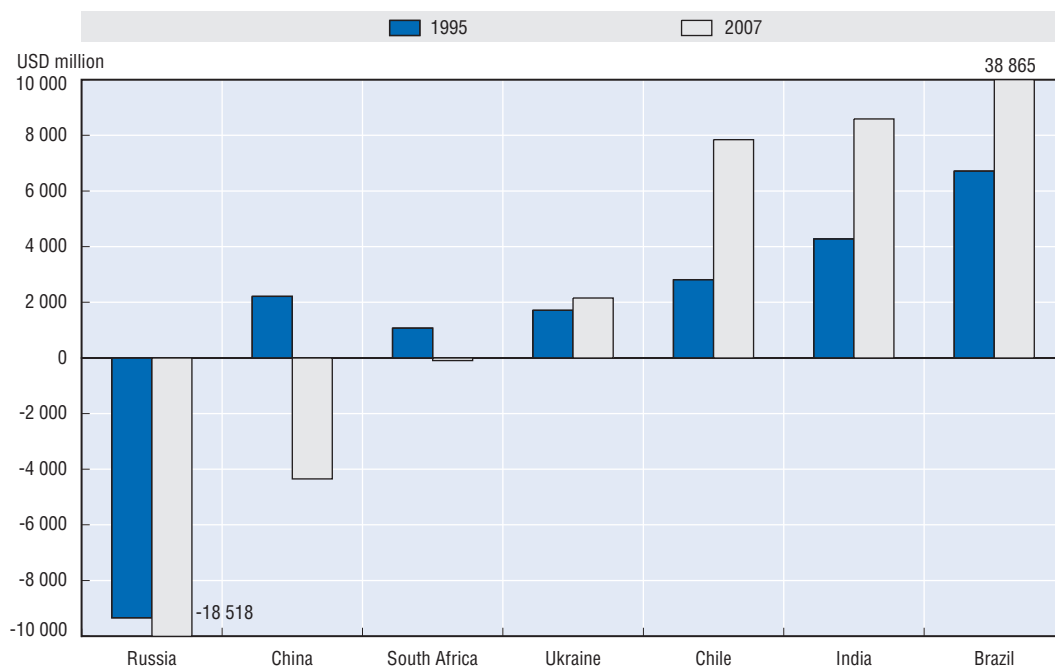
		Consumer-orientated			Producer-orientated		Trade-orientated		
Macroeconomic	Social	Market			Production support	Market management	Import	Export	
Interest and exchange rates	Food subsidies and other	Price controls and taxes	Release stocks	Food procurement and other	Producer credit and other	Minimum producer prices and other	Import tariffs and other	Quantitative export controls	Export price controls and tax measures
Brazil	Increased interest rates	Lowered the excise tax on petrol and diesel	Released stocks of beans, maize and wheat	Increased funds to raise the level of safety stocks	Increased access to credit and expanded extension services	Increased minimum prices for 2008/09 crop season	Reduced tariffs on wheat, sardines, palm kernel oil and some fertilisers; eliminated the merchant marine levy on wheat and flour		
Chile	Increased interest rates	One-off cash bonus for the 40% poorest							
China	Allowed the CNY to appreciate	Price controls on cooking oil, pork, eggs, instant noodles, milk, grains, natural gas, gasoline and electricity	Released stocks of grain	Stopped approval for any new grain-based biofuel processing plant	Increased subsidies for the purchase of farm machinery, fuels, fertilisers and improved seeds	Increased minimum purchase prices for wheat and rice	Reduced tariffs for a variety of products including pigmeat, cod fish, infant food, soybean and peanut meal	Imposed export licences on grains, soybean and flour	Suspended VAT export rebates on grain and grain products, later reinforced by provisional export taxes on grains, soybeans, flour and fertilisers
India	Increased interest rates	Increased food subsidies	Administratively fixed prices of key food products for public distribution kept unchanged	Efforts to secure sufficient supplies of grain for buffer stocks	Increased input subsidies particularly for fertilisers	Increased minimum prices and banned futures trading on a range of agricultural commodities	Removed tariffs on wheat, rice, maize and pulses	Export ban on wheat, corn, pulses and non-basmati rice	Introduced minimum export price and duty on basmati rice
Russia	Increased interest rates	Price freeze on wheat and rye bread, milk and fermented milk, sunflower oil and eggs; voluntary price restraint agreement	Released stocks of grain		Fuel subsidies to mitigate higher energy prices; additional per tonne subsidies for pigmeat and poultry		Reduced tariffs on milk and milk products, cheese, some types of vegetable oil and vegetables; lifted duties on poultry and eggs imported for breeding purposes	Introduced temporary ban on exports of wheat to Belarus and Kazakhstan	Introduced export taxes on grain
South Africa		Increased spending on the food package programme		Lowered the biofuel target level in liquid fuel from 4% to 2.5%			Removed tariffs on maize if the world price is greater than USD 110 for more than two weeks		
Ukraine		Mark-up limits on flour and retail price limits on breads, voluntary price restraint agreements	Released stocks of grain, flour, sugar and meat				Granted preference to state trading enterprises	Export quotas for grains and oilseeds	

Source: OECD Secretariat, 2008. The table structure is based on that developed by the FAO Global Information and Early Warning System (GIEWS) on food and agriculture.

- Another common response was to **release government held stocks**, particularly of grains, on to the domestic market to ensure supply and reduce upward price pressure. Many governments used up a large proportion of their buffer stocks during 2007-08.
- Another response has been to **stimulate domestic production** by raising minimum prices and expanding input subsidies. The increase in minimum prices may indicate a failure in the transmission of market price signals to farmers, which in turn could be due to other policy decisions, or it may reflect efforts to rebuild government stock holdings. The expansion of input subsidies reflects initiatives to counteract the increase in energy costs. These policies take time to work through the system and do little to reduce the position of the most vulnerable in the short run.
- **Retail price controls** have been introduced in China, Russia and Ukraine.
- China and South Africa made changes to their **biofuel policies** to reduce pressure on food security.
- Chile and South Africa provided additional **direct transfers** to those most vulnerable to the effect of higher food prices: a cash-based transfer in Chile and the provision of food in South Africa.


The varying responses of the seven economies reflect differences in their net trading positions (Figure 1.4), income levels, distribution of poverty, share of expenditure on food, and government economic policy. The contrasting responses of Chile and China illustrate this. In comparison with China, the response in Chile has been quite muted reflecting the fact that Chile is a net exporter while China is a net importer; income per capita in Chile (measured in PPP USD) is 2.5 times higher than in China; the share of expenditure on food in Chile is around half the level in China; and the level of state involvement in the market is minimal in Chile.

Figure 1.4. **Agricultural and food trade balance, 1995 and 2007**



Data for Russia and Ukraine is for 1996 instead of 1995; data for South Africa is for 2000 instead of 1995.

Source: UN, UN Comtrade Database, 2008; OECD calculations based on national data, 2008.

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Other changes reflect differing policy objectives among the emerging economies

During 2006-08, a number of new policy measures and major changes to existing policies were introduced in each of the seven economies:

- **Brazil** – Prior to the introduction of policy measures to deal with rising food prices, a number of measures were introduced in 2006 to deal with falling producer incomes. Lower output prices, attributable in large part to the appreciation of the Real against the USD, and higher production costs as well as localised droughts, pest and disease outbreaks were causing financial hardships for many farmers. In response, the government introduced a new payment based on output, expanded credit facilities and deferred debt repayments on investment and working capital for a period of one year (which was further rolled over in 2007). Of particular note was the extent to which these measures were introduced to support soybean producers.
- **Chile** – Stronger emphasis was put on credit programmes for small-scale agriculture. These programmes are designed and co-ordinated by the National Institute of Agricultural Development (INDAP) with the purpose of increasing credit allocations to smallholders from the private financial sector. In 2007, investments in general services increased to account for more than a third of total expenditures to support agriculture.
- **China** – Agricultural tax reform was completed in 2006 and a new Property Law adopted in 2007 strengthened farmers’ legal rights to land. However, farmers are still prohibited from raising a mortgage on the land, which limits access to credit. Pilot insurance schemes have been introduced for grain and livestock producers, with the cost shared between central government, local government and farmers. Stronger support for farmers is part of a wider programme of improving access to basic services such as education, health care and social security for the rural population.
- **India** – Improvement of rural infrastructure has been given a high priority to make India’s growth “more inclusive and equitable”. A large part of this rural investment is to be undertaken within a programme Bharat Nirman focussing on the expansion of irrigation area, improved water management, support for rural roads, housing, electrification, telecommunication, research and diversification of economic activities. The National Policy for Farmers, introduced in 2007, places greater emphasis on the economic well-being of farmers and rural development rather than just on agricultural production. In 2006, a new package was introduced to revive the short-term rural co-operative credit structure and to expand credit available to farmers at preferential interest rates. In 2008, the government announced a large scheme to waive overdue and unpaid debt, initially for small and marginal farmers, but then extended to include commercial producers.
- **Russia** – As part of a broader administrative reform process, the roles and responsibilities of central and regional governments in the delivery and financing of agricultural programmes were defined more clearly, and a multi-year overarching framework for the delivery of agricultural policy was introduced. With twin aims of stimulating agricultural production and improving rural areas through technological modernisation and investment in social infrastructure, there has been a significant expansion in concessional credit.
- **South Africa** – Following an evaluation of the performance of its land, agriculture and rural sector policies, the government adopted three new measures to accelerate the pace of land redistribution: the Land and Agrarian Reform Project (LARP) provides a new

Framework for delivery and collaboration on land reform and agricultural support to accelerate the rate and sustainability of transformation through aligned and joint action by all involved stakeholders; the Pro-Active Land Acquisition Strategy (PLAS) under which the government proactively identifies, purchases and distributes land in terms of established needs; and Sourcing Strategic Partners (from key non-governmental stakeholders) that will speed up land delivery, and more importantly, ensure stability of the farms and projects delivered, by providing skills and expertise that are currently lacking in the public service.

- **Ukraine** – The main driver of policy changes over the period was the long awaited accession to the WTO in 2008. Many modifications in national legislation were implemented to comply with the WTO requirements. Prior to accession, tariffs had been reduced substantially for key commodities such as pigmeat, poultry and sugar. An attempt is being made to improve co-ordination regarding the formation and implementation of agricultural policy measures.

While negotiations for Russia's accession to the WTO have reached an advanced stage, particularly in terms of market access, the remaining issues include determining the level of agricultural domestic support commitments. At the multilateral level, agriculture remains one of the areas of continuing difficulty in the WTO negotiations. In June 2008, ministers from WTO member countries failed to conclude a final agreement in the Doha round of negotiations. An impasse was reached on the terms that would govern Special Safeguard Mechanism remedies, with some developing countries, notably China and India, arguing that they needed additional flexibility, including the right to raise tariffs above bound rates – a position that could not be reconciled with demands for improved access to developing country markets.

All seven emerging economies have been engaged in bilateral and regional trade negotiations during 2006-08. Among the most significant to be concluded, or in which substantive progress was made, were agreements between: Ukraine and the European Union (EU); India and the Association of South East Asian Nations (ASEAN), and with the EU; China and Pakistan, and with New Zealand; South Africa, as part of the Southern African Development Community, and the EU; and Brazil, as part of Mercosur, with Venezuela, Chile and Israel.

Developments in agricultural support

This section examines agricultural support estimates for six of the seven emerging economies in this report (support estimates are not available for India because the government of India does not participate in the review process). These estimates form the basis for a comparative evaluation of policy developments in each country and cover the period 1995 to 2007. The effects of policy changes made in 2008 discussed in the previous section are not captured by these estimates. Annex A contains definitions of the OECD indicators of agricultural support, a description of the new PSE classification system introduced in 2007 and used in this report, and technical updates and improvements made to the measurement of support in each of the six economies.

Producer support is provided at a relatively low level

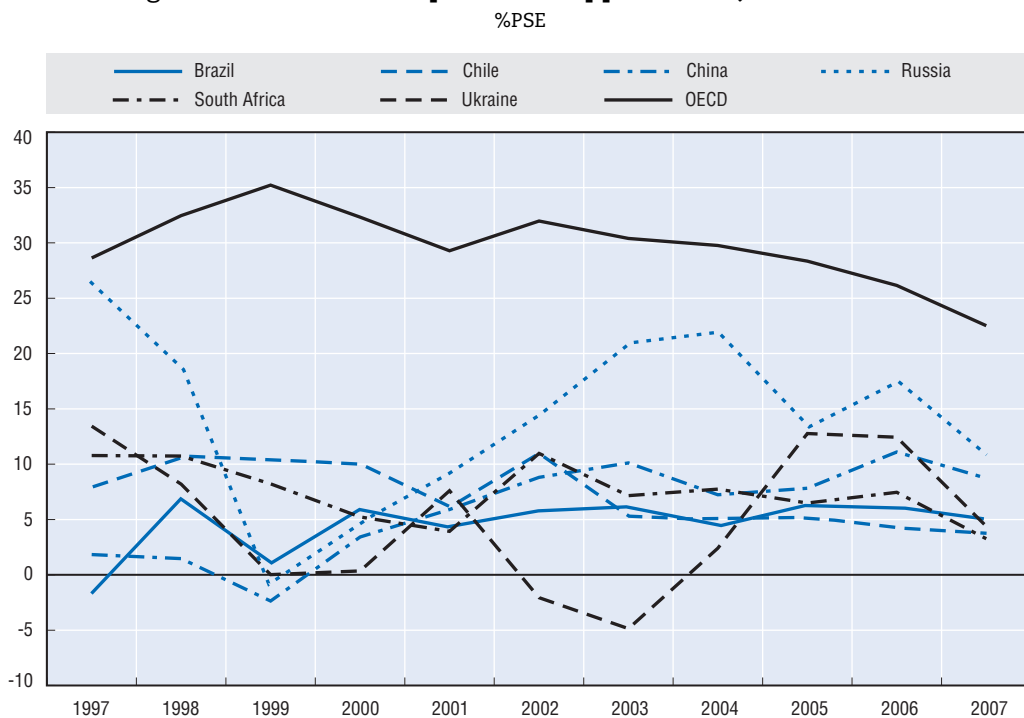
The percentage Producer Support Estimate (%PSE) is the key indicator used to measure the level of support to agricultural producers. It expresses the estimated monetary value of

policy transfers from consumers and taxpayers to producers (defined as the PSE) as a percentage of gross farm receipts. The %PSE is useful for analysing changes in the level of support both over time and between countries.

For all six emerging economies, the level of producer support as measured by the %PSE has been lower than the OECD average for all years of the past decade (Figure 1.5). In 2005-07, the value of policy transfers to producers represented 4% of gross farm receipts in Chile, 6% in Brazil and South Africa, around 9% in China and Ukraine, and 14% in Russia. This compares with an average level of producer support in the OECD area of 26% in 2005-07. Russia, with the exception of 1999 (a year following the 1998 financial crisis), has the highest level of producer support among the six emerging economies being evaluated in this study.

Trends in the level of producer support over time vary between economies. In Chile and South Africa, the level of producer support has fallen from around 10% in the mid-1990s, to 4% and 7% respectively in 2005-07. While the level of producer support in Brazil has been relatively constant at about 5% during the current decade, this represents a slight rise from the mid-1990s when policies effectively taxed the sugar cane/ethanol sector. Since the late 1990s, there has been a steady rise in producer support in China, which has stabilised at around 9% in recent years. The level of support to agricultural producers in Russia has been steadily rising over the current decade, from around 5% of farm receipts in the early 2000s to 14% in 2005-07, although it remains below the 1995-97 level of 19%. Ukraine has the greatest variability in producer support levels from year to year. Even as recently as 2003, agricultural producers in Ukraine were being “taxed” rather than supported by government policies.

Figure 1.5. **Evolution of producer support levels, 1997 to 2007**



Source: OECD, PSE/CSE Database, 2008.

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Between 2006 and 2007, the monetary value of policy transfers from consumers and taxpayers to producers (PSE) decreased in all six economies (Table 1.2). With the exception of Brazil, the reduction in the value of support to producers was driven by a fall in market price support (MPS) – the value of transfers arising from policy measures that create a gap between domestic market and border prices such as tariffs, minimum guarantee prices and export subsidies. In Brazil, an increase in MPS was more than offset by a decline in budgetary and other transfers (*e.g.* transfers arising from preferential credit) to producers. Brazil was also the only economy to have a decline in budgetary and other transfers: in other economies the increase in budgetary and other transfers came predominately through an increase in transfers based on input use.

The change in MPS is further broken down in Table 1.3a and 1.3b in order to understand better the main drivers behind annual changes in MPS in each emerging economy. In four of the six economies (Brazil, China, Russia and Ukraine), the main driver for the change in MPS was a variation in the quantity of production supported by MPS policies: this increased in Brazil, but decreased in the other three. In contrast, changes in the average unit MPS (gap between domestic and border prices measured at the farm gate) were the most important cause of lower MPS in Chile and South Africa (Box 1.2). A rise in the unit MPS means that the gap between domestic and border prices increased, while a fall indicates that the gap decreased. While out-weighted by the fall in quantity, there was also a large increase in the unit MPS in Ukraine. In OECD countries, overall developments in MPS were mainly the result of decreases in unit MPS, which were in turn driven by increases in border prices.

In all six economies the average border price rose when measured in both national currency and in US dollars. For Brazil, Chile, China and Russia, the appreciation of the national currency against the US dollar partly offset the increase in border prices measured in US dollars, while in South Africa, the depreciation of the Rand against the US dollar led to a larger increase in average border prices measured in national currency. In Ukraine, there was little change in either the US dollar border prices or the exchange rate.

Table 1.2. **Contribution to the change in Producer Support Estimate, 2006 to 2007**

Producer Support Estimate (PSE)			Contribution of:		Contribution of budgetary and other transfers (BOT) based on:						
			MPS	BOT	Output	Input use	Current A/An/R/I ² production required	Non-current A/An/R/I production required	Non-current A/An/R/I production not required	Non-commodity criteria	Miscellaneous
USD million, 2007	% change ¹	% change in PSE if all other variables are held constant									
Brazil	5 374	-4.9	6.8	-11.6	4.9	-17.7	1.2	0.0	0.0	0.0	0.0
Chile	285	-5.2	-15.2	10.0	0.0	11.3	-1.2	0.0	0.0	0.0	0.0
China	50 208	-3.0	-20.2	17.3	0.0	11.3	5.5	0.0	-0.3	0.7	0.0
Russia	7 880	-22.6	-37.8	15.3	1.1	10.8	0.2	0.0	0.0	0.0	3.2
South Africa	457	-47.6	-50.6	3.1	0.0	3.8	-0.7	0.0	0.0	0.0	0.0
Ukraine	1 175	-56.6	-72.1	15.5	10.1	9.4	-4.0	0.0	0.0	0.0	0.0
OECD ³	258 236	-3.9	-3.4	-0.5	-1.2	0.9	-1.1	0.2	1.0	-0.4	0.1

1. Per cent change in national currency.

2. A (area planted) / An (animal numbers) / R (revenue) / I (income).

3. An average of per cent changes in PSE for individual OECD countries (with EU25 as one), weighted by the value of countries' PSE in OECD total PSE in the previous year; not equivalent to the variation in OECD PSE in any other common currency.

Source: OECD, PSE/CSE Database, 2008.

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Table 1.3a. **Contribution to the change in Market Price Support, 2006 to 2007**

Market Price Support (MPS)	Contribution to % change in MPS of:	
	Quantity	Unit MPS
% change ¹	if all other variables are held constant	
Brazil	22.4	2.5
Chile	-55.3	-38.0
China	-48.9	-2.6
Russia	-47.7	-7.1
South Africa	-58.4	-65.2
Ukraine	-172.0	68.3
OECD ²	-6.6	-8.3

1. Per cent change in an economy's total MPS is the average of per cent changes in MPS for individual commodities in national currencies, weighted by the shares of individual commodity MPS in an economy's total MPS in the previous year.
2. An average of per cent changes in MPS for individual OECD countries (EU25 as one), weighted by the value of countries' MPS in OECD total MPS in the previous year.

Source: OECD, PSE/CSE Database, 2008.

StatLink  <http://dx.doi.org/10.1787/531726567854>

Table 1.3b. **Contribution to the change in border price, 2006 to 2007**

Border price (national currency) ¹	Contribution to % change in border price of:	
	Exchange rate	Border price (USD)
% change ²	If all other variables are held constant	
Brazil	-12.2	29.9
Chile	-1.8	48.2
China	-4.9	15.9
Russia	-6.6	21.9
South Africa	5.1	46.8
Ukraine	0.0	1.5
OECD ³	-4.6	19.6

1. Border price at farm gate, i.e. price excluding marketing margins between border/wholesale market and farm gate.
2. Per cent change in an economy's border price is the average of per cent changes in border prices for individual commodities in national currencies, weighted by the shares of individual commodity MPS in an economy's total MPS in the previous year.
3. An average of per cent changes in border price for individual OECD countries (EU25 as one), weighted by the value of countries' MPS in OECD total MPS in the previous year.

Source: OECD, PSE/CSE Database, 2008.

StatLink  <http://dx.doi.org/10.1787/531735700487>

Producer support is provided through measures which support commodity output or input use

In addition to the level of support, it is also instructive to analyse the composition of support, showing the different ways in which support is provided. As in most OECD countries, support based on commodity output (MPS and payments based on output) is an important way in which transfers are delivered to producers in the six emerging economies, particularly in Russia, South Africa and Ukraine (Figure 1.6). In the emerging economies this almost exclusively takes the form of transfers associated with MPS policies, primarily import protection, with only Brazil, Russia and Ukraine providing payments based on output. In contrast to most OECD countries, a considerable portion of support is provided to agricultural producers in the six emerging economies through

Box 1.2. Why does the PSE change when world prices change?¹

Support levels as measured in the PSE framework tend to fluctuate over time, a large part of which can be attributed to fluctuations in the MPS component of the PSE.

The calculation of the MPS for a given commodity is based on the gap between the producer price (at the farm gate) and the border price equivalent (adjusted for marketing margins) in the country concerned. A major source of fluctuations in the MPS is the variability of world market prices for agricultural commodities. Another source is variability of exchange rates, as world market prices (at the border) and domestic prices have to be expressed in the same currency.

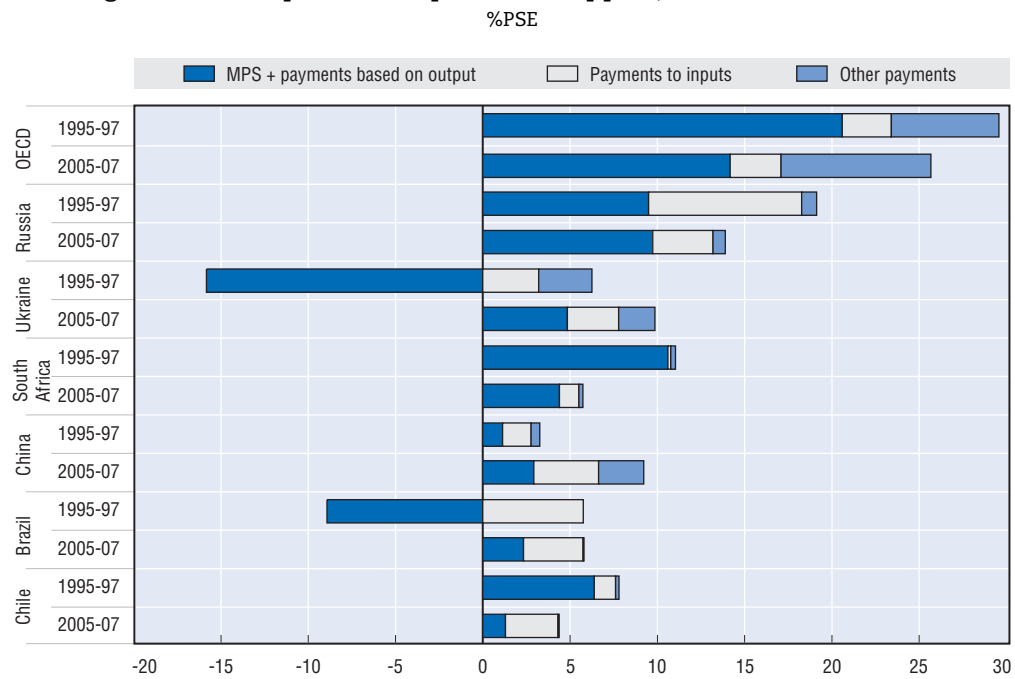
The PSE indicator reflects the nature of policy and the changes in support due to policy. It is tempting to think that the indicators should remain constant if policy settings have not changed. However, by picking up the variability of world market prices and exchange rates, the PSE rightly reflects the policy design characteristics that lead to a dependence of support levels on market developments. In the absence of price support policies, and with rapid adjustments in markets, the producer price would be aligned with the border price (adjusted for marketing margins), and would therefore move up and down with changes in world market prices and exchange rates.² Fluctuations in policy transfers arise when domestic prices are supported by domestic and border measures that impede the transmission of changes in world market prices to the domestic market. There are different policies regarding the transmission of world market changes to the domestic market, and the MPS properly reflects such differences.

For example, if an importing country has only an *ad valorem* tariff, then its domestic market price moves up and down with the world market price (although domestic prices remain higher than those on the world market). Consequently the gap between border and domestic prices remains constant and the per unit MPS would show no fluctuation. Alternatively, if an importing country operates a mix of policy measures which keeps domestic prices constant, then the gap between border and domestic prices will fall when world prices rise, and vice versa. Equally, per unit MPS will rise (fall) when the exchange rate appreciates (depreciates). Similarly, a country providing a deficiency payment (a payment based on output) to maintain a constant domestic target price makes smaller budget expenditures when the border price is high (including due to exchange rate variations), and vice versa. In this case, the PSE calculations will show a change in the level of payments based on output rather than of MPS.


The fact that MPS in the above examples behaves differently over time is an appropriate reflection of differences in policy implementation.

In brief, the PSE is an indicator of the transfers associated with agricultural policies, including those resulting from keeping producer prices in the domestic market stable while world market prices and exchange rates fluctuate. The indicator provides an equivalent measurement of all types of policies that insulate producer prices from market fluctuations. In particular, the method treats market price support and deficiency payments in the same way.

1. For a more detailed discussion on this topic see Tangermann, S. (2005).
2. In the reality of complex market situations, pass-through of a given change in the border price to the domestic market may be imperfect and may take some time. However, this does not change the fundamental point that in the absence of price support policies or other barriers, domestic market prices for tradables would respond to changes in international prices and exchange rates.

Figure 1.6. **Composition of producer support, 1995-97 and 2005-07**

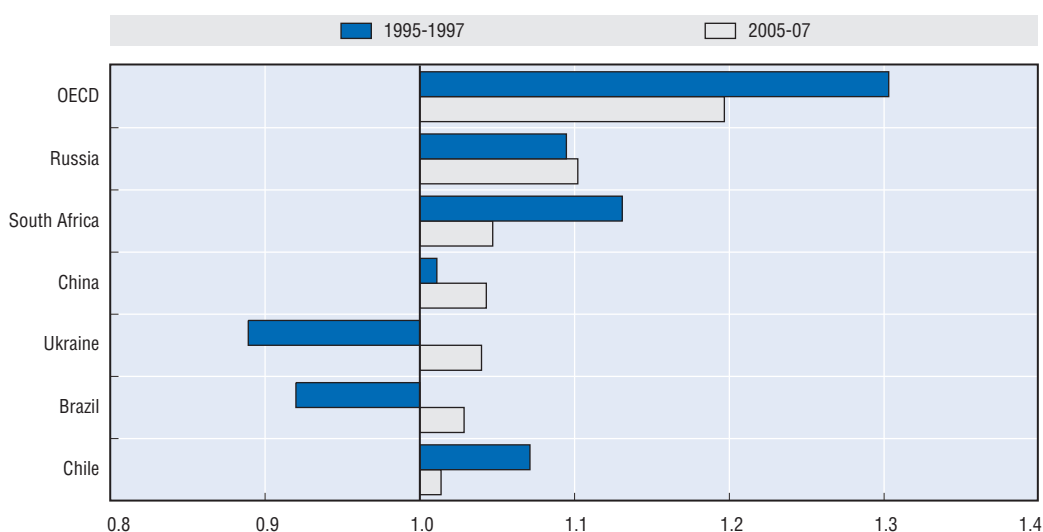
Source: OECD, PSE/CSE Database, 2008.

StatLink  <http://dx.doi.org/10.1787/528680043222>


payments based on input use (interest concessions, fertiliser subsidies, etc), with comparatively less use made of other payments, such as those based on land, animals or income.

While support based on commodity output decreased in importance for the OECD as a whole between 1995-97 and 2005-07, it increased in importance for four of the six emerging economies. Only in Chile and South Africa did support based on commodity output fall as a share of gross farm receipts between the two periods; hence it is the main factor contributing to the reduction in the level of producer support in both countries. In China and Russia there was a rise in support based on commodity output. While this led to a rise in the level of producer support in China, in Russia the level of support has fallen because of a reduction in other forms of support, most notably transfers associated with debt restructuring. Brazil and Ukraine both had significantly negative commodity based support in 1995-97. This has changed, with producers in both countries benefiting from support based on commodity output leading to an increase in the %PSE, but in Ukraine MPS was again negative in 2007.

These changes in support based on commodity output are also quite clearly shown by changes in the producer Nominal Protection Coefficient (producer NPC): the ratio between the producer price (including payments per unit of output) and the border price. This highlights the degree to which policies increase prices received by domestic producers. The average producer NPC for the OECD area was 1.20 for the period 2005-07, meaning that in the OECD farmers received, on average, prices that were 20% above international levels (Figure 1.7). In 1995-97 prices were 30% higher (NPC of 1.30), indicating that the gap between domestic and world prices has fallen by about one-third on average across all commodities across the OECD.

Figure 1.7. **Producer Nominal Protection Coefficients, 1995-97 and 2005-07**

Source: OECD, PSE/CSE Database, 2008.

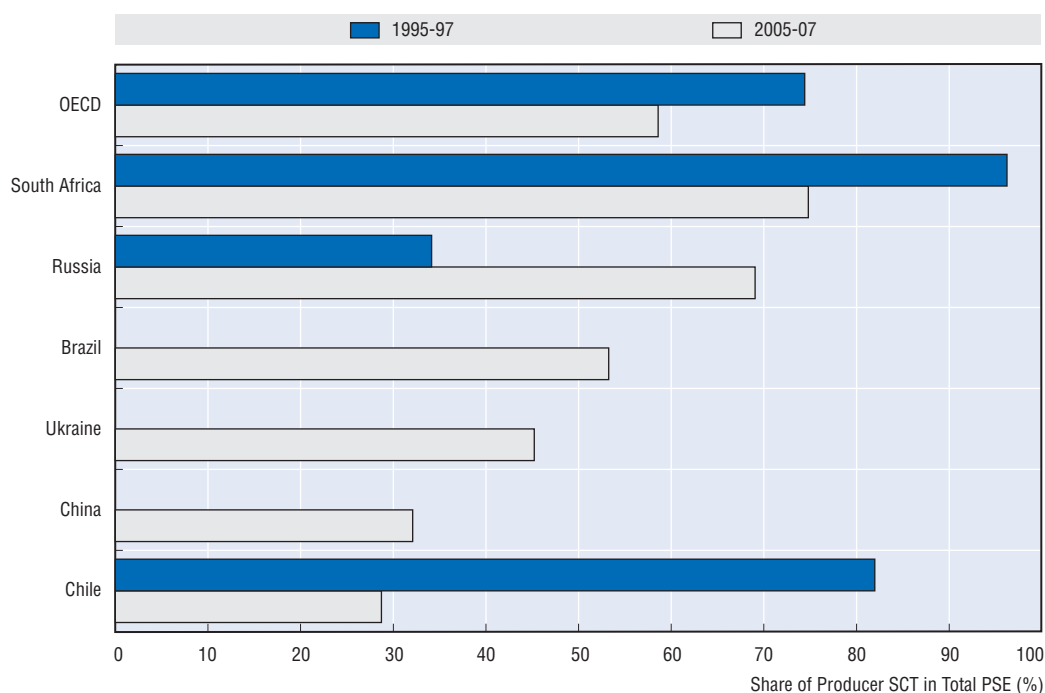
StatLink  <http://dx.doi.org/10.1787/528714284461>

The gap between domestic and international prices also fell in Chile and South Africa between 1995-97 and 2005-07, although producer prices in Chile are, on average, more closely aligned with world prices than in South Africa. In contrast, producer NPCs for Russia and China have increased, implying a greater misalignment of domestic prices *vis-à-vis* world market levels. In Brazil and Ukraine, the situation is more complex. In 1995-97, producers received on average prices that were around 10% lower than world prices (negative NPCs): in 2005-07, producers received prices 3%-4% greater than world prices (positive NPCs). Consequently, while the producer NPC increased in both Brazil and Ukraine, average producer prices are now more closely aligned with world prices than in 1995-97.

Producer support is often concentrated on a few commodities


The composition of support can also be analysed from the standpoint of the flexibility that policies accord to producers in determining production choices. For example, a payment designated for one specific commodity implies that in order to receive payment a farmer must produce that commodity. In contrast, payments may be provided to a group of commodities, *i.e.* any crop belonging to the cereals group, simply to any commodity without distinction. The prevalence of transfers directed to single commodities – as reflected by the share of Single Commodity Transfers (SCT) in the PSE – conveys important information on the flexibility given to producers in their production choices.²

The share of SCT in the PSE for the OECD countries fell from 74% in 1995-97 to 59% in 2005-07, driven mainly by a fall in MPS (Figure 1.8). Among the emerging economies, around 70% of producer support in South Africa and Russia is provided through single commodity transfers, indicating little production flexibility for farmers if they want to retain support. In contrast, less than 30% of support in Chile and China is provided in this form. Around 50% of producer support in Brazil and Ukraine is provided through transfers designated for a specific commodity.

Figure 1.8. **Single Commodity Transfers as a share of PSE, 1995-97 and 2005-07**

Data is not presented for Brazil and Ukraine for the years 1995-97 because SCT was negative in these countries during this period. For China, SCT as a share of PSE was just 0.1% for the years 1995-97.

Source: OECD, PSE/CSE Database, 2008.

StatLink  <http://dx.doi.org/10.1787/528734185708>

It is also instructive to look at the extent to which farmer's receipts for a particular commodity depend on the Single Commodity Transfers (the %SCT indicator). This measures the estimated monetary value of SCT for a commodity as a share of gross farm receipts for that commodity. While the level of support to agricultural producers in the emerging economies is below 10% of gross farm receipts for the sector as a whole, with the exception of Russia, there are commodities in each economy where SCTs account for a substantial share of farmers' receipts (Table 1.4).

Sugar appears in the list for all countries, with the exception of Brazil. There is no consistent pattern of support for any other commodities across the emerging economies, reflecting differences in production and consumption patterns and policy objectives. For example, it is mainly crops that receive SCT support in China, while it is mostly livestock

Table 1.4. **Single Commodity Transfers by commodity, 2005-07**

%PSE	SCT as per cent of gross farm receipts for each commodity			
	10%-20%	20%-30%	30%-40%	Over 40%
Brazil	5.8	Cotton	Rice	
Chile	4.4	Sugar		
China	9.2	Soybean, Sheepmeat	Maize	Sugar
Russia	13.9	Milk	Beef and veal, Poultry	Sugar, Pigmeat
South Africa	5.7	Sugar, Sheepmeat		
Ukraine	9.9		Beef and veal	Pigmeat, Sugar
				Poultry

Source: OECD, PSE/CSE Database, 2008.

products in Russia and Ukraine. Brazil, Chile and South Africa, the three emerging economies with the lowest level of producer support, have only one or two commodities with a %SCT value above 10%, although the level of support for cotton and rice in Brazil is relatively higher.

Relative importance of support to general services is increasing in some economies but falling in others

In addition to support provided to producers individually (PSE), the agricultural sector is assisted through public financing of services such as agricultural research and development, training, inspection, infrastructure, marketing and promotion, and public stockholding. The General Services Support Estimate (GSSE) measures the value of the associated transfers. Some of these expenditures constitute potentially important areas of public investment, which may in the long run improve the competitiveness of the agricultural sector and yield higher and sustained returns to farmers than commodity price support or input subsidies.

The share of GSSE in total support (%GSSE) indicates the relative importance of these transfers within overall support to the agricultural sector. The six emerging economies spend a greater proportion of total support on general services than for the OECD as a whole (Figure 1.9). In South Africa, over half of total transfers to agriculture are categorised as GSSE, which represents about one-third of transfers in Chile, and one-quarter in Brazil and China.

During the current decade there have been divergences among economies in terms of changes in the relative importance of expenditure on general services. In Brazil and South Africa, the level of producer support is low and stable; however, the relative importance of

Figure 1.9. Level and composition of General Services Support Estimate, 2000-02 and 2005-07

Share of Total Support (%GSSE)



1. For Ukraine, data for 2000-02 is not presented because the TSE was negative in 2002.

Source: OECD, PSE/CSE Database, 2008.

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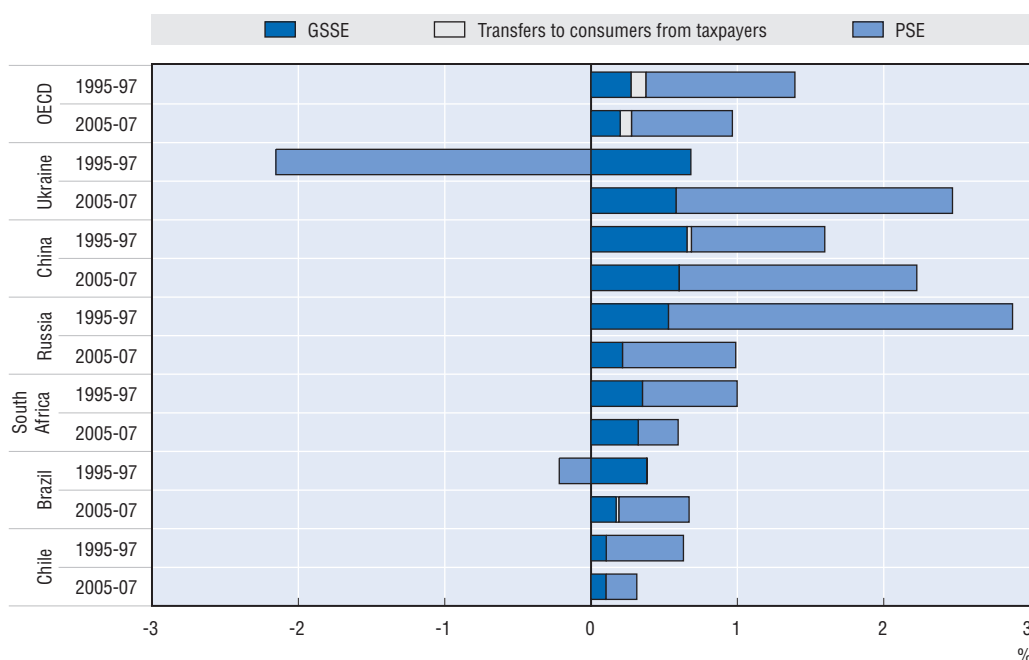
GSSE expenditures has decreased in Brazil but increased in South Africa. Expenditure on general services has also become relatively more important in Chile, where producer support has fallen since 2000. GSSE expenditure has not kept pace with the increase in producer support in China; the %GSSE falling from 43% to 27% between 2000-02 and 2005-07. In Russia, by contrast, GSSE expenditure has kept pace with the increase in producer support and the %GSSE remained almost stable.

In all six emerging economies, expenditure on infrastructure to support agriculture (irrigation, drainage, farm consolidation, etc.) is one of the major categories of GSSE category of expenditure. A significant portion goes to research and development in Chile and South Africa, although in Brazil expenditure on research and development has fallen in relative importance. Public stockholding is important in China, and there has been a considerable increase in expenditure on inspection services in Russia and Ukraine.

The total value of support to the agricultural sector is measured by the Total Support Estimate (TSE), which represents the sum of transfers to agricultural producers individually (PSE) and collectively (GSSE), as well as subsidies from taxpayers to consumers. For the OECD as a whole, total transfers arising from agricultural support policies represented around 1% of GDP in 2005-07, and have fallen over time as non-agricultural sectors of the economy have grown and support levels to agriculture have fallen (Figure 1.10). This is not the case for some emerging economies, in particular for China, where, despite the rapid expansion of the Chinese economy, support to agriculture has risen from about 1.5% of GDP in 1995-97 to more than 2% in 2005-07. Support to agriculture also imposes a considerable burden on the economy in Ukraine, with a %TSE of about 2.5%. For the other four countries, support to agriculture represents around 1% or less of GDP.

Figure 1.10. **Composition of Total Support Estimate, 1995-97 and 2005-07**

Per cent of GDP



Source: OECD, PSE/CSE Database, 2008.

StatLink  <http://dx.doi.org/10.1787/528751716084>

Policy observations and recommendations

Based on the previous sections of this overview, the following policy conclusions and recommendations can be drawn:

- The level of support to agricultural producers in the emerging economies is relatively low compared to that provided in many OECD countries. However, there are certain commodities in each economy that benefit from a greater amount of support than others, with sugar being an obvious example in many cases. This provides a strong incentive to farmers to retain production of these commodities, diverting more resources such as land, labour and fertilisers into their production than would otherwise be the case. As governments consider policy measures to increase food production in response to higher food prices, they should consider reducing support for some commodities which are attracting more resources than they would otherwise because of current policy settings.
- The imposition of export barriers in response to higher food prices, while reflecting legitimate concerns about food security, does not target those most in need and is likely to undermine producers' supply response. Moreover, while they may reduce the risks of food shortages in the short term, they are likely to make international markets smaller and more volatile. Export bans undermine trust in trade and encourage self-sufficiency driven policies in importing countries. Export restrictions have harmful effects on import-dependent trading partners. For example, export restrictions on rice in India affected Bangladeshi consumers adversely and also dampened the incentives for rice farmers in India to invest in agriculture, which is a long-term driver of growth. They also impede the transmission of price signals to domestic producers. For example, export quotas involved substantial foregone revenue in the grain and oilseed sectors, and reduced Ukraine's total export earnings.
- The introduction of export barriers, and their subsequent destabilising effect on world markets, has drawn attention to the fact that WTO rules do not prevent countries from imposing such export restrictions and that export taxation is not well disciplined. Weak rules in this area create uncertainty about the world market as a reliable source of food supplies.³
- A number of countries have responded to the food price crisis by increasing input subsidies, particularly for fertiliser, to stimulate production. While prices for energy based inputs have certainly increased, great care needs to be exercised in the delivery of these policies. In particular, it may be sensible to make such increases in subsidies time bound, or closely linked to international prices so that they are reduced if prices come back down. Further, appropriate regulations and extension services need to be provided and enforced to ensure that the increased use of chemical inputs does not lead to further environmental damage.
- Efforts are being made to improve the delivery of agricultural policy in a number of emerging economies, through administrative reform, the rationalisation of policy measures, the establishment of co-ordinated multi-year frameworks, and the introduction of private sector expertise and skills, among other initiatives. These are all welcome developments as consistency and transparency are vital for the success of any policy regime.
- Initiatives to introduce or expand insurance opportunities for farmers are also positive steps. Insurance schemes, if successful, can reduce the need for market intervention and assist farmers develop appropriate risk management strategies. However, when heavily

subsidised, insurance schemes can encourage excessive risk taking, leading to an expansion in production of the commodities covered by the insurance scheme at the expense of those that are not and the development of farming in areas which are not suitable for agricultural production, resulting in environmental degradation. When establishing or reviewing these schemes, governments need to consider carefully whether subsidies provided for the operation of the scheme can be phased out over a period of time, so that farmers gradually move towards paying the full costs of the programmes.

- Producer access to credit is vital for the development of agriculture in the emerging economies. A number of governments have increased the amount of credit available to farmers, including both commercial and small-scale producers. While the government can play a vital role in establishing the credit market, more can be done to expand private sources of credit, particularly to small producers. Rather than simply expanding government-supported credit, barriers to the expansion of private credit need to be reviewed and removed if feasible. However, the global financial crisis during the latter half of 2008 is likely to severely curtail governments' opportunities for doing this.
- A number of governments have taken steps during the period to either defer repayment of producer debt or completely write it off. These actions were taken to address a short term problem (financial difficulties) but they may worsen a long term structural deficiency (underdeveloped credit markets) because they can damage the discipline of credit systems. They can also create an expectation on the part of farmers that the government will bail them out in the event of future payment difficulties. Furthermore, such schemes may end up compounding rather than alleviating the debt problem because they make farmers' eligible for fresh credit despite not being creditworthy.
- The relative increase in expenditure on general services for agriculture, particularly infrastructure and research and development, is reassuring. However, significant room remains for improving the efficiency of public resources by increasing investments on high-priority public goods. Public investments are needed to ensure that the supply responses to higher prices can take place and that new strains of crops which deliver quantum yield increases are developed.

Notes

1. As determined by the standard "dollar-a-day" expenditure definition of the World Bank.
2. SCT includes all market price support and payments based on output – as these forms of support are specific to a particular commodity by definition – as well as any payments provided to single commodities under other categories of support which require commodity production.
3. At present, the WTO provides only minimal disciplines on export restrictions, mainly a notification requirement. Under the current DDA modalities members would be obliged to notify the WTO of new export restrictions or prohibitions within 90 days of their entry into force, with the duration of these measures limited to 12 months, or up to 18 months if affected importing countries were to agree.

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List of Acronyms and Abbreviations

AAY	Poorest-of-the-poor (<i>antyodaya ann yojana</i> ; India)
ABC	Agricultural Bank of China
ACFTA	ASEAN-China Free Trade Agreement
ACP	African, Caribbean and Pacific
AEZ	Agri-Export Zone (India)
AFC	Family Agriculture (<i>Agricultura Familiar Campesina</i> ; Chile)
AGOA	African Growth and Opportunity Act
AgriBEE	Black Economic Empowerment Framework for Agriculture
AMS	Aggregate Measurement of Support
APEDA	Agricultural and Processed Food Products Exports Development Authority (India)
APMC	Agricultural Produce Marketing Committee Act (India)
APTA	Asia-Pacific Trade Agreement
ASEAN	Association of South East Asian Nations
BAF	Financial Coordination Subsidy (<i>Bono de Articulación Financiera</i> ; Chile)
BLNS	Botswana, Lesotho, Namibia and Swaziland
BNDES	National Bank for Economic and Social Development (Brazil)
CACP	Commission for Agricultural Costs & Prices (India)
CASP	Comprehensive Agricultural Support Programme (South Africa)
CBR	Central Bank of Russia
CES	Agreement on Common Economic Space (between Belarus, Kazakhstan, Russia and Ukraine)
CIP	Central Issue Price (India)
CIS	Commonwealth of Independent States
CNR	National Irrigation Commission (<i>Comisión Nacional de Riego</i> ; Chile)
COMSA	Agricultural Insurance Programme (<i>Comité de Seguro Agrícola</i> ; Chile)
CONAB	National Food Supply Agency (Brazil)
CONADI	National Service for Indigenous Development – MIDEPLAN, Chile (<i>Corporación Nacional de Desarrollo Indígena</i>)
CORFO	Economic Development Agency (<i>Corporación de Fomento a la Producción</i> ; Chile)
COTRISA	Wheat Marketing Enterprise (<i>Comercializadora de Trigo</i> ; Chile)
CPC	Communist Party of China
CPI	Consumer Price Index
CPI-IW	Consumer Price Index for Industrial Workers (India)
DIPRES	Budget Department (<i>Dirección de Presupuesto</i>), Chilean Ministry of Finance
DIRECON	Directorate for International Economic Relations – Chilean Ministry of Foreign Affairs (<i>Dirección de Relaciones Económicas Internacionales</i>)
DoA	Department of Agriculture (South Africa)
EC	European Commission
ECA	Economic Complementation Agreement (Chile)

ECA	Essential Commodity Act (India)
ECLAC	Economic Commission for Latin America and the Caribbean – United Nations (Comisión Económica para América Latina y el Caribe – CEPAL)
EFTA	European Free Trade Association
EPA	Economic Partnership Agreements
EU	European Union
FAD	Fund of Delegated Cash Management (<i>Fondo de Administración Delegada</i> ; Chile)
FAO	Food and Agriculture Organization of the United Nations
FAP	Federal Agency for Regulation of Food Market (Russia)
FCI	Food Corporation of India
FDI	Foreign Direct Investment
FOSIS	Social and Solidarity Investment Fund (<i>Fondo de Solidaridad e Inversión Social</i> ; Chile)
FSSS	Federal State Statistics Service (Russia)
FTA	Free Trade Agreement
GAO	Gross Agricultural Output
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEIS	General Export Incentive Scheme (South Africa)
GMO	Genetically Modified Organism
GOI	Government of India
GRF	Government of the Russian Federation
HRB	Basic Irrigation Hectares (<i>Hectáreas de Riego Básico</i> ; Chile)
IEPA	Interim Economic Partnership Agreement
IMF	International Monetary Fund
INDAP	National Institute for Agricultural Development (<i>Instituto Nacional de Desarrollo Agropecuario</i> ; Chile)
INE	Chile's National Statistical Office (<i>Instituto Nacional de Estadísticas de Chile</i>)
KCC	Kisan (Farmer) Credit Card (India)
LARP	Land and Agrarian Reform Project (South Africa)
LRAD	Land Redistribution and Agricultural Development (South Africa)
MAFISA	Micro-Agricultural Finance Scheme of South Africa
MAPA	Ministry of Agriculture, Livestock and Food Supply (Brazil)
MDA	Ministry of Agrarian Development (Brazil)
MEP	Minimum Export Price (India)
MERCOSUR	Southern Common Market
MERT	Ministry of Economic Development and Trade (Russia)
MFN	Most Favoured Nation
MIDEPLAN	Chilean Ministry of Planning and Cooperation
MINAGRI	Chilean Ministry of Agriculture
MIP	Market Intervention Price (India)
MOP	Chilean Ministry of Public Works
MSP	Minimum Support Price (India)
NABARD	National Bank for Agriculture and Rural Development (India)
NAFED	National Agricultural Cooperative and Marketing Federation of India
NAIS	National Agricultural Insurance Scheme (India)
NAMC	National Agricultural Marketing Council (South Africa)
NAP	National Agriculture Policy (India)
NDRC	National Development and Reform Commission (China)

NPF	National Policy for Farmers (India)
NRA	Nominal Rate of Assistance
NREGP	National Rural Employment Guarantee Programme (India)
NYBOT	New York Board of Trade
ODEPA	Office of Agricultural Policies and Studies (<i>Oficina de Estudios y Políticas Agrarias</i> ; Chile)
OECD	Organisation for Economic Co-operation and Development
PBS	Price Band System (Chile)
PLAS	Pro-Active Land Acquisition Strategy (South Africa)
PNRA II	Second National Plan for Agrarian Reform (Brazil)
PPP	Purchasing Power Parity
PROCHILE	DIRECON's Department, to promote Chilean exports
PRONAF	National Programme for the Strengthening of Family Agriculture (Brazil)
PRRS	Porcine Reproductive and Respiratory Syndrome
PSS	Price Support Scheme (India)
R&D	Research and Development
RBI	Reserve Bank of India
RRA	Relative Rate of Assistance
SACU	South African Customs Union
SADC	Southern African Development Community
SAFTA	South Asian Free Trade Area
SAG	Agriculture and Livestock Service (<i>Servicio Agrícola Ganadero</i> ; Chile)
SARB	South African Reserve Bank
SASA	South African Sugar Association
SAT	Single Agricultural Tax (Russia)
SEZ	Special Economic Zone (India)
SINOGRAIN	China Grain Reserves Corporation
SNCR	National System of Rural Credit (Brazil)
SPS	Sanitary and Phytosanitary
SSG	Special Safeguard
STE	State Trading Enterprise
TBT	Technical Barriers to Trade
TDCA	Trade, Development and Cooperation Agreement (South Africa)
TPDS	Targeted Public Distribution System (India)
TICA	Trade and Investment Cooperation Agreement
TRQ	Tariff Rate Quota
UF	Chilean Unit of Account (Unidad de Fomento)
UN	United Nations
URAA	Uruguay Round Agreement on Agriculture
USA	United States of America
VAT	Value Added Tax
WB	World Bank
WBCIS	Weather-Based Crop Insurance Scheme (India)
WTO	World Trade Organization

OECD indicators of support

CSE	Consumer Support Estimate
GSSE	General Services Support Estimate
MPS	Market Price Support
NAC	Nominal Assistance Coefficient
NPC	Nominal Protection Coefficient
PSE	Producer Support Estimate
SCT	Single Commodity Transfers
TSE	Total Support Estimate

Currencies

BRL	Brazilian real
CLP	Chilean peso
CNY	Chinese yuan renminbi
EUR	Euro
INR	Indian rupee
RUB	Russian rouble
UAH	Ukrainian hryvnia
USD	United States dollar
ZAR	South African rand

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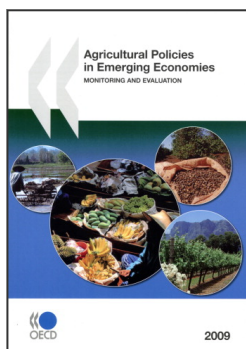
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