Commodities, Governance and Economic Development under Globalization

Edited by

Machiko Nissanke

and

George Mavrotas
Contents

List of Tables and Figures xi
Foreword by Richard Jolly xv
Acknowledgements xvii
Notes on the Contributors xviii
List of Abbreviations xxi
Preface and Introduction by Machiko Nissanke xxiv
A Current Contextual Setting for Development Finance by George Mavrotas xxxi

PART 1 COMMODITIES, TRADE AND GOVERNANCE: REFLECTIONS ON ALFRED MAIZELS’ LIFE, WORK AND LEGACY

1 Commodities, Cooperation and World Economic Development: The Mission of Alfred Maizels, 1917–2006 3
John Toye
Early life and education 3
At the Board of Trade 4
Research at the National Institute 5
Alf Maizels at UNCTAD 1966–1980 6
Subsequent academic contributions 12
Conclusion 14

2 Poverty, Power and Global Economic Governance 19
Gerry Helleiner
Alf Maizels and global economic governance 19
Global economic governance and the role of developing countries 21
‘Voice’ and the problems of the poorest and weakest 23
Preferential treatment for the poorest? 26
Reforming G8 summitry for global governance 28
Elements of governance reform in international financial institutions 31
Elements of governance reform in the trade arena: the WTO 33
Conclusion 36
### Contents

#### PART 2 COMMODITIES AND THE GLOBAL ECONOMY IN THE TWENTY-FIRST CENTURY

3 **Issues and Challenges for Commodity Markets in the Global Economy: An Overview**

39

*Machiko Nissanke*

Introduction 39

- Commodity prices and economic development: a debate in a historical retrospect 43
- The recent commodity price movements in a historical context 49
- The impact of the global financial crisis on commodity prices 60

4 **Commodity Market Structures, Evolving Governance and Policy Issues**

65

*Machiko Nissanke*

Introduction 65

- Changing landscapes of primary commodity markets and production 67
- Managing resource based economies over commodity price cycles 80
- Conclusion: policy implications and challenges 90

5 **Commodities Still In Crisis?**

99

*David Sapsford, Stephan Pfaffenzeller and Harry Bloch*

Introduction 99

Alf Maizels: commodity economist 99

- Primary commodity prices post-1980s: commodities still in crisis? 102
- Conclusion 106

6 **Asian Drivers, Commodities and the Terms of Trade**

117

*Raphael Kaplinsky*

Introduction 117

- The Asian Drivers are a disruptive force in the global political economy 118
- Asian Drivers and the rise in commodity prices 121
- What has happened to the prices of traded manufactures? 128
- Terms of trade reversal? 130
- Will the terms of trade reversal be sustained? 132

7 **Uncertain Prospects of Commodity-Dependent Developing Countries**

139

*Alice Sindzingre*

Introduction: a structural change in commodity markets? 139

- The central issue: the volatility of commodity prices 142
- Detrimental effects of commodity price volatility 146
The limited impact of China on price volatility and existing commodity based export structures 149
Beyond commodity prices levels: commodity-dependence and poverty traps 152
Conclusion: the difficulty of regulating volatility at the international and domestic levels 157

PART 3 CASE STUDIES OF COTTON AND COPPER

8 Cotton in Crises of Francophone Africa: Fatality or Challenge for Multidimensional Cooperation? 165
   Michel Fok
   Introduction 165
   Cotton in continuous crisis 166
   Multiple cotton crisis amplification factors 176
   Moving beyond the cotton crisis 197
   Conclusion 208

9 Exchange Rate Management for Commodity-Dependent Countries: A Zambian Case Study 221
   Elva Bova
   Introduction 221
   Theoretical background 223
   What would pegging the export price do for Zambia? 226
   What would do a counter-cyclical band do for Zambia? 235
   Conclusion 240

PART 4 FINANCE AND GOVERNANCE UNDER GLOBALIZATION

10 A Role for Compensatory Finance in the 21st Century after the 2008 Global Financial Crisis 249
   Adrian Hewitt
   Introduction 249
   The bubble economy and the global financial crisis 251
   The whys and wherefores of compensatory finance mechanisms 252
   The IMF Compensatory Financing Facility 253
   STABEX and parallel and successor schemes 256
   Assessment for compatibility with current commodity trade issues 260
   New thinking on compensatory finance 264

11 ‘The Bottom Billion’: A Critique and Alternative View 269
   Charles Gore
   Collier’s argument and its conceptual underpinnings 270
   Weaknesses of the conceptual framework 273
Elements of an alternative approach 278
Implications of the 2003–2008 commodity boom and the global financial crisis 293
Conclusion 295

12 Global Rules and Markets: Constraints on Policy Autonomy in Developing Countries 301
Yilmaz Akyüz
Introduction 301
Global economic integration and policy space 302
Multilateral disciplines and development policy 306
Finance and macroeconomic policy 312
Conclusion 327

Index 337
Uncertain Prospects of Commodity-Dependent Developing Countries

Alice Sindzingre

Introduction: a structural change in commodity markets?1

In the first decade of the twenty-first century, commodity markets appear to have undergone deep changes. In view of the rise in commodity prices over the period 2003–2008, the impact of China on global commodity prices and terms of trade has been considered as a factor that could lift prices beyond their historic trend. As argued by Raphael Kaplinsky in Chapter 6 of this volume, the two ‘Asian drivers’ – China and India – might be seen as disruptive forces in the global political economy. Their growth has underlain a rise in demand that is likely to push up the prices of ‘hard commodities’, agricultural products and fuels.

Indeed, the years 2007–2008 witnessed spectacular increases – in particular, for oil prices. In the summer of 2008, energy prices were 80 per cent higher in dollar terms than in 2007, and non-energy prices were 35 per cent higher; there is no doubt that these increased prices were caused, among other things, by emerging countries’ growth, Chinese demand for metals and the surge in the demand for certain food crops for biofuels (World Bank 2009).

Several observers considered that the high commodity prices of 2003–2008 would last for a long time and that this phenomenon was inaugurating a new period characterized by high prices at a global level, which would even represent a structural shift calling into question previous evidence and theories. In particular, this rise in commodity prices has seemed to question the theses on the secular deterioration of the terms of trade elaborated by Raul Prebisch and Hans Singer in the 1950s, and later by Alfred Maizels. As is well known, these theses provide the theoretical arguments demonstrating the intrinsic instability of commodity markets and the long-term decline in the terms of trade of commodities in relation to manufactures. Among others, the key
reasons are the low price-and-income elasticities of demand for commodities as compared with manufactures, and the technological superiority of developed countries, which allows these countries to capture excess profits in their trade with developing countries (Maizels 1987).

The generalized price slump that started in the last quarter of 2008 made it very unlikely that the increase in commodity prices was signalling a genuine reversal of this secular trend, however, which would have contradicted the Prebisch–Singer–Maizels theses on the deterioration of the commodity terms of trade. Evidence shows that the long-term decline is difficult to refute, as illustrated by the *Economist* industrial commodity price index devised in the mid-nineteenth century (Figure 7.1). David Sapsford and Stephan Pfaffenizzer, in Chapter 5 of this volume, have also highlighted the resilience of the commodity crisis over the long term and the negative slope of price trends.

The World Bank (2009) has also underscored that the global economy does not seem to be moving into a new era of relative shortage and permanently higher commodity prices that would be pushed by global demand – in particular, that of China. Over the past fifty years, several factors (technological change, changes in the structure of global GDP, services being less commodity intensive than manufactured goods) have reduced the quantity of metals and energy required to produce a unit of GDP (Figure 7.2).

Indeed, as argued by Streifel (2006), in the mid-2000s, in real terms, agricultural prices were below former peak levels. Oil and metal prices have risen to record nominal highs but, in real terms, most remain below the peaks of the 1980s (Figure 7.3).

---

**Figure 7.1** The secular decline of commodity prices since 1845

*Source: The Economist* (15 April 1999).
Arguments centred on high prices and their positive prospects have overlooked the crucial feature of commodities and the macroeconomics of commodity exporting countries – that is, price volatility, as well as the fact that commodity prices are determined by factors other than demand, in particular international financial markets. These arguments also overlooked the market failures operating both at the global and local levels – for example, affecting the organization of local markets in developing countries – that make it difficult for commodity exporting countries’ policies to cope with volatility.
The chapter is structured as follows. It first underscores that the predictions of higher prices and structural shift that would have made the Prebisch–Singer–Maizels theories obsolete overlooked a central feature of commodities and their macroeconomics, which is that of price volatility and the plurality of its determinants. The chapter then emphasizes the negative effects of volatility. Volatility is not likely to be modified by China’s demand, the structure of which changes according to China’s cycle of development and converges towards the structure of industrialized countries. These negative effects are particularly detrimental in developing countries, as many of them are excessively dependent on commodities for their exports, a dependence that is not likely to be changed by the demand from emerging countries in the medium term. The chapter finally confirms the pessimistic findings demonstrated by Alfred Maizels long ago regarding the contribution of commodity dependence to poverty traps: these traps might be compounded by other processes, in particular institutional arrangements.

The central issue: the volatility of commodity prices

The second half of the 2000s – the period 2003–2008 – caught observers’ attention, as it was a long period of high commodity prices. The second half of the 1970s also witnessed high commodity prices, however, which, as during any boom period, was followed by a slump.

The financial crisis of 2008 and the concomitant sharp drop in oil prices showed that the prevailing views on high prices in 2003–2008 lacked historical perspective and neglected a key characteristic of commodity prices, which was their intrinsic volatility. This volatility is a long-term characteristic that affects real oil commodity prices, but also, though to a lesser extent, non-oil commodity prices (Figure 7.4).
This volatility is sometimes even considered as a feature of real commodity prices over the long term that is more irrefutable than the downward trend: for example, for Cashin and McDermott (2002, using the Economist’s commodity price index), the downward trend is small and ‘completely dominated by the variability of prices’ (Figure 7.5). The financial crisis that began in September 2008 has, indeed, been associated with extreme commodity price volatility.

Therefore, the high commodity prices of 2003–2008 could not hide the fact that price volatility was still the central issue. The 2003–2008 increase could have been viewed from its inception as another cycle in the history of commodity price cycles and another in a long series of booms followed by busts, the most recent being the boom of the second half of the 1970s. The 2003–2008 boom could be compared to similar booms, the 1973–1974 oil shock and in 1950–1957 after the Second World War. Both booms turned to bust, and this was the case of the 2003–2008 boom (Table 7.1).

The 2003–2008 boom, however, had a number of distinctive features, as it was unprecedented in terms of strength, length and scope, and characterized by the rapidity of the subsequent price fall. According to the Reuters–Jefferies CRB index, which includes oil and other commodities (copper, cotton and so on), October 2008 brought the largest monthly drop since the index started in 1956 (Blas 2008). Oil prices witnessed a very steep decline, with a division by a factor of more than four in a few months (from about US$150 per barrel in July 2008 to less than US$35 by the end of 2008).
### Table 7.1  Principal characteristics of major commodity booms

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid global real growth (average annual %)</td>
<td>N/a</td>
<td>4.8</td>
<td>4.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Major conflict and geopolitical uncertainty</td>
<td>First World War</td>
<td>Korean War</td>
<td>Yom Kippur War, Vietnam War</td>
<td>Iraq conflict</td>
</tr>
<tr>
<td>Inflation</td>
<td>Widespread</td>
<td>Limited</td>
<td>Widespread</td>
<td>Limited second round effects</td>
</tr>
<tr>
<td>Period of significant infrastructure investment</td>
<td>First World War</td>
<td>Post-war rebuilding in Europe and Japan</td>
<td>Not a period of significant investment</td>
<td>Rapid building of infrastructure in China</td>
</tr>
<tr>
<td>Centred in which major commodity groups</td>
<td>Metals, agriculture</td>
<td>Metals, agriculture</td>
<td>Oil, agriculture</td>
<td>Oil, metals, agriculture</td>
</tr>
<tr>
<td>Initial rise observed in prices of</td>
<td>Metals, agriculture</td>
<td>Metals</td>
<td>Oil</td>
<td>Oil</td>
</tr>
<tr>
<td>Preceded by extended period of low prices or investment</td>
<td>No</td>
<td>Second World War destroyed much capacity</td>
<td>Low prices and a supply shock</td>
<td>Extended period of low prices</td>
</tr>
<tr>
<td>Percentage increase in prices (previous through to peak)</td>
<td>34.0</td>
<td>47.0</td>
<td>59.0</td>
<td>131.0</td>
</tr>
<tr>
<td>Years of rising prices prior to peak</td>
<td>4.0</td>
<td>3.0</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Years of declining prices prior to through</td>
<td>4.0</td>
<td>11.0</td>
<td>19.0</td>
<td>N/a</td>
</tr>
</tbody>
</table>

*Note: N/a = not available

Volatility is compounded by the fact that non-fuel commodity prices have a strong business cycle component; metals, in particular – for example, steel and copper, the prices of which have been influenced by China’s growth cycle (World Bank 2009). Demand for commodities varies depending on the different stages of growth of emerging countries (for example, oil, copper, steel and so on), which contributes to the formation of cycles and the instability of global demand. The International Monetary Fund (IMF) (IMF 2006) emphasizes that the correlation between world growth and annual changes in real metals prices is about 50 per cent, while periods of large upward...
movement in metal prices tend to be associated with world growth. Prices of agricultural commodities also tend to rise during cyclical upturns, but with a more limited response due to more flexible supply and the low-income elasticity of demand.

In addition, commodity markets are linked and prices might be transmitted across markets (though price co-movements remain debated, since methodologies matter; see Cashin et al. 1999). Baffes (2007), for example, for 1960–2005, has calculated the transmission of oil prices to non-energy commodity prices (metals, agriculture and fertilizers) – the elasticity of non-energy prices to oil prices being 0.16.

The formation of commodity prices is, moreover, not only driven by global demand – in particular, the demand of large emerging countries such as China and India – but also by several other factors, especially financial markets. Commodity prices are determined by financial variables such as exchange rates, not only by the US$ but also the exchange rates of a number of small commodity exporters (Chen et al. 2008, on the cases of Australia, Canada, Chile, New Zealand and South Africa). Commodity prices are also determined by interest rates, and the effect of interest rates on commodity prices can come through three channels: the level of inventories, production, and financial speculation (Frankel 2008).

The 2000s have witnessed a ‘financialization’ of commodity markets, with some commodities (for example, gold, oil, copper, wheat) more heavily traded in the financial markets than others (IMF 2008b: ch. 3). Commodities have increasingly become alternative financial assets, as shown by the spectacular increase of open futures positions of crude oil and derivative instruments. The debate is ongoing as to whether high investor activity has increased price volatility and pushed prices above levels corresponding to fundamentals, thus increasing instability in commodity markets: for the IMF, speculative activity responds to price movements (rather than the other way around), the causality running from prices to changes in speculative positions (Helbling et al. 2008). By June 2008, investors’ commodities assets under management had risen from about US$10 billion in 2000 to US$270 billion (Blas 2008).

Oil prices started to decline in August 2008, when the global spread of financial crisis caused by the sub-prime loans in 2007 became increasingly manifest and the linkages between markets increasingly visible. Global financial and commodity markets are integrated, which was overlooked by studies that explained price formation by a sole determinant such as global demand for commodities (or supply constraints, or low inventories) that would be linearly driven by China.

Commodity and financial markets are linked, as well as commodity markets between themselves, which contributes to commodity price volatility, and the determinants of commodity prices boom are more macroeconomic than market specific. Growth in China contributed to the 2003–2008
commodity boom, but the amplitude of the boom is explained by financial considerations and trade-offs across markets. This had been analyzed long ago by Maizels (1994), who demonstrated that commodities constitute an asset class which underlies price movements that spread across markets. For Maizels, speculative funds shift into, and out of, the commodity markets that deal in futures contracts. In periods of uncertainty, large amounts of funds might switch, either for hedging or for speculation, from other asset markets into commodities, and vice versa, which intensifies commodity price cycles. Maizels had underscored as early as 1994 that the volume of speculative funds had grown hugely in the 1980s.

**Detrimental effects of commodity price volatility**

Much more than the short-term profiles of the trends of commodity prices, volatility is thus a crucial feature of commodity prices. Volatility is a problem because it has negative economic effects, especially on low-income countries such as in sub-Saharan Africa (SSA). The negative effects of terms of trade volatility have been assessed over the long run. Williamson (2008) has shown that terms of trade volatility was much greater in the ‘poor periphery’ than the ‘core’ during the nineteenth century – between 1820 and 1870 – in some cases, six or seven times greater. Moreover, econometric evidence from 1870–1939 and 1960–2000 reveals that terms of trade volatility lowered long-term growth in the poor periphery: this helps explain the ‘Great Divergence’ between the two parts of the world.

As emphasized by Loayza et al. (2007), macroeconomic volatility – here, defined by output volatility – is both a factor and a reflection of a low level of development (Figure 7.6). Many countries affected by macroeconomic volatility are predominantly commodity exporters (Ecuador and Nigeria). Small economies are among the most volatile; for example, the Dominican Republic and Togo. Large economies might suffer from volatility as well, such as China and Argentina.

The principal negative effect of macroeconomic volatility in developing countries is the large welfare costs it entails, which come, first, from the direct welfare loss of deviating from a smooth path of consumption (optimal for most people, who are risk averse) and, second, from its negative impact on output growth – and, thus, on future consumption (Figure 7.6). For Loayza et al., among other transmission channels, volatility has negative effects in that it creates uncertainty (economic, political and policy related) and intensifies the constraints on investment.

The negative impact of volatility on growth is amplified in poor countries. Macroeconomic volatility has much higher welfare costs for poor countries than for rich countries, and is more frequent in developing countries than rich countries, the question of the directions of causality still being debated (Figure 7.7).
Moreover, volatility is detrimental due to the asymmetry of shocks: growth accelerations and collapses appear to be asymmetric phenomena (Jones and Olken 2005) and, in commodity price cycles, price slumps seem to last longer than booms (Cashin *et al*. 2002). The impacts of price shocks are asymmetric...
also, as in the case of energy prices: energy price increases seem to cause recessions, but decreases do not seem to cause expansions (Kilian 2008).

In addition, the negative effects of volatility are compounded by the current context of global trade openness. In their analysis of the structural determinants of external vulnerability, Loayza and Raddatz (2007) emphasize that greater trade openness magnifies the output impact of terms of trade shocks, particularly negative ones.

As the price of oil is characterized by a high level of volatility, the negative impact of volatility is likely to be even worse for oil exporting countries. Indeed, as underlined by Kaplinsky, agricultural commodities must be distinguished from fuels. Here, countries in SSA might be particularly affected: from almost nothing in the 1960s, the share of fuels has risen to over half of the total exports of SSA (IMF 2007a) (driven by Angola, Cameroon, Chad, the Republic of the Congo, Côte d’Ivoire, Equatorial Guinea, Gabon and Nigeria) (Figure 7.8).

The recent growth episodes in oil exporting countries in SSA over the period 2004–2008 have been almost entirely driven by oil prices. As emphasized by the IMF (2007b), terms of trade have improved in SSA – above all, for oil exporters (Figure 7.9).

This model of growth is obviously very vulnerable to price decreases. Volatility is not only particularly important and detrimental to growth in oil exporting countries, but also fiscal management is notoriously very difficult.
in these countries: the high volatility of oil prices is a permanent threat to the fiscal balance (Olters 2007).

The international financial institutions (the IMF and the World Bank) acknowledge that countries in SSA are excessively reliant on commodity exports, and that it is the region most vulnerable to any decline in energy and mineral prices, with oil and mineral exporters being the most vulnerable to commodity price volatility (World Bank 2007a). Both recognize that the structural characteristic of primary commodity prices remains high volatility: the question of the robustness of growth in SSA has been raised at the World Bank (Saba Arbache and Page 2008).

**The limited impact of China on price volatility and existing commodity based export structures**

The rise in commodity prices in 2003–2008, then viewed as offering better prospects for commodity exporting low-income countries, has been explained by the growth and the subsequent demand of China and other large emerging countries (Figure 7.10).

A key point is that, if the focus had been on volatility, lesser changes could have been attributed to China’s growth, as global commodity price volatility is not likely to be modified by China’s demand in the medium term. The structure of China’s demand changes according to China’s cycle of development, and converges towards the structure of industrialized countries.
The increase in trade between China and other developing countries, especially SSA, is undoubtedly spectacular – not only trade, but also investment and aid. Between 2001 and 2006, SSA exports to and imports from China rose on average by 40 per cent and 35 per cent, respectively – higher than the growth rate of world trade (14 per cent) or commodities prices (18 per cent) (Wang and Bio-Tchané 2008). China has become the third largest trading partner of SSA, after the USA and the EU. China has been often said to trade with SSA only for the purpose of extracting its natural resources and securing the inputs necessary to China’s growth. There is no doubt that trade between SSA and China heavily involves primary commodities (Figure 7.11).

The composition of goods traded between SSA and China, however, is similar to that between SSA and its other major trading partners. In 2006, oil and gas represented 60 per cent of SSA exports to China; non-petroleum minerals and metals, 13 per cent. Africa’s imports from China consist of manufactured products, machinery and transport equipment (three quarters of total imports) (Wang and Bio-Tchané 2008) (see Figure 7.12).

In highlighting the similarity in composition of goods traded between SSA and its main trading partners, Wang and Bio-Tchané make a key point: the recent surge in trade between China and countries in SSA reflects partners’
comparative advantages, given their stage of economic development and not China’s unilateral quest for natural resources. China is reproducing the long-standing pattern of countries in SSA – export of primary commodities – rather than modifying it.

The IMF significantly recognizes that, even if the rise of China might change long-term price trends, prices might continue to decline in real terms (as they did during the last century), and the prices of most non-fuel commodities remain below their historical peaks in real terms compared with the prices of manufactures (IMF 2006). The real impact of China on the growth of other developing countries – in particular, commodity exporting low-income countries – as well as on commodity price behaviour, is uncertain at the economic and political levels.

The integration of China into the world economy, its growth and, hence, increasing demand for products exported by low-income countries, is a positive process as it increases prices and exports. As argued by Kaplinsky (2006), in the 2000s price changes have reversed the decline in the terms of trade of commodity producers in SSA due to the entry of China into the global market, which has augmented the demand for commodities. China’s demand for natural resources has contributed to a rise in prices (for oil and metals), and boosted real GDP in SSA (Zafar 2007).
There are factors of pessimism, however, that have been underscored by Kaplinsky. Trade with China has a negative impact on SSA’s manufacturing sectors, which cannot compete with the low production costs, technology and cheap goods imported from China. In particular, the end of the MultiFibre Agreement in 2005 and the subsequent removal of quotas had a devastating impact on SSA textile sectors (Kaplinsky et al. 2007).

In following the same pattern as the other main trading partners (the USA and the EU), China’s demand reinforces the specialization of SSA countries in the export of commodities and their dependence on natural resources, which reduces incentives for diversification. In addition, due to its development strategy, which is based on the assembling and exporting of manufactured products, China’s growth is vulnerable to the global instability of the demand for these products, as shown by its sensitivity to the 2008 economic crisis. In the words of Bardhan (2005): ‘China, India, superpower? Not so fast!’

**Beyond commodity prices levels: commodity-dependence and poverty traps**

Even if commodity prices had remained high after 2008, this could have entailed negative effects in a series of developing countries. This might
maintain distorted market structures and the excessive dependence on commodities for their exports that characterize many developing countries. The 2003–2008 high prices have even increased this dependence in the case of SSA: primary commodities, as a percentage of total exports, increased as prices surged over the period 2003–2008 (World Bank 2009: fig. 1.20).

Sub-Saharan Africa is indeed a particularly clear example of commodity dependence. Exports have been composed of primary commodities since the colonial period: in 1980, 95.3 per cent of SSA exports were primary commodities (oil and non-oil). The World Bank estimates that, in 2005, food represented 15 per cent of merchandise exports; agricultural raw materials, 5 per cent; fuels, 36 per cent; ores and metals, 10 per cent; and manufactures, 33 per cent (World Bank 2007b). Countries in SSA did not diversify their export structure despite more than two decades of stabilization and adjustment programmes, which achieved little structural change. For example, in 1990, fuels represented 97 per cent of Nigerian exports and, in 2005, 98 per cent. In Benin, agricultural raw materials represented 56 per cent of exports in 1990, and 64 per cent in 2006 (World Bank 2008).

A problem linked to commodity dependence is export concentration (Table 7.2). Countries in SSA often export a very small number of agricultural products: for example, Mauritania exports 13 products, Angola 13 products, Republic of Congo 30 products, to be compared with, for example, 221 for Ireland or 214 for Portugal (Jansen 2004, based on the UNCTAD Handbook of Statistics 2002).

UNCTAD (2008b) defines the ‘dependency rate’ as the average share of the value of the four main commodity exports as compared with the total exports value for 2003–2005: 30 least developed countries (LDCs) show a dependency rate above 50 per cent. The highest dependent countries (a dependency rate above 80 per cent) are West African and Western Asian countries, due to their exports of petroleum. Agricultural products such as cotton, cocoa and coffee also created high dependence; for example, in Benin and Burkina Faso (a dependency rate above 65 per cent). Examining 78 countries, UNCTAD finds that a small number of commodities are associated with dependence: oil and oil products appear in 41 countries, fish in 35 countries, natural gas in 15, forestry products in 13, cotton in 11, sugar in 10, and cocoa and coffee in 8.

Such unbalanced export structures have many detrimental consequences; they are obviously very vulnerable to price volatility. Dependence contributes to the vulnerability of countries as it reduces their capacity to sustain shocks (a well-known example being the Dutch disease effects): dependence increases vulnerability and diminishes resilience (UNCTAD 2008b). In commodity-dependent developing countries, price volatility generates fiscal crises, budget deficits and revenues that are very difficult to manage, which in fine has a negative effect on growth.

For example, it was the boom in the price of agricultural commodities such as coffee and cocoa in 1976–1979, immediately followed by a sharp
Table 7.2 Commodity dependence by geographical region, 1995–1998 and 2003–2006 (number of countries for which exports of commodities account for more than 50 per cent of total exports)

<table>
<thead>
<tr>
<th></th>
<th>Total primary commodities(^a)</th>
<th>Three or less commodities</th>
<th>One commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing and transition economies</td>
<td>118</td>
<td>113</td>
<td>82</td>
</tr>
<tr>
<td>Developing economies</td>
<td>108</td>
<td>103</td>
<td>78</td>
</tr>
<tr>
<td>Africa</td>
<td>46</td>
<td>45</td>
<td>37</td>
</tr>
<tr>
<td>Latin America</td>
<td>30</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>East and South Asia</td>
<td>7</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>West Asia</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Oceania</td>
<td>16</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Transition economies</td>
<td>10</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Least developed countries</td>
<td>38</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>Heavily indebted poor countries</td>
<td>38</td>
<td>38</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: \(^a\) = primary commodities: SITC Rev. 2: 1 to 4 plus 68, 667 and 971.
Sources: UNCTAD (2008a), table 2.4; UNCTAD secretariat calculations, based on UNCTAD Handbook of Statistics database.

decline, that was the cause of major fiscal crises in low-income countries in the 1980s, their need for financial help from the IMF and the World Bank, and the launch of the first stabilization and adjustment programmes (Ghanem 1999).

In their analysis of terms of trade shocks over the period 1970–2006, Funke et al. (2008) thus consider that it is because of limited diversification, dependence on a few natural resources and a lower manufacturing base that SSA and the Middle East have been affected to a greater degree than other regions. Countries in SSA averaged more than two persistent terms of trade shocks during that period (Table 7.3).

Another detrimental consequence of commodity based export structures is that they reduce incentives for diversification and industrialization, and might even be an obstacle to these. As mentioned by the UNIDO Report for 2005, SSA represented 0.79 per cent of world industrial output in 1990, and 0.74 per cent in 2002. If South Africa is excluded, in 1990, SSA represented 0.24 per cent of world industrial output, and 0.25 per cent in 2002.

The export earnings of commodity-dependent countries are vulnerable to the risks of fallacy of composition: when the export volume of commodities with low price and income elasticities increases at the global level, the
Table 7.3  Distribution of terms of trade shocks, 1970–2006

<table>
<thead>
<tr>
<th>Number of countries</th>
<th>Size and type of shocks</th>
<th>10%</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall</td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>All</td>
<td>159</td>
<td>228</td>
<td>110</td>
</tr>
<tr>
<td>Advanced</td>
<td>28</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Emerging markets-developing countries</td>
<td>131</td>
<td>209</td>
<td>101</td>
</tr>
<tr>
<td>of which: Middle-East</td>
<td>17</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>23</td>
<td>47</td>
<td>16</td>
</tr>
<tr>
<td>Asia</td>
<td>12</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Western Hemisphere</td>
<td>21</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>Europe</td>
<td>29</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Transition economies</td>
<td>57</td>
<td>80</td>
<td>43</td>
</tr>
</tbody>
</table>

Note: Funke et al. (2008) define a terms of trade shock as ‘persistent if the five-year mean of the terms of trade for the period \( t - 4 \) to \( t \) compared to period \( t + 1 \) and \( t + 5 \) differs by a predetermined threshold, where \( t \) is the period of the shock. Initially, the threshold is set to minus 10 per cent for negative shocks’. As a sensitivity test, they increase the threshold to −30 per cent.

Source: Funke et al. (2008).

aggregate export revenues of these countries decline. The fallacy of composition and its negative consequences, however, also apply to manufactured products (Razmi and Blecker 2008).

Commodity dependence might generate traps – in particular, poverty traps – as argued by UNCTAD in many reports (for example, UNCTAD 2002b; 2008a). Fast-growing manufactures are technology intensive and in sectors with high productivity growth. In low-income countries, the following elements are likely to build a poverty trap: dependence on commodities, low productivity, low value added, competition from other countries in the main exports, and concentration of exports in a few products. High commodity prices might have detrimental effects on political regimes as they might reinforce autocracies and rents, and fuel civil conflict.

For UNCTAD, volatility is a key factor of poverty traps, with oil producing countries being particularly exposed. In turn, dependence might increase volatility at the domestic level: the model devised by Hausmann and Rigobon (2002) thus shows that the smaller the non-resource tradable sector, the greater the volatility of relative prices, and an increase in resource income that leads to specialization might cause a decline in welfare.

Growth that is driven by global demand for commodities has an ambiguous impact here: while growth is undoubtedly a positive process, this model might include ‘lock-in’ effects in a market structure based on commodity export, might make diversification more costly, and could build a ‘primary products trap’. The IMF acknowledges that, since the mid-2000s, the high
growth rate and improvement in the terms of trade in SSA (a real GDP of 6.5 per cent in 2007), was almost entirely driven by global growth and demand for commodities (especially exports to China), and the high prices of oil, minerals and metals (IMF 2008a).

It can be noted here that the removal by industrialized countries of subsidies on certain of the primary commodities they export (for example, cotton) might have ambiguous effects on developing countries. This might increase international prices and therefore provide developing countries with incentives to continue to export these commodities, maintaining their unbalanced export structure (Sindzingre 2007a).

In addition, developing countries are typically characterized by important market failures. As underlined by Tschirley and Poulton (2008) in the case of cotton in West and Central Africa, at the local level commodity sectors are affected by many problems – in particular, low productivity and tension between stakeholders (that is, maintaining input credit versus enhancing efficiency). Failures in input and credit markets call for more coordination, but the objective of efficiency calls for more competition. These market and export structures involve political dimensions that explain resistance to reform in some countries; for example, in West Africa. Resistance is also explained by the mixed impact of reforms (liberalization, privatization) on sector performance, especially on small farmers.

Developing countries are also often affected by ‘state failures’: relevant state intervention, effective public policies and institutions, therefore play a crucial role in the enhancing of the efficiency and allocative functions of the commodity sectors (in this case, the cotton sector).

This shows that exporting primary products per se and commodity dependence are not the only cause of poverty traps. The composition of exports might be viewed as both a cause and effect of underlying structural features and endowments – for example, in labour, in human and physical capital – linked to demographic and geographical characteristics. There are strong complementarities between factors, which imposes constraints on the opportunities to change production and export structures. The relative endowments in two factors – skill (or human capital) and land (or natural resources) – determine whether a country has a comparative advantage in manufactures or in primary products: developing countries with low skill/land ratios and low levels of skills per worker, as in most low-income countries, have limited industrial prospects (Owens and Wood 1997). As emphasized by Alfred Maizels, domestic public policies and institutions – and, hence, the domestic political economy – have the capacity to change these initial constraints (or not), hence the differential performances and reactions to reform of the cotton sectors across countries.

These processes had been analyzed by the ‘founding fathers’ of development economics; for example, Paul Rosenstein-Rodan (1943), who demonstrated that coordination failures were crucial factors of
underdevelopment: coordination is necessary in the early stages of development, which are characterized by subsistence agriculture and lack of capital, as it reduces costly competition. Rosenstein-Rodan highlighted the key role of spillovers between sectors in triggering the process of development, because spillovers induce increasing returns to an activity proportional to the number of other individuals who undertake the same or complementary activities. In contrast, lack of spillovers between sectors lead to multiple equilibria, some of them being ‘low equilibria’ and ‘underdevelopment traps’. These coordination failures constitute the argument for the role of the state at the early stages of development that is the most powerful at the theoretical level: at early stages, and in the presence of coordination failures, the state is the only entity able to reallocate factors and resources across markets (Adelman 2000).

Many low-income countries’ market structures might be characterized fifty years later as highly exposed to ‘traps’ where different processes reinforce themselves: high-risk export structures such as commodity-dependence, but also low technology and innovation capacities, and inefficient institutions (Hoff 2000; Sindzingre 2007b). Indeed, institutions constitute crucial causes of traps, as revealed by Bowles (2006) with the concept of ‘institutional poverty traps’. For Bowles, such a concept explains the coalescence of market and institutional structures, and why institutions that implement highly unequal divisions of the social product persist, even if they are inefficient.

**Conclusion: the difficulty of regulating volatility at the international and domestic levels**

Commodities thus include a series of inherent features over the long term, confirmed by the boom of the 2000s, and entail uncertain prospects for exporting countries. Alfred Maizels therefore underscored the necessity of regulating commodity prices and reducing their volatility (be it for energy or agricultural commodities). This notoriously difficult task is even more daunting in a context of global trade openness and financial integration.

The good news, however, is that the financial crisis of 2008–2009 might mark the end of the paradigm of ‘markets against states’ and the ‘counter-revolution’ that reshaped economics from the 1980s onwards (Toye 1987), with the evidence of the inefficiency and danger of leaving markets to their own dynamics, which has triggered state rescue in all countries concerned (whatever the variations, for example, strengthening regulation, owning assets or guaranteeing them). Confirming the accuracy of Rosenstein-Rodan’s findings, only public policies operating within the framework of the nation-state appeared able to alleviate the detrimental impacts of international markets, even in the richest countries.

The necessary role of the state, as well as supra-state institutions, for the correction of the detrimental effects of unregulated markets had precisely
been one of Alfred Maizels’ central arguments – though, at his time, the very concept of market regulation was rejected by those economists and policymakers who put this forward after the 2008 financial crisis.

Whether or not they face high or low prices, developing countries relying on the export of commodities remain vulnerable on two sides. From the international perspective, their vulnerability to the volatility of world prices for their fiscal balance, coupled with geopolitical weakness in the case of low-income countries, highlights the need for meta-institutions to be able to coordinate policies and pool resources. From the domestic perspective, their vulnerability highlights the need for efficient institutions and taxation systems that smooth exports earnings volatility – an example of this vulnerability being the SSA textile sectors affected by Chinese imports, as analyzed by Kaplinsky. The necessity for the state (‘big government’), in the context of open economies, has been emphasized, for example by Rodrik (1996): that is, a state that has redistributive capacities and the ability to overcome the negative impacts of trade openness.

The other good news here is that commodities do not per se hinder growth or erode institutions, as shown by Blomström and Kokko (2003) in the example of Scandinavian countries. It is the nature of economic and political institutions that in fine determine the impact of commodities on an economy; for example, the way in which institutions can cope with resources windfalls, or the way these windfalls modify previous political equilibria (Englebert and Ron 2004, on the Congo). There is no ‘curse’, and natural resources are not ‘fate’.

Political economy problems, however, affect many developing countries: states are weak, public policies not credible, and rulers are often driven by predatory motives. Commodities might foster corruption, capital flight and inequality, as is shown not only by oil countries, but also by other commodities (for example, cocoa might have the same effects). Global demand for commodities might have negative effects on political institutions, which in turn perpetuate low diversification, vulnerability and ‘institutional traps’. Earnings from natural resources (oil, minerals) accrue to governments (by means of royalties, or the resources might be nationalized): this provides authoritarian regimes with leeway with regard to the conditional financing of international financial institutions, in addition to investment and aid (which often take the form of barter for natural resources) from large emerging countries such as China or India. These countries do not belong to the ‘cartel’ of usual donors (Easterly 2003) and do not hide the fact that they are driven by trade interests and the need to secure a supply in energy.

Here, a difficult question relates to the assessment of the relevant causalities. Does commodity export and dependence weaken further state capacity, or are weak states more prone to be locked into market structures of an extractive type? These ingredients of a ‘political economy–commodity trap’
underlie theories regarding the so-called ‘resource curse’ and its impact on civil conflicts.

Countries with weak political economies might be less able to form coalitions in order to reduce their vulnerabilities, the importance of which has been underscored by Alfred Maizels. The external political economy might impede the ability of low-income countries to make the appropriate deals – due, for example, to the geopolitical power of players (Russia with oil and gas; China with oil and so on). The internal political economy might be unable to foster coalitions (as did the Asian ‘developmental states’ in the 1970s), with governments providing private firms, banks or investors with incentives oriented towards domestic growth, be it for political motives. Indeed, these authoritarian governments used export led growth as an instrument to enhance legitimacy (Kang 2002, on Korea).

These conditions are rarely met in low-income countries, due to the endogeneity between low growth fragmented (‘weak’) institutions, and the existence of threshold effects maintaining countries in ‘traps’. Sokoloff and Engerman (2000) explained, for example, the diverging paths in North and South America by the impact of factor endowments on institutions (especially inequality) that, in turn, triggered different growth trajectories. When export structures are based on the extraction of primary resources (often in enclaves), there is no necessity to foster spillovers. ‘Low equilibria’ and institutional traps are likely to stabilize in this context.

In sum, low-income commodity exporting countries continue to be confronted with a very difficult alternative: being locked into economic and political low equilibria, specializing in the production of commodities, from which it is difficult to escape, or implementing policies aimed at achieving higher equilibria, spillover effects and industrialization.

Note

1. The paper on which this chapter is based was presented at the International Workshop ‘Challenges and Prospects for Commodity Markets in the Global Economy’, in memory of Alfred Maizels, 19–20 September 2008, School of Oriental and African Studies (SOAS), University of London. The author is very grateful to Machiko Nissanke for innumerable stimulating discussions and invaluable comments. The author, editors and publishers are grateful to the International Monetary Fund for permission to use the figures from the March 2008 issue of Finance and Development.

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