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OVERVIEW

COMMODITIES AND DEVELOPMENT REPORT

Perennial problems, new challenges and evolving perspectives



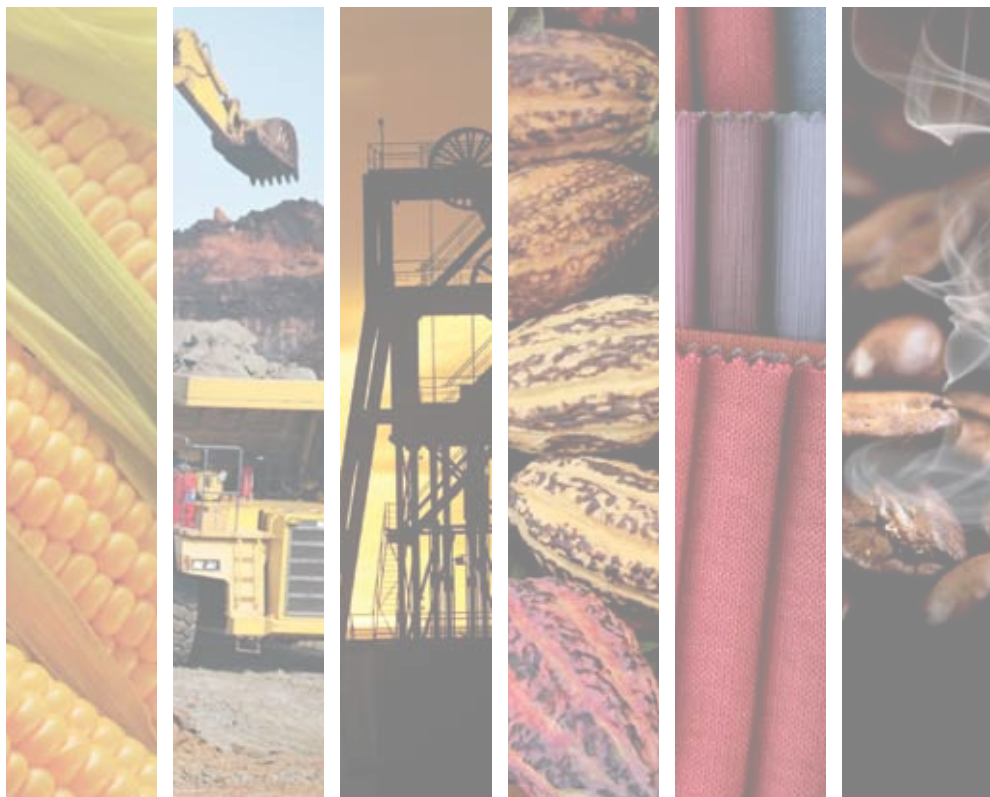
UNITED NATIONS



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NOTE

The Overview contained herein is also issued as part of the UNCTAD Commodities and Development Report (UNCTAD/SUC/2011/9). The Overview can also be found on the Internet at www.unctad.org/commodities.

All references to dollars (\$) are to United States dollars. A “billion” means one thousand million.

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UNCTAD/SUC/2011/9 Overview

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CHAPTER 1 :

REVISITING THE COMMODITY PROBLEMATIQUE

The problematique in the current context

Apart from a few notable exceptions, commodity-dependent developing countries (CDDCs) have been associated with poor economic performance. The domestic and international economic factors that account for this phenomenon, known as the “commodity problematique”, are complex and have been widely researched and debated over the years. The rapid and impressive changes in commodities markets over the past decade - which include price spikes, high price volatility, and the ever-increasing financialisation of commodities markets – call for a review of this problematique to assess the validity of past theoretical models and to search for new explanatory variables in order to better understand this issue of crucial importance for the vast majority of developing countries that depend on the commodities sector to attain their development objectives.

CDDCs, defined as countries depending on commodities for at least 60 per cent of their export earnings, represented 94 of the 156 developing countries in 2009. In many of these countries, the agricultural sector continues to be of vital importance in terms of foreign exchange earnings, fiscal revenues, income growth, and livelihood sustenance. The policy challenges of commodity-dependent developing countries, many of which are least developed countries (LDCs), are therefore central to reducing global poverty and malnutrition, among other internationally agreed development objectives.

Historically, CDDCs are among those countries that benefit least from international trade. Indeed, the higher price volatility and, until recently, long-term deterioration of terms of trade vis-à-vis manufactures put commodity exporters at a disadvantage. The historically high price levels attained by many commodities in recent years¹ have increased the revenues of many commodity exporters but they have not alleviated the deeper policy challenges faced by these countries. Price volatility has increased in the past decade, most tellingly illustrated by the succession of a price peak in 2008 followed by a crash in early 2009 and a rapid rebound in the next two years. This price instability, combined

¹ The recent commodity boom period is defined as starting in 2003, experiencing a short but marked downturn in the second half of 2008 and a subsequent rally at the beginning of 2009.

with the pervasive financialisation of commodities markets especially since 2000 has brought the commodity problematique to the forefront of the development agenda after decades of relative neglect. Consideration of this problematique today must take into account not only the eminent history of theoretical work on this issue but also the current global economic context marked by the major changes occurring in the global balance of economic power, the increasing financialisation of commodities markets, the improvements in understanding of the structural economic vulnerability of LDCs, and the greater accessibility and diversity of risk mitigation instruments.

Commodities: from Ricardo to Prebisch-Singer

The relationship between commodity production and economic growth has long been subject to theoretical analysis. In 1776 already, Adam Smith had noted the existence of increasing returns to scale in manufacturing as division and specialisation of labour yield higher levels of labour productivity. Looking at agricultural and mining production in 1815 David Ricardo found that, in contrast to manufacturing, these sectors were subject to diminishing marginal returns as production expands into more marginal and less fertile lands. The supply of food and raw materials was therefore seen as effectively representing a possible limiting factor to growth. The fundamental opposition between the two activities has profound implications for overall economic growth as it suggests that, over time, the relative price of primary commodities should increase at the expense of manufactures. The terms of trade for commodity producers would therefore improve over time.

By the mid-twentieth century however it was clear that relative prices had not evolved in the predicted fashion. In 1950, both Prebisch and Singer found that the net barter terms of trade between commodities and manufactures had deteriorated for commodity-exporting developing countries. The reasons advanced for this observation covered both supply and demand-side factors. On the supply side, Prebisch and Singer both highlighted the structural differences between the labour markets of manufactures-exporting developed countries and commodity-exporting developing countries. Organised workers in developing countries are able to press for higher wages and absorb productivity gains keeping prices high. In developing countries, the abundance of labour keeps wages stable and productivity gains result in lower prices. Other economists focused on demand-side factors such as the lower income-elasticity of demand for commodities and tendencies for reduced demand due to evolving technology and protectionism.

The structuralist school of Prebisch and Singer was instrumental in bringing to attention the economic challenges associated with commodity dependence. Their thesis has been subject to much debate and some important qualifications have come to light. Specifically, it has been shown that the thesis's theoretical validity is limited to the production of labour-intensive commodities such as tropical agricultural products that are predominantly produced in developing countries. Developed country commodity producers are typically not subject to the same fate due to better producer organisation and alternative employment opportunities. Further, the thesis does not apply to the extractive sector where labour only accounts for a small share of the costs of production.

Commodity revenues as a driver of diversification

Early models of economic development, such as that of Lewis in 1954, saw primary sector commodity production as an engine of growth for developing countries which could take advantage of their relatively abundant land and labour endowments and use the earnings to pursue economic diversification and growth. It was thought that countries could benefit from the important externalities generated by agricultural production notably by developing and diversifying their economies into low-technology manufacturing sectors such as agricultural inputs, or primary product processing.

While these strong linkages of primary production with the rest of the economy are important for domestic agriculture, they may not necessarily be relevant to commodity exports. In addition, there are important structural and financial drawbacks to commodity-export led development. Historically, the structural dependence on primary sector earnings may hamper the economic diversification that is a prerequisite for long-term economic growth and development. In terms of revenues, the terms of trade of non-oil commodity exporting developing countries have generally been deteriorating until recently and it is not at all clear that the recent commodity boom represents a durable change in this trend. Furthermore, the traditional policy response to declining terms of trade which was for CDDCs to move up the commodity value chain and diversify into manufactures has become more difficult for developing countries as commodity value chains have become more fragmented and internationalised. The greater control exercised by processors, traders, and retailers has effectively curtailed the policy space of CDDCs and limited their ability to influence global value chains. Similarly, CDDCs have in the main struggled to use commodity revenues to promote structural change (productive capacity building, investment) and poverty reduction (through increasing social expenditure).

Commodity revenues as a “curse”

Natural resource-rich countries have often failed to grow as rapidly as less resource-abundant countries. This paradoxical state of affairs has been dubbed the ‘natural resource curse’. Many different explanations have been advanced in addition to declining terms of trade and price volatility. One of the most often cited explanations is that earnings from commodity exports lead to a strengthening currency which harms the competitiveness of other sectors through the ‘Dutch Disease’ phenomenon. It has also been noted that the revenues accruing from commodity production are poorly allocated resulting in poor economic performance and political instability.

It is important to note that many of the described channels are not, as the term ‘curse’ might suggest, inherent to commodity production. Rather they are problems that can be eliminated or alleviated through appropriate policies. What is at stake therefore is governance and the quality of institutions. If the revenue generated by commodity exports can be allocated in such a way that the other sectors of the economy benefit rather than suffer, and that they contribute to the diversification and enhancement of productive capacities, the natural resources can become a blessing rather than a curse.

The kind of policies that need to be put in place vary from one case to another. In particular, there are important differences between the extractive and the agricultural sectors. Due to the important involvement of foreign companies in the extractive sector, countries seeking an equitable distribution of gains will need to put in place appropriate taxation and royalty policies such as progressive taxation on profits, differentiated production taxes, or export taxes depending on the circumstances and on the administrative and audit capacity of the relevant authorities.

In the agricultural sector, in contrast, it is increasingly difficult for developing countries to generate adequate revenue from tropical agricultural exports. The internationalisation of value chains has restrained the bargaining power of fragmented agricultural producers. These producers get little support to meet the often stringent demands of international purchasers and are often unable to obtain their fair share of world market prices. Indeed, farmers cannot reduce their supply in response to low prices in the absence of alternative employment and are therefore in a position of weakness with regard to the buyers on the international market. Only in countries in which the farmers retain means of collective bargaining are these imbalances somewhat alleviated. For both sectors, appropriate policy measures and good institutions are critical in attaining the multiplier effects for the rest of the economy.

Commodity revenues and evolving development paradigms

The recent episode of high commodity prices has improved the revenues of commodity-exporting developing countries. Conventional responses to this windfall in revenue emphasise good governance and appropriate policies to allocate revenues well and manage the potential macroeconomic risks. These responses may minimise some of the negative features that can accompany a revenue windfall.

As the report outlines, the rising commodity prices are linked, among other factors, to the growing financialisation of commodities markets and therefore constitute a symptom of a broader trend of growth in markets for financial assets and wealth at the expense of growth in output and productivity.

CHAPTER 2: **PERENNIAL PROBLEMS, NEW TWISTS: THE COMMODITY BOOM AND BUST IN HISTORICAL PERSPECTIVE**

Commodity markets are characterised by price cycles which can have severe macroeconomic consequences and pose great policy challenges for CDDCs. Historically, the price cycles have consisted of short-lived booms followed by longer periods of bust. Since the mid-twentieth century, there has only been one previous major commodity boom between 1973 and 1980. The current boom (2003 and 2011) has been both the longest in the historical record and the broadest affecting all categories of commodities. Commodity prices then fell sharply in late 2008 and 2009 before rebounding sharply in 2010-11. Food, tropical beverages, and agricultural raw materials all experienced high prices in 2011. Metals similarly reached high prices, especially for tin, nickel, copper and gold and it is expected that metal, food and agricultural raw material prices could rise even further in the medium term due to strong demand.

There are some important commonalities between the 1970s commodities price boom and the 2003-11 one. In both periods, the price boom was preceded by a period of robust growth in world industrial production though this was weaker in the recent boom due to very slow industrial expansion in the OECD which continues to represent two thirds of world industrial production despite the rapid growth of emerging markets. It is likely that commodity demand will be sustained if the emerging markets follow the resource-intensive growth path taken by the US, Western Europe, Japan, and Korea.

A second important common element to both price booms is that they coincided with periods of real depreciation of the US dollar and low global interest rates. In the 1970s, the breakdown of the Bretton Woods system of gold-based fixed exchange rates permitted substantial monetary expansion in the US leading to a real depreciation of 50 per cent between 1971 and 1980 as well as to a lowering of global real interest rates. Between 2001 and 2010, the US dollar similarly depreciated by 26 per cent due to a growing trade deficit. This deficit has been financed by important capital inflows from emerging economies. These inflows have provided a source of cheap

capital and helped to maintain low interest rates first introduced following the 2001 economic slowdown. In both periods, the US's monetary expansion forced other countries to act in order to prevent excessive appreciation of their currencies against the US dollar effectively exporting the US's monetary expansion and resulting in low world real interest rates.

One of the channels through which low interest rates lead to higher commodity prices is linked with the search by treasury bill (T-bill) holders for higher yields. Indeed, as T-bills can be used as collateral against futures positions according to the US Commodity Futures Trading Commission, investors can earn interest on treasury bills while simultaneously speculating on commodity prices. This behaviour has been stimulated by some of the large investment banks and broker/dealers that are involved in open market operations with the Federal Reserve in the context of monetary expansion. These investors seek higher returns than T-bills alone can yield in a low interest rate context. Lending to investors involved in equity and commodity index funds is less risky than lending to non-financial firms or consumers. As investment in commodity index funds is heavily concentrated on the buy (long) side of the commodities futures market, this substantial influx of investment gives rise to futures price bubbles. These, in turn, affect spot prices by altering price expectations and providing incentives to hoard. This phenomenon may go a long way in explaining the synchronised increase in equities and commodities prices since 2008.

The real depreciation of the US dollar also contributes to the upward pressure on commodity prices. As commodities are generally priced in US dollars, the depreciation increases the purchasing power of non-US buyers thereby creating more demand. A falling dollar also reduces the relative returns on dollar-denominated financial assets which can make commodities more attractive as an asset class for investment. Dollar depreciation further leads to monetary expansion in countries such as China whose currencies are pegged to the US dollar. The effects of depreciation on commodities prices are however conditional upon low inventories. Since 1960, it is only during periods where supplies have been limited, namely in the 1970s and during the past decade that there has been significant positive correlation between dollar exchange rates and commodity prices. Empirical analysis shows that exchange rate effects are particularly important for oil, gold, and some metals such as aluminium and copper. For cereals, however, there is little observable effect due to the US's position as a major exporter.

New twists to perennial problems

In addition to these factors, there are several new elements that have come to complicate the commodity problematique. These include, the growing demand from

emerging markets, changing patterns of demand and retail, increasing importance of sanitary and phytosanitary (SPS) and quality standards, increasing use of crops for biofuels, financialisation of commodities markets, climate change, and health challenges such as Avian flu, HIV/AIDS, or malaria.

Among these, one of the most important elements for understanding the current situation of commodities markets is the growing Chinese demand for commodities. The rapid development of China (and India) has fuelled demand for industrial metals and has been accompanied by changing food consumption patterns with increasing spending on meat and fish products. This in turn led to increased demand for cereals as animal feedstock. The export sector in China has meanwhile focused on electronics, metal-intensive consumer goods, and textile products. This has stimulated the country's demand for industrial metals, cotton and wool. Despite this growing demand, and with the notable exception of iron ore and a handful of other products, China's share of global imports is relatively small for most commodities.

The other element that has taken a growing importance in commodities markets and seems set to continue to have a strong influence in the future is the financialisation of commodities markets. Indeed, the rise in commodity prices since 2003 have been accompanied by the increasing presence of financial investors in commodities futures markets. The annual number of commodity futures contract traded in exchanges globally has risen exponentially from 418 million in 2001 to 2.5 trillion in 2010. This financialisation, which surged in response to the dramatic decline in equity prices following the dotcom bubble collapse in 2000, has raised concerns that financial investors are creating increased volatility and price movements unrelated to market fundamentals.

One of the main drivers of the financialisation of commodities markets has been an increase in investment by index traders. These investors have taken large participations in commodity indices as a portfolio diversification strategy based on the expectation that returns on these indices are negatively correlated with equity returns. This expectation has not, in fact proven true over all periods. Between 2003 and 2010, for example, the correlation has been significantly positive due to the growing presence of long-only commodity index investment since the collapse of the dotcom bubble. What is significant for commodity price formation is that commodity index investors are often passive and largely non-responsive to commodity fundamentals. Instead, investment in commodity indices varies according to fluctuations in income from other asset classes – especially equities. This investment in commodity futures nonetheless influences spot prices by changing the expectations of future prices. This creates a correlation between spot prices of commodities and equity returns that is detached from the underlying fundamentals of commodities markets resulting in distorted prices and high volatility.

CHAPTER 3: **THE DIRECT EFFECTS OF THE RECENT COMMODITY BOOM: POVERTY AND FOOD INSECURITY**

The recent price hikes in commodities can be traced back to a variety of different causes, many of which relate to fundamentals of supply and demand. Demand is notably rising rapidly in emerging economies. On the supply side, adverse weather patterns, low inventory levels, increasing scarcity of land and water, and a history of underinvestment in productive capacity have together resulted in a tightening of commodities markets. Additionally, government policies such as biofuel quotas and export restrictions have further reduced the supply of specific commodities. Beyond these changes in the fundamental supply and demand of commodities, the increase in financialisation of commodities markets and especially the large sums invested in futures markets have also contributed to pushing prices higher. As a result of these combined factors, food prices have more than doubled since 2006.

More than just the high levels reached by commodity prices, it is the rapidity and amplitude of price movements that have harmed many developing countries. Volatility is natural in commodities markets as supply is largely dependent on natural factors such as weather patterns that cannot be accurately predicted while demand cannot be easily or rapidly modified. Several studies have however concluded that agricultural commodity prices have exhibited higher volatility in the decade since 2000. The period from 2006 in particular has been characterised by severe price volatility.

Unstable high prices can have negative repercussions for developing countries be they net exporters or net importers of commodities. Net importing countries experiencing sharp import price increases are faced with repercussions throughout the economy notably in the form of inflationary pressures and a deteriorating current account balance. Heavily fluctuating prices also pose a threat to macroeconomic management in net commodity exporting countries by distorting financial planning and harming investment though rising uncertainty.

High and unpredictable food prices have caused important damages to health and social well-being in many of the poorest areas of the world. The rapid price hikes have also resulted in episodes of severe public unrest and even riots in more than

30 developing countries during the 2007-2008 price spike and again in the past year. It is estimated that an additional 44 million people have fallen below the \$ 1.25 poverty line as a result of higher food prices since June 2010 in what represents a severe blow to the attainment of MDG1 by 2015.

Some of the national policy responses have further exacerbated the problem of rapidly rising prices. Overall during the period 2007-10 there were at least 36 export bans, 6 ad valorem taxes, 6 quotas and 4 minimum export price instruments imposed. These measures, that were put in place by a number of large commodity exporters pushed prices higher, notably in the case of wheat and rice. They also caused supply disruptions in several importing countries leading, in some extreme cases, to food insecurity emergencies.

It is estimated that 119 million additional people have experienced hunger and malnutrition as a result of the 2008 food crisis pushing the world total to over 1 billion. Developing countries are naturally more vulnerable to food insecurity. They spend larger proportions of their incomes on food and tend to depend more on rain-fed agriculture. Many of the poorest countries are also dependent on food imports and are therefore particularly exposed to international price increases and swings. The most vulnerable countries are those, often LDCs, that are both net food and fuel importers. These countries experienced the sharpest deterioration of their terms of trade during the period 2002-2008.

Despite having large shares of their labour force employed in agriculture, productivity in the poorest and most commodity dependent developing countries is increasingly lagging behind the world average. Sub-Saharan Africa and non-African LDCs are the regions in which this productivity lag has been most severe. The low agricultural productivity of poor countries is also in part an expression of the relative neglect suffered by the agricultural sector prior to the recent crisis. The share of ODA dedicated to agriculture has notably been falling from a high point of 13 per cent in 1983 to only 3 per cent in 2006. The food crisis has only partially succeeded in reversing this trend. By 2009 the share was still only 5 per cent of the total.

Agricultural production in poor countries has also been hindered by long-standing agricultural export subsidies and domestic support policies in developed countries. These result in overproduction and lead to countries dumping their surplus below production costs and out-competing local production in poor countries. As a result, food imports have grown rapidly and have come to represent important elements of food security strategies in these countries.

Sharp rises in food prices are particularly difficult to bear for poor households that already spend the largest part of their incomes on food expenditures. For such

poor households, an upswing in food prices can translate directly into skipped meals, reduced expenditure on health and education, and loss of the capacity to earn a living. It should nonetheless be noted that international price movements are not necessarily reproduced in domestic price movements within developing countries. Indeed, food subsidy policies, variations in transport and storage costs, and variations in food value chain profit margins are among the factors that result in an incomplete pass-through of international to domestic food prices. Using domestic food prices to assess the poverty impacts of rising food prices reveals that, though there are large regional variations, the negative impact on consumption clearly outweighs any positive income effects that have accrued to producers in part because most are net food buyers. Similarly, it appears that the ability of developing countries to respond to increased food prices by expanding production was insufficient given the low investments in the sector over the past couple of decades, to offset the negative price effects.

Policy responses: emergency food reserves and food insecurity

The 2008 crisis exposed weaknesses in the international food system that disproportionately threaten the world's poor and malnourished populations. The response of some national governments to rising prices further worsened the effects of the crisis. The uncoordinated decisions by many food exporting countries to restrict their exports notably compounded the threat of high food prices by raising fears regarding physical access to essential foodstuffs and led to adverse consequences in both net exporters and importers of food commodities. For food exporting countries, the protectionist measures delayed the transmission of higher food prices to consumers leading to accelerated price inflation when measures were repealed. For importing countries, restricted supplies and sky-rocketing prices resulted in severe fiscal imbalances and, in some cases, actual physical food shortages.

The experience of the 2008 food crisis is leading policy makers to search for mechanisms to better prevent and cope with future crises in the context of the changed international food system. The crisis has clearly demonstrated that food security strategies based on spot transactions on the market combined with financial reserves were insufficient and unsustainable for poorer countries. Furthermore, it has appeared clearly that food-importing countries could not depend on international trade during crises without severely compromising their food security. Together, these elements point to the need for some form of supranational grain reserve. Given regional specificities and logistical constraints, it seems that a regional institution would be best placed to provide cost-effective and responsive management of such a multilateral grain reserve.

Several such initiatives are under way notably in Asia and Africa. Indeed, some of which have been ongoing for several decades. A review of the experiences of these various schemes highlights four main challenges that a grain reserve initiative should address if it is to be effective: setting achievable objectives, finding the adequate scale and components, identifying the right mix of commodities to stockpile, and aligning the interests of the different members participating in the initiative / scheme.

In terms of *objectives*, grain reserves vary in their ambitions. The most basic aim is to insure against food emergencies by stocking essential food grains that will be used to feed vulnerable populations in times of acute crisis. Some grain reserves also aim to smooth consumption by improving the distribution of food grains across time as well as geographically by stocking grain at times and in places where it is more plentiful to distribute in times and places experiencing relative scarcity. The most ambitious grain reserves aim to stabilise prices through direct purchasing and selling of grain in order to avoid volatility and price extremes. Naturally, the costs of operation of a food reserve increase along with the ambitions of market interventions. An emergency supply is considerably cheaper to operate than a price stabilisation scheme. Further, the actual track record of grain reserves in terms of price stabilisation is mixed at best. The complexity of price formation in commodities markets and the small size of reserves relative to the market as a whole limit the ability of reserves to significantly affect price levels. In fact, most reserves with price stabilisation objectives failed within a decade or two of their creation. In contrast, reserve programmes designed as emergency stocks have a higher survival rate in recent times. This suggests that emergency response is a more feasible mandate for regional grain reserves. Should a reserve initiative contemplate a price stabilisation mandate, its regular operating budget will need to be underwritten by emergency funding facilities of sufficient size and responsiveness to protect its defined price band.

A mix of *components* working at different scales can offer the best outcome for regional grain reserves. An independent emergency physical reserve equivalent to approximately 5 per cent of food aid flows, using existing national and local storage infrastructure and used exclusively for emergency response can help to address the threat of malnutrition during food crises. A “virtual reserve” amounting to a budget collected from member states and managed by a technical commission could be used to influence prices by acting on futures markets. A coordinated international price stabilisation reserve that would be used to stabilise commodity food prices on the spot market has been proposed but currently appears to be unrealistic due to the high costs of operation involved.

The *commodity mix* that is stockpiled by the regional grain reserve will naturally depend on the specificities of each region. In East Asia, for example, rice is the only commodity to be subject to regional stockpiling while in some African regions up to four commodities are concerned. Stocking multiple commodities increases the complexity of operations and reduces the economies of scale as purchasing power is split among several commodities. On the other hand, stocking multiple commodities also offers some possibilities for internal arbitrage taking advantage of differentiated price movements among the various grains.

Aligning the different interests of the countries participating in a regional food grain reserve is crucial to the success of such schemes. Clearly, the means and goals of participants vary according to many factors such as their relative wealth and whether they are net importers or exporters of food grains. While these varying interests pose a challenge to proposed regional food grain reserves, they can also lead to synergies between members. Identifying and building upon such synergies will be an important factor in the success of regional food reserve initiatives.

As these considerations demonstrate, there is no one-size-fits-all blueprint for designing regional food reserves. The important questions are where stocks are located and at what level they are controlled. High-level policies and schemes have the advantage of scale but can suffer from blind spots at the local level and slow response times. A mix of different instruments operating at different levels may represent the best approach with stocks and storage being primarily a matter of national or sub-national policy with regional reserves as an important backstop.

CHAPTER 4:

THE INDIRECT EFFECTS OF THE RECENT COMMODITY BOOM: STRUCTURAL AND FINANCIAL IMPACTS

The effects of the recent commodity price boom on developing countries are complex and highly variable. While commodity exporting countries might benefit directly from increasing prices raising the values of their exports, net oil and/or food importers may see their import bills increase significantly. Beyond these direct effects however there are a number of indirect effects that are more complex to assess. These include positive effects such as spillovers into economic diversification or financial sector development as well as negative effects such as ‘Dutch Disease’ symptoms.

In order to analyse the impacts of the commodity price boom on developing countries empirically, the report uses data for 142 developing countries over the period 1995-2009. Looking at general trends for these countries, it is found that structural change occurred on average until 2002 with industry and services growing faster than total value added growth. After that date, strong growth in the primary sector appeared to reverse this trend. Another important change in the trends is that, as of 2004, manufacturing growth follows a divergent path from service sector growth. This suggests the existence of a structural break² around 2002-2003.

Another finding was that countries in the sample increased their spending on health and education and their population gained in health and longevity. These trends are strongest in the poorest countries of the sample. In terms of domestic financial development, both money and credit aggregates increased relative to GDP especially after 2003. A rise in GDP deflators and falling interest rates are also observed. For the average of developing countries, the commodity price boom years 2003-2009, which are considered in this analysis, were years of monetary expansion, financial development and innovation, and rising inflationary pressures.

Foreign financial positions showed large debt reductions after 2002, especially for the poorest countries in the sample. Foreign asset accumulation follows the same

¹ In chapter 4, we refer to a potential “structural break” in the time series (both for commodity price trends and structural variables) during 2002/2003.

upwards trend in poor developing countries although the levels relative to GDP remain about half those of the middle-income developing countries. Real effective exchange rates fell for all countries in the sample between 1999 and 2005 and rose only modestly thereafter. FDI is highly volatile for the poorest countries and, at around 4 per cent of GDP, only about half the level of the richer developing countries in the sample which experienced a rise in FDI to 8 per cent of GDP in 2005 – a level that remained stable in the following years.

In order to establish to what extent these and other observable trends in developing countries were ascribable to the effects of the commodity price boom, the report creates a measure of countries' exposure to commodity revenues' growth based on the severity of commodity dependence and the extent to which a country is experiencing growth in commodity revenues. This variable is termed 'commodity growth exposure'. Countries with very high commodity growth exposure include oil and gas exporters such as Iraq, Chad, Azerbaijan, and Sudan; countries with very low commodity growth exposure include Cambodia, the Philippines, Bangladesh, and China. Generally, the price boom was more important for the poorer countries of the sample due to their less diversified economies and greater share of commodities in total exports.

The first observation is that greater commodity inflows are good for per capita income growth and that this effect is not limited to the primary sector but also results in higher rates of growth in non-primary sectors and in investment. Both manufacturing and services exhibit stronger growth rates with greater commodity growth exposure even if the shares of services and manufacturing in total GDP tend to decline due to higher growth rates in the primary sector. It appears therefore that, for countries with a moderate or high commodity growth exposure, higher commodity revenues are positive both for growth and for investment but not (in the short run at least) for diversification in the poorest developing countries.

Domestic financial development does not appear to have been stimulated by commodity growth exposure. Both money and credit, as shares of GDP, decline as commodity growth exposure increases. This is also true for stock market capitalisation in those countries of the sample for which it is relevant. It also appears that although interest rates were stagnant, commodity growth exposure did increase inflationary pressure as reflected in rising GDP deflators. There is nonetheless no evidence of exchange rate pressures that might be expected in a 'Dutch Disease' scenario. This may be due to the build-up of foreign assets and the decline in foreign liabilities as commodity inflows were increasingly channelled to international financial markets during the period 2003-2009.

Finally, countries with greater commodity growth exposure tended to spend less on health and education as a share of their GDP. There is however no observable negative correlation between commodity growth exposure and life expectancy or infant mortality rates.

Further econometric analysis and disaggregation of results between different income levels and between the periods before and after the observed structural break in 2003 both support and add to the above results. Notably, it is found that:

- (i) For the poorest 40 per cent of countries in the sample, more commodity growth exposure was linked with greater investments in international financial markets after 2002 but not in the period before that.
- (ii) Also during the period 2003-2009, the same poorest countries used their commodity revenues to strengthen foreign financial positions by increasing debt servicing.
- (iii) As a result of increasingly channelling commodity revenues to debt servicing and foreign investments, these countries' commodity growth exposure was not correlated with income growth over the period 2003-2009.
- (iv) The richer countries, but again not the poorest 40 per cent, experienced increased financial development in the form of increasing money and credit relative to GDP along with commodity growth exposure during the boom years during the period 2003-2009.
- (v) For the poorest 40 per cent of countries, commodity growth exposure translated in increased spending on health but less on education. A negative effect that was stronger in the 2003-2009 period than in 1995-2002.
- (vi) On the upside, 'Dutch disease' effects that might have been expected to result from large commodity inflows appear to have been largely averted. In 2003-2009, there was no evidence of a decrease in the GDP shares of non-primary sectors in the poorest countries and only a small decrease in the richer developing countries.
- (vii) Also, the boom was correlated with greater gross capital formation in the poorer countries. It should be noted that this may indicate mainly investments in the primary sector and may not be indicative of durable structural development.
- (viii) Another 'Dutch disease' type effect that was avoided in 2003-2009 but not before was the appreciation of the real effective exchange rate.

Commodity dependence in the context of finance-driven globalisation

One of the striking features of the commodity price boom has been the strong growth in commodity-exporting developing countries' foreign assets, especially in the form of official reserves, and in sovereign wealth funds. It is remarkable that even low-income developing countries that have continued to run current account deficits throughout the 2000s have been substantially increasing their reserves. This may have been an attempt, as advised by donors and international financial institutions, to constitute buffers against the increased volatility of international financial markets.

Even during the boom years then, most developing countries did not move into positions of current account surplus. These findings are in line with other research (e.g. Obstfeld, 2008), it also appears that the increased revenue was not channelled to a build-up of fixed capital formation and upgrading for greater productivity. Instead, what accumulated was financial capital in both government and private accounts in developing countries in general. Reserves notably rose tenfold in nominal terms between 1992-1997 and the 2003-2008 periods. This accumulation of reserves should be recognised as a net outflow of liquidity for the domestic economy. While these reserves may serve as useful buffers against volatility, the opportunity costs in terms of investment or health and education spending, real (domestic) sector growth and therefore development are substantial.

Further, it is striking that even during the commodity price boom years commodity revenues were dwarfed by net external financing inflows so that it is the capital account rather than the current account that determined countries' financial balance. This means that the availability of finance for investment and for maintaining financial stability is for many countries now dependent on the ability to attract and retain capital flows that include but go far beyond export revenues. This phenomenon is in line with an observable shift in policy focus on the part of developing countries from real-sector investment for growth to financial stability as a prerequisite for growth. Accordingly, it explains much of the financial asset growth and the simultaneous decoupling of commodity inflows from real sector development for growth in the poorer developing countries.

In this context, sovereign wealth funds have mushroomed in recent years and have served to direct developing economies' windfall gains into foreign bond and stock markets. Out of the US Dollar 4.7 trillion held in such funds, it is estimated that 82 per cent is owned by developing countries and that within this share, \$ 2 trillion are in commodity-based sovereign wealth funds. They contributed strongly to the separation of financial inflows, including commodity revenues, from the domestic real economy.

Foreign direct investments by firms and nations

One of the consequences of the commodity price boom was a marked although volatile increase in foreign investment coming into commodity-rich economies. This was partly in search of high profits linked to high and rising prices but also reflected the interest of a number of emerging economies in securing future commodity supplies.

Foreign direct investment can benefit host economies through employment, capital and technology spillovers. Such positive effects are however conditional upon a number of factors such as the investment motive, the level of host country development, and the linkages with the rest of the host economy. Resource-seeking investments tend to have fewer development benefits as they do not generally seek to introduce or develop new technologies. Furthermore, even when opportunities for spillovers exist, they are often not exploited due to host-country weaknesses in infrastructure, the education system, the quality of institutions or other areas. As a result of both these sets of factors, it has been found that the evidence is mixed as to whether FDI has a significant long-run impact on growth.

This conclusion seems to hold in those countries where the commodity price boom attracted large foreign investment inflows with little impact on non-resource sector growth, the wider economy and employment. This is partly due to the lack of greenfield investment but is also directly related to the fact that countries have used the foreign exchange generated by FDI to build up reserves and financial investments rather than to invest in the real domestic economy.

Among the most visible and commented upon incarnations of the phenomenon of foreign investment in resource-rich countries has been the case of Chinese investment in Africa. This investment largely coincided with the commodities boom, beginning with the 'Going Global' programme to promote Chinese overseas investment activity. Between 2003 and 2009, China's outward direct investment rose almost sevenfold from \$ 33 billion to \$ 230 billion. In Africa, this investment mainly took the form of contracted projects whereby infrastructure is provided in return for access to natural resources. This investment was therefore heavily directed towards Africa's resource-rich countries. In particular, it has been found that since 2002 energy and mineral output have become significant attracting factors for Chinese FDI. One of the important concerns that have been voiced regarding Chinese investment in Africa is that the potential loss of ownership of natural resources and the repatriation of profits may deprive African countries of foreign exchange that is needed to service debts and invest in economic diversification and long-term development.

Land acquisition as a category of FDI

The acquisition of land by foreign investors is a particular type of FDI which has taken on large proportions in recent years. In Africa alone, it is estimated that an area equivalent to four times the size of France has been acquired through foreign investment. The main form of such investment involves large areas of land – usually above 10,000 hectares – and takes the form of long-term leases of up to 99 years. Major investors include Gulf States, China, and South Korea and most of the investment has taken place in Africa although South-East Asia and South America have also hosted such deals.

This form of foreign investment raises a number of concerns. Domestic agricultural development is a prerequisite for broader development in poor countries. The acquisition of large tracts of land by foreign investors therefore directly reduces the policy space available to host countries by limiting the land on which domestic producers can farm and raise livestock. Furthermore, as access to land is typically the basis of poor people's livelihoods, the foreign ownership of land can have detrimental impacts on local poverty and social conditions. These developmental and distributional impacts may be severe even in cases where the overall macroeconomic impacts are positive.

The balance of costs and benefits with regard to this type of investment is even poorer in light of the observed recent tendency of developing countries to privilege financial investments over real-economy investments. Indeed, there is now a marked risk that developing countries are giving up long-term control over a major productive resource in return for finance which will not be used for economic diversification and development but for financial investment.

CHAPTER 5: **PERENNIAL PROBLEMS, NEW CHALLENGES AND SOME EVOLVING PERSPECTIVES**

Following decades of largely stagnating or falling prices, most commodities experienced rapidly rising prices from about 2003. This report has sought to establish the different ways in which this price boom affected CDDCs, and examined these effects within the context of established theories concerning commodities and economic development. Overall, the rise in prices should have translated into increased export earnings for CDDCs (direct impacts). Provided that the macroeconomic effects of these inflows were well managed, this windfall revenue should have helped CDDCs to meet their development priorities (indirect impacts).

The empirical evidence reviewed in this report, however, suggests that in the current global context the overall impact of the commodity price boom on CDDCs has been limited. This underscores the need for a re-examination of the commodities and development nexus to better reflect the new developments in global commodity and financial markets. In particular, there is a need to (re)establish the link between higher commodity prices, growth in the real sectors, and therefore sustained growth in incomes through policies that prioritize national development over the externalization of windfall incomes.

For CDDCs, the direct impacts of rising commodity prices between about 2003 and 2011 varied widely according to the composition of the exports and imports of each individual country. Some CDDCs and especially those that are net fuel and food exporters saw their terms of trade improve in the six years leading to 2008. Several CDDCs, including some of the poorest countries, however, suffered a deterioration of their terms of trade. Indeed, although they export other primary commodities the CDDCs are often net food and fuel importers. For some of them, the increase in the prices of the tropical agricultural products that make up the bulk of their exports was not sufficient to compensate for the increase in the import costs of food and fuel. The concrete outcome for these countries has been a severely worsening trade balance while their populations had to bear the higher costs of food and fuel.

The causes of the commodity price boom were as complicated as some of these effects. Among the causes that have been most widely discussed, we found that as

a proportion of world maize consumption, ethanol use has increased sharply since 2003/04 and that this is effectively diverting food and animal feedstock towards fuel production, with the effect of raising food prices, in particular the price of corn.

Despite concerns raised about the potential impact of Chinese demand for commodities, the report shows that during the period 2005-2010 China's share of world imports was significant for several 'hard' (mineral) commodities but relatively small for most 'soft' (agricultural) commodities. The 'China effect' was therefore strongest in some of those commodities where prices rose the most, such as iron ore, copper and oil, but negligible in cereals and other arable crops (with the notable exception of soya).

Beyond these direct effects, there are a number of indirect effects which capture the nature and magnitude of the impact that the changes in revenue have had on various economic variables in these countries.

Overall, there is some indication that greater commodity inflows did lead to moderate income growth and that the effect was not limited to the agricultural sector. It appears that the non-commodity sectors of the economy were not adversely affected by the commodity price boom. Both the industrial and services sectors exhibit stronger growth rates. Due to a much higher growth rate of the primary sector, however, the share of these sectors in the economy reduced. The commodity price boom does not therefore appear to have promoted economic diversification and structural change. Indeed, there is a paradox in even expecting commodity income growth to stimulate such change, unless it is very carefully nurtured, since structural change would help make economic growth less dependent on commodity sectors.

Some policy perspectives

The recent commodity boom and its consequences for CDDCs suggest a number of broad policy considerations. How to respond to the commodity problem discussed here has received a lot of attention in the last couple of years, most importantly within the framework of the G20. The interagency consultation process, launched during the French Presidency of the G20 in 2011 (and which is continuing under the current Mexican Presidency of the Group), to debate the issue and identify policy directions brought together 10 international organizations, including UNCTAD. While taking cognizance of the conclusions or recommendations that emerged from this process, and from recent works on the issue, the report tries to identify some broad policy options that emerge directly from its main findings.

The combined crises of 2008 marked a turning point in the economic situations of CDDCs just as much as the more widely discussed one which affects leading developed countries. The problem is further exacerbated by the financialisation of

the commodity markets themselves, one aspect of which has been defined as the 'Increasing involvement of new actors such as financial players and traders', which is a consequence of the slow shift in their pricing mechanisms from long-term, fixed contracts to methods that allow for very sharp price fluctuations, and therefore attract players who are looking for various sorts of financial gain.

Partly because of the importance of such influences spreading from North to South, policy needs to have direct input from representatives of all parts of the Global South, and not only the G20. After all, the question of commodity prices has always raised the biggest problems for the poorest countries. And yet, when after the crises of 2008 it became an important item on the international agenda, policy was led by the G20. This grouping includes countries with 'emerging' economies such as Brazil and South Africa, and it is therefore more inclusive than the Group of 8. The G20 nevertheless includes none of the world's poorest countries, whether the 48 defined by the U.N. as Least Developed Countries or the 35 defined by the World Bank as low-income countries. They include only India and Indonesia out of the 66 Low-Income Food-Deficit Countries. Future policy on the international commodity trade needs to incorporate the views of those countries for which that trade looms the largest in their economies. Among the existing global country groupings, this suggests that the G77 should be directly involved, as well as regional organisations from the South. The concentration of commodities expertise at the U.N., and especially UNCTAD, FAO, and the Common Fund for Commodities also needs to be brought to the fore.

Many countries in East and South-east Asia, the most successful region of the developing world, increasingly rely on their own region as the source of economic demand and transformation. They follow the impetus which was created by the earlier industrial breakthroughs of neighbouring countries – first Japan, then South Korea and the other newly industrial countries of the 1980s, and more recently China and other, smaller countries in the region. However, the greatest concentration of CDDCs is in Africa, which does not benefit from any local growth poles of industry and finance to compare with China and Japan. What can be done to substitute for them?

In this new context, it is necessary to rethink development strategies in order to maximise the gains to developing countries from the commodities trade, while drawing lessons from the unfulfilled history of commodities and development over the 60 years in which experts have been working on it. The following three lines of strategy are recommended for the CDDCs' consideration, together with certain changes in international architecture which would be required to realise them:

1. Prepare for the possibility of price falls and a consequential decline in export incomes, government revenues and economic demand.

2. Rely on neighbouring countries' potential in order to generate autonomous economic development away from the pressures imposed by commodity dependence in a context of unbridled reliance on global markets.
3. Harness the income gains from higher commodity prices to facilitate wider economic transformations and a reduction of dependence on commodities.

The proposed new architecture calls for some degree of reconfiguration of CDDCs' trade away from the current system based on unimpeded global markets, over whose institutions they have so little influence. It argues for a much stronger role for Regional Economic Communities, and regionally-based agricultural development banks or agencies, which together with other regional institutions could formulate economic development strategies based on: (i) the development of downstream commodity processing and commodity-related industries, and (ii) stimulation of wider domestic trade and new economic sectors, including manufacturing. At the international level, this new architecture foresees a greater and more coordinated role for the G77 (in addition to the G20), regional organizations from the South, and UN institutions in which there is a concentration of commodities expertise, especially UNCTAD, FAO, and the Common Fund for Commodities, as well as International Commodity Bodies.

Winning the argument concerning some of the policy measures discussed so far will not be easy, in particular because of well-known practical difficulties which were encountered in previous attempts to achieve similar goals. However, the persistence of the problems of commodity dependence in the past three decades suggests that markets have not been able, and cannot be expected, to solve the problem alone; and perhaps more than any others, commodity markets need a helping hand. Commodity cycles and price volatility are an integral part of commodity production and trade and will not go away, no matter how much we might want to wish them away. The commodity problematique will continue into the future, in particular considering recent developments in global financial markets. It is now time to get all stakeholders involved in trying to find ways and means of coping with the problem. The problems are practical in nature and the search for solutions should consider all possible avenues with no ideological preferences or preconceptions of the 'right' method or outcomes. It is only in this spirit that we can be sure to discover the solutions most likely to enable the majority of CDDCs to make the most of the cyclical and occasionally highly volatile commodity markets which are so important to their economic livelihoods.
