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Natural resources and development strategy after the crisis

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How important are primary commodities for economic development? This column suggests that primary commodity prices are likely to ease over the next five years. Nevertheless, commodity revenues will remain high, raising challenges that, if not addressed, can harm long-run development. With good governance, however, such revenues can also be a valuable resource to help accelerate overall development.



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Recent events have rekindled interest in the role of primary commodities in development. Was the boom in commodity prices from 2003 to 2008 just a cyclical event or does it represent a period of strength, driven by factors such as demand in fast-growing developing countries like China?

While commodity prices fell sharply with the onset of the global financial crisis, they generally remained much higher than in previous recessions, often as high as during 2005 to 2007 – a period of robust world growth. Moreover, as shown in Figures 1 and 2, prices rebounded smartly over the course of 2009.

Figure 1

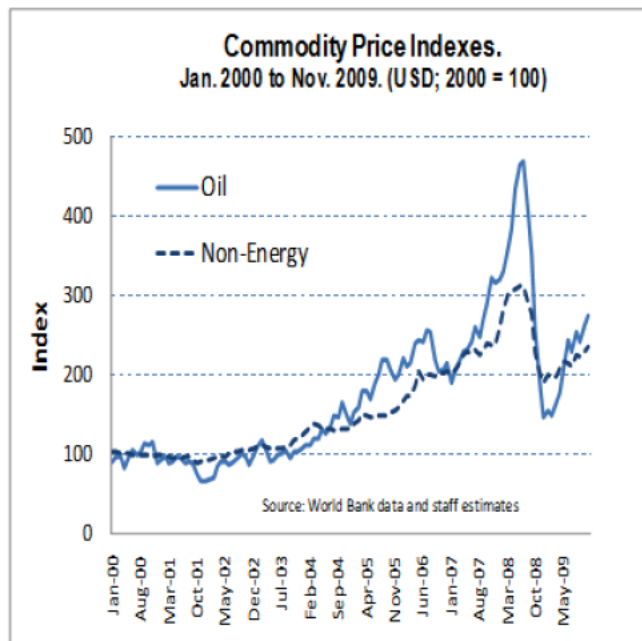
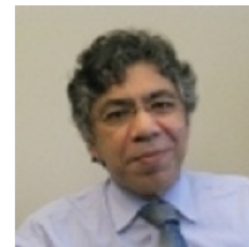


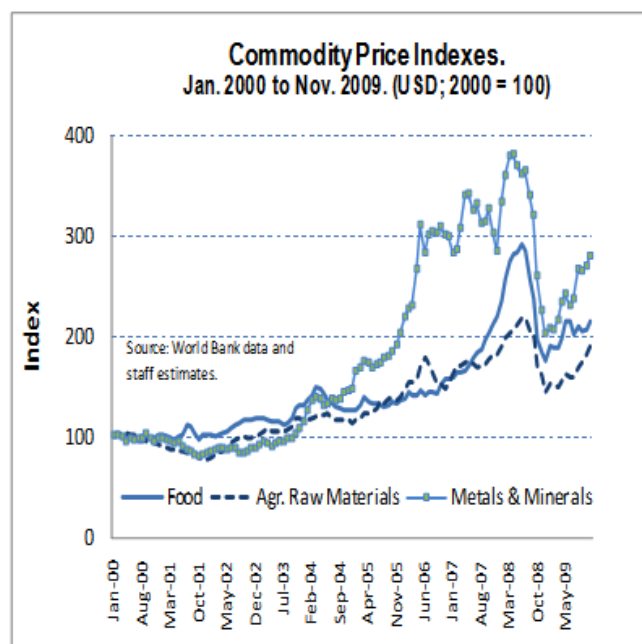
Figure 2



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If a period of commodity strength is imminent, what are the implications for development policies? Many argue that high specialisation in primary commodities has proved to be a curse for developing countries, while others suggest that sustained high prices could reduce the relevance of a classic East Asian tiger style, industrialisation-focused strategy (see for example, Oxford Analytica 2009).

Although it has fallen over time, developing country specialisation in commodities remains high. Commodities still comprise over 60% of the merchandise exports of the average developing country, although this is down from 90% in the 1960s. Half of developing countries still have commodity export dependence of over 70%.

What is the outlook for primary commodity prices?

The present consensus appears to be that real commodity prices do not display any permanent trend over the long run. Figure 3 shows the Grilli and Yang time series of real non-energy commodity prices (updated by other researchers) for the period 1900 to 2009 with simple analysis suggesting an average decline of 0.5% per year. It is not possible, however, to reject the unit root hypothesis for real commodity prices in the period 1900 to 2008 – thus raising the possibility that regression results are spurious. It is therefore possible for commodity prices to move significantly lower or higher for long periods even in the absence of an underlying trend, for example the period of low prices from the mid-1980s through the 1990s. Based on statistical properties alone, it would not be surprising to see a sustained period of high prices following the earlier period of low prices.

Are there plausible fundamentals to support such an outlook? The price of commodities relative to the price of manufactures can be analysed by examining the demand for and supply of primary commodities *relative* to the demand for and supply of

manufactures.

On the supply side, there is little evidence to suggest that productivity growth in commodities sectors is significantly different from manufactures (World Bank 2009). But it is true that investment in energy and minerals was slashed when prices were low in the 1980s and 1990s and is recovering only slowly due to skill shortages, technical difficulties in developing new reserves (for example, deep offshore), and political uncertainty in regions with new reserves. Bio-fuel subsidies have helped switch grain acreage from food to fuel use, contributing to the grain price hikes in 2005 to 2008. Over the longer term, however, one would expect a more copious supply response, as skill shortages and technical difficulties are overcome, and as new reserves and acreage are brought into production.

Relative demand for commodities could also rise in the medium term to the extent world growth after the financial crisis is more dependent on developing countries and the demand for commodities in these countries is more intensive than elsewhere. There is also evidence that real commodity prices are affected by monetary conditions, with prices tending to be high when real interest rates are low, as at present (Frankel 2008). In the longer term, however, some of these demand factors should also abate. Production efficiency in developing countries will approach developed-country levels and relative demand for food will decline due to low income elasticities. In the longer term, real interest rates can also be expected to rise.

So both supply and demand factors could support the present relatively high level of real commodity prices into the medium term, although these factors will tend to dissipate in the longer term. Most current forecasts are consistent with this scenario, projecting only a gradual easing in real commodity prices from existing levels by 2015 (Figure 3). If correct, this means that commodity exporters are likely to face a more benign medium-term price environment than in the 1980s and 1990s.

Are natural resources a blessing or a curse?

The short answer is "it depends." A survey of the large empirical literature suggests that natural resources are "neither curse nor destiny" (Lederman and Maloney 2007, Aaronson 2008). But these studies have often generated disparate results. A recent effort to reconcile these findings (Collier and Goderis 2007) observes that negative long-run growth effects are mostly related to oil and minerals – concentrated "point source" resources that stimulate rent-seeking and redistributive struggles. Further, high oil and mineral prices mostly have a negative impact on long-run growth in countries with "bad governance". This suggests that continued high commodity prices in the next few years could provide valuable resources to accelerate development in commodity exporting countries with good policies and governance.

There are several considerations to consider when evaluating how natural resource abundance can lead to worse economic performance.

- First, countries with weak governance are more likely to adopt poor economic policies to manage commodity booms.

For example, politicians may expand public spending and employment excessively to increase their patronage networks and chances of staying in power. Poor fiscal policy is indeed at the heart of economic mismanagement in the wake of natural resource booms. The most important recommendation from a study of natural resource booms in the 1970s and 1980s was that “spending levels should have been adjusted to sharp rises in income levels more cautiously than they actually were” (Gelb 1988).

- Second, resource booms create challenging problems in macroeconomic management even for economies with good governance.

These include Dutch Disease effects which result in appreciation of the real exchange rate and output contraction in non-resource tradables sectors like manufacturing, and also price-driven volatility in government spending and real exchange rates that damages investment and growth because of increased uncertainty. The extent of the effects will depend to some extent on policies. For example, if cautious fiscal policies are able to moderate aggregate demand pressures and smooth volatility in spending.

Resource-abundant countries also face longer-run questions about the optimal pace of resource depletion and of optimal saving from revenues for the welfare of future generations. Is the country’s strategy *sustainable*, transferring sufficient capital to future generations to allow them to achieve at least the same welfare as today? Natural resources are part of a country’s overall capital stock, alongside its physical capital stock and intangible capital such as human and social capital. To increase its overall capital stock, a country’s investment in its physical, human, and other capital must exceed the depreciation, including that of its natural resources. Figure 4 shows that countries with high resource depletion are often on unsustainable development paths, with negative net savings.

Figure 3

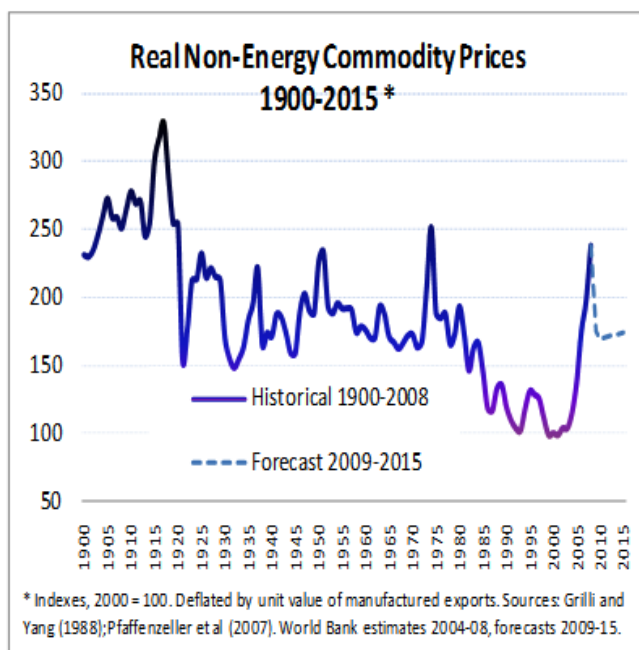
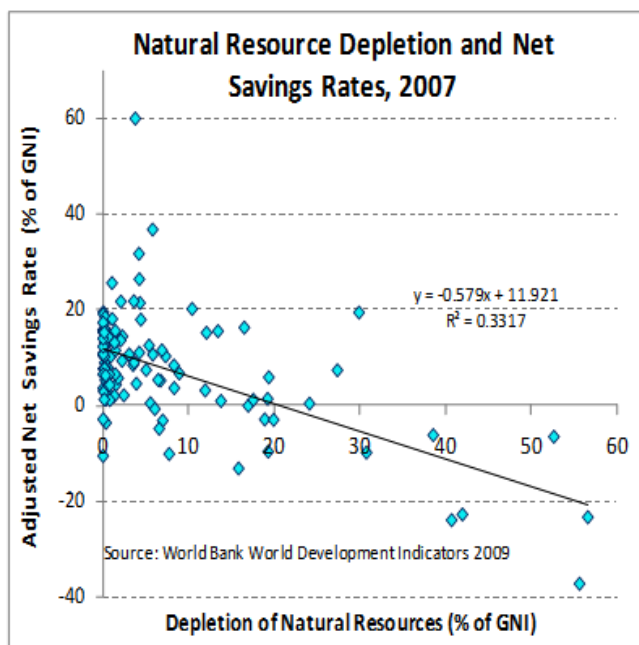


Figure 4



What policies can help poor countries best manage commodity resources for development?

Given the role of weak governance, efforts to enhance transparency and strengthen checks and balances on natural resource extraction are vital, as are broader anti-corruption reforms. Natural Resource Funds to facilitate good revenue management and to counter political pressure and corruption have also received attention, although these are more likely to succeed if they are part of broader efforts to strengthen governance and fiscal policy. Policy decisions about the allocation of natural resource revenues are also crucial – for example, whether to return revenues to citizens (via tax cuts or transfers) or to retain them in public hands, and how to allocate

public revenue between government consumption and investment (or reductions in debt).

A commonly used benchmark is the “permanent income rule” that suggests saving all resource revenues after funding a certain permanently sustainable increase in consumption (equal to the annuity value of the country’s natural resource wealth). The related practical advice is often to establish a Natural Resource or Sovereign Wealth Fund to invest in foreign assets, the returns from which support spending on the non-natural-resource budget. This approach is sustainable in that converts a limited stock of natural resources into a permanent financial income stream. By saving a large proportion of resource revenues it reduces the domestic demand pressures that cause Dutch Disease, and, by smoothing expenditures, it alleviates volatility.

There is nevertheless something odd about viewing the permanent income rule – where poor, capital-scarce countries invest in rich countries – as a long-run development strategy. Some analysts argue that the permanent income rule is optimal only under special circumstances that do not apply to most developing countries, notably the ability to freely borrow and lend at the world rate of interest (Collier and Venables 2008, Van der Ploeg and Venables 2009). Most developing countries are instead characterised by restricted access to capital markets, capital scarcity, and potentially high domestic rates of return, especially if the government can supply scarce public goods that raise returns on private investment. A better strategy may then be to spend more on high-return domestic public investments.

The success of such a strategy will evidently also depend on how efficiently public investment funds are allocated and managed. So reforms to strengthen public investment management, cost benefit analysis, monitoring and evaluation, and budget processes and institutions provide another crucial element of a successful resource-based development strategy.

We conclude that booming commodity revenues raise challenges that, if not addressed, can harm long-run development. With good policies, governance, and management, however, such revenues can also be a valuable resource to help accelerate overall economic and social development.

Editor’s note: A longer version of this column can be found at [World Bank Economic Premise Number 1, February 2010](#).

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