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Chapter I

GLOBAL IMBALANCES AS A SYSTEMIC PROBLEM

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Chapter I

GLOBAL IMBALANCES AS A SYSTEMIC PROBLEM

A. Global growth

Since 2002 the performance of the world economy has had a strong positive impact on growth and poverty reduction in the developing countries, thereby contributing to progress towards the Millennium Development Goals (MDGs). The expansion of world output continued unabated in 2005, with a growth rate of 3.6 per cent. Output is expected to expand in 2006 at a similar pace as in 2005. High prices for oil and industrial raw materials and a tendency towards more restrictive monetary policies as well as turbulence in the financial markets have not yet had a significant negative impact on global growth. Nevertheless, the risks of a slowdown are increasing.

The upswing of the world economy after 2002 has been shared by all regions, although expansion in the economies in transition has slowed down somewhat since 2004. Developing countries, including many of the poorest countries, have benefited from continuing strong demand for primary commodities but some of them have also had to carry a higher burden of rising costs for imported oil and other raw materials (see annex 1 to this chapter for an analysis of commodity prices and terms of trade). On the other hand, global economic performance continues to be accompanied by serious imbalances in the world economy, and these should give rise to caution regarding prospects for the coming years as their correction could have serious repercussions for developing countries.

To some extent, developing countries have themselves contributed to setting the pace for global growth, with strong investment dynamics and an overall growth rate of about 6 per cent for the group as a whole. In particular, rapid growth in China and India has contributed to this outcome, not only because of their statistical weight as large economies but also because they serve as an engine for trade in manufactures within Asia. Moreover, their rapid growth, combined with their increasingly intense use of energy and metals,[1] has sustained international demand for a wide range of primary commodities. Inflation has remained subdued despite some countries reducing or even suppressing subsidies for energy prices. In this environment of moderate inflation, macroeconomic policies have remained accommodating and domestic demand in developing countries has been contributing increasingly to gross domestic product (GDP) growth.

Table 1.1

WORLD OUTPUT GROWTH, 2001–2006[a]

(Annual percentage change)

Region/country	*1990–2000[b]*	*2001*	*2002*	*2003*	*2004*	*2005[c]*	*2006[d]*
World	**2.9**	**1.5**	**1.8**	**2.7**	**4.1**	**3.6**	**3.6**
Developed countries	**2.5**	**1.2**	**1.2**	**2.0**	**3.1**	**2.7**	**2.7**
of which:							
Japan	1.1	0.4	0.1	1.8	2.3	2.7	2.8
United States	3.5	0.8	1.6	2.7	4.2	3.5	3.1
European Union	2.2	1.9	1.2	1.2	2.5	1.6	2.3
of which:							
European Union-15	2.2	1.9	1.1	1.1	2.3	1.4	2.2
Euro area	2.1	1.8	0.9	0.8	2.1	1.3	2.0
France	2.0	2.1	1.2	0.9	2.3	1.2	2.1
Germany	1.8	1.2	0.1	-0.2	1.6	0.9	1.8
Italy	1.6	1.8	0.4	0.3	1.2	0.0	1.0
United Kingdom	2.7	2.2	2.0	2.5	3.2	1.7	2.3
South-East Europe and CIS	**-4.3**	**5.9**	**5.2**	**7.2**	**7.9**	**6.3**	**6.0**
CIS	-5.0	6.2	5.3	7.8	8.2	6.8	6.3
South-East Europe	-1.0	4.8	4.8	4.5	6.6	4.6	4.8
Developing countries	**4.9**	**2.6**	**3.8**	**5.1**	**7.0**	**6.2**	**6.2**
Developing countries, excluding China	**4.0**	**1.4**	**2.6**	**3.9**	**6.2**	**5.3**	**5.3**
Latin America	3.2	0.3	-0.8	2.0	5.7	4.4	4.6
Africa	2.7	3.7	3.4	4.7	5.1	5.3	5.9
Asia	6.3	3.6	6.1	6.5	7.9	7.2	7.0
West Asia	3.9	-0.2	3.9	5.0	7.3	5.7	5.1
East and South Asia	7.0	4.5	6.5	6.8	8.0	7.4	7.3

Source: UNCTAD secretariat calculations, based on UNCTAD *Handbook of Statistics* online; United Nations, Department of Economic and Social Affairs (UN/DESA); and national sources. 2006 forecasts: UN/DESA, *World Economic Situation and Prospects as of mid-2006*.

a Calculations are based on GDP at constant 2000 dollars.
b Average.
c Preliminary.
d Forecasts updated in May 2006.

As a result economic growth in East and South Asia, which exceeded 7 per cent in 2005, is expected to continue at similar rates in 2006 (table 1.1). Other parts of the developing world will also continue to grow relatively quickly. For 2006, a growth rate of 4.6 per cent in Latin America, 6 per cent in Africa and in the Commonwealth of Independent States (CIS) should be possible; in West Asia, growth will probably remain at around 5 per cent even if the volume of oil production cannot keep growing at the same rate as in previous years. With monetary policy freed from the chains of unsustainable exchange-rate regimes, Latin America as a whole has succeeded in transmitting external stimulus into the domestic economy without reviving inflationary tendencies. Real per capita GDP in the region will grow significantly for the third consecutive year. The recovery was accompanied by a significant decline in unemployment; the unemployment rate fell from 11 per cent in 2002 to 9.1 per cent in 2005.

Another remarkable feature in the evolution of the world economy has been the ability of many

African countries to maintain high growth rates since 2003. Regional growth has accelerated in every year since 2003, and the 6.6 per cent growth expected for sub-Saharan Africa (excluding Nigeria and South Africa) in 2006 is the highest growth rate of a sub-region after East Asia. In several countries, higher government revenues following the hike in the prices of some export commodities seemed to spill over into the domestic economy and stimulate domestic spending without causing higher inflation.

Developed countries will maintain an economic expansion of between 2.5 and 3 per cent. In the United States a more neutral monetary policy, a likely slowdown of housing prices and the impact of high energy prices are expected to decelerate private consumption and investment in the second half of 2006. United States exports have recovered somewhat since 2003, but imports will continue outpacing exports. The opposite is true for Western Europe. There, despite a modest recovery of domestic demand, exports remain the driving force for output growth in the major economies. In Japan, the long deflationary phase appears to have come to an end; GDP growth will remain stable at 2.8 per cent and domestic demand is recovering, following a breakneck increase in exports during the last four years. However, the foreseeable end of a very expansionary monetary policy associated with measures aimed at fiscal consolidation might temper the rapid growth witnessed in the last quarter of 2005 and the first quarter of 2006.

B. Turbulences in financial markets

There have recently been signs of increasing volatility in stock, commodities and currency markets as well as in short-term capital outflows from some emerging markets, some of the ingredients that have made for financial crises in the past. The dollar is highly vulnerable and international investors appear to have become nervous in the face of continuing global imbalances and rising interest rates. After years of calm, with increasing private capital flows to the emerging markets, there is a new threat of hot money being withdrawn overnight. Indeed, a number of developing countries have experienced a sharp drop in their stock market prices and some emerging-market currencies have lost markedly against the dollar, the euro and the yen as well as against those currencies that are closely attached to them.

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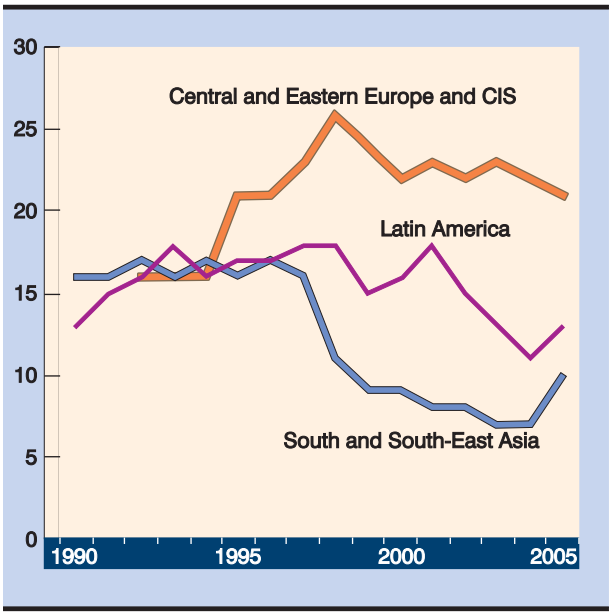
However, this turbulence is limited only to some areas and to a number of countries with rather high current-account deficits. There is hardly any evidence that a major financial crisis is looming, comparable to the Asian or Latin American crises some ten years ago. Taking the current account as an indicator of external vulnerability, most emerging-market economies appear to be less vulnerable than at the time of the big shocks during the past two decades. Overall, the situation of developing coun-

Figure 1.1

NUMBER OF DEVELOPING AND TRANSITION ECONOMIES WITH CURRENT-ACCOUNT DEFICIT, SELECTED REGIONS, 1990–2005



Source: UNCTAD secretariat calculations, based on IMF, *World Economic Outlook*, April 2006.

Note: For Central and Eastern Europe and CIS, the number of new reporting countries increased from 24 to 25 in 1995, and to 27 in 1998. South and South-East Asia correspond to the country grouping of East and South Asia, excluding Macao (China) and the Democratic People's Republic of Korea.

tries is much better today than it was before the big crises of the 1990s. In 1996, the current account of a group of 22 countries in South Asia and South-East Asia had turned slightly into deficit (-1.2 per cent of GDP) after a decade of consistent surpluses. Seventeen out of the 22 countries recorded deficits. Latin America in 1998, one year before its crisis, had increased its traditional deficit to 4.5 per cent, with all the 19 countries on the continent recording current-account deficits (fig. 1.1). This compares with a deficit of nearly 6 per cent at the beginning of the debt crisis in the early 1980s.

By contrast, in 2005 the group of South and East Asian countries recorded a large surplus on its current account (4.6 per cent of GDP), and only ten of the 22 countries were in deficit, after that number had been down to seven in 2004. The Latin American region as a whole is also in surplus, on the order of 1.3 per cent of GDP, and only some smaller countries in Central America are presenting significant current-account deficits. The group of countries most vulnerable to capital flight and financial stress is located in Central and Eastern Europe and the CIS. In that region (excluding the major hydrocarbon exporters, the Russian Federation and Kazakhstan), 21 out of 25 countries recorded relatively high and stable current-account deficits of around 5 to 6 per cent of GDP during the last ten years.

During the second quarter of 2006, several East European countries and some other emerging economies were hit by financial turbulences, recording losses in their stock market values (among them Hungary, Latvia, Lithuania, Romania, South Africa, Turkey and Ukraine) or their currency values (as in Hungary, South Africa and Turkey), while the spreads on their international debt increased moderately. In some cases these episodes show similarities to the typical speculative cycle as experienced in the Asian as well as in the Latin American or Russian crises.[2] In the context of fighting inflation, relative high short-term interest rates attracted short-term capital inflows that triggered nominal and real appreciation of the currency, expanded domestic credit and fed price bubbles in financial markets; at some point, overvalued currencies widened the current-account balance and increased the nervousness of investors as well as the vulnerability of the economy to sudden capital outflows. So far these financial turbulences have been contained, but some observers warn that there is a significant risk of contagion because several countries share similar vulnerabilities and common creditors (Roubini and Menegatti, 2006).

Nevertheless, apart from the economies mentioned, which carry relatively high current-account deficits, the risk of a financial crisis on a global scale originating in the developing world is relatively small. Most of the countries affected by the former crises have been careful not to jeopardize the beneficial situation brought about by a certain currency undervaluation or high export prices, and have protected a current-account surplus that they had been able to achieve under the strains of devaluation and recession.

C. The systemic character of the global imbalances

1. Alternative views on external imbalances

Despite growing surpluses in the current account in the developing world, a conclusive explanation of the global imbalances cannot be found without looking carefully at the relationship between the United States on the one hand and a small number of big surplus countries including Japan, Germany, China and the major oil exporters on the other (fig. 1.2). At this moment, however, there is not even consensus among policymakers and experts on the very nature and the seriousness of the imbalances, let alone on the politics of a multilateral approach to correct them. Without a comprehensible approach identifying the potential risk involved in huge current-account deficits and surpluses shared by the major players, a solution is out of reach.

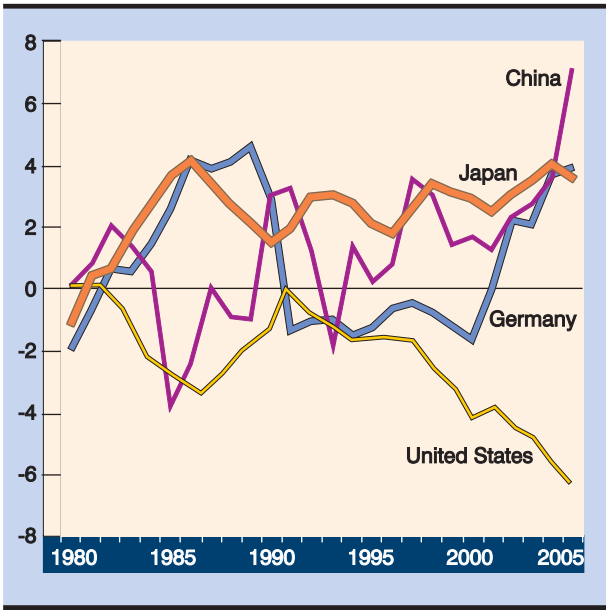
In general, conclusive explanations for current-account balances are not easy to find. But beyond the traditional approaches that have been tried out to explain trade flows in the past, in the current discussion it is not even clear whether the current-account imbalances are mainly caused from the trade side or from the capital side of the balance. One view places primary responsibility on trade flows, stressing the fact that, by definition, a current-account balance describes the difference between current receipts and expenditures for internationally traded goods and services and income payments. The other view, putting major emphasis on capital flows, focuses on the fact that from a national perspective, the current-account balance always exactly equals the gap between national saving and domestic investment. Although it should be clear from the outset that such *ex post* identities cannot by themselves provide an explanation or indicate a direction of causality, they are nonetheless taken as starting points for divergent tracks of analysis that lead to different policy recommendations.

Unforeseen shocks can occur and macroeconomic prices can go fundamentally wrong, with entire economies losing competitiveness and suffering dire consequences for growth and jobs.

The view that puts capital flows and national savings at centre stage concludes that the decision to save a high share of disposable income leads to a capital-account deficit (i.e. net capital outflows), as not all these savings can be used productively inside national boundaries. The opposite outcome, a current-account deficit, is the result of the domestic propensity to invest being in excess of the national propensity to save. Again, this view flirts with stating a tautology by using the identity of the current-account balance being always equal to the difference between national saving and domestic investment as a meaningful explanation. The advocates of this hypothesis assert that trade balances are basically the result of the decisions by national agents to consume either

Figure 1.2

CURRENT-ACCOUNT BALANCE AS A PERCENTAGE OF GDP IN CHINA, GERMANY, JAPAN AND THE UNITED STATES, 1980–2005



Source: IMF, *World Economic Outlook*, April 2006.
Note: Before 1992, data for Germany refer to West Germany.

now or at a later stage. Consequently, in this approach a balanced current account is not regarded as a meaningful economic policy target for individual countries. Rather, this view asserts that in a world of liberalized financial markets, global savings should always flow toward their best use. It is held that through the arbitrage of capital flowing from excess-saving countries toward countries with more plentiful profitable investment opportunities, the global economy achieves a more efficient allocation of resources than would ever be possible without free capital mobility.

The alternative explanation of imbalances is more substantive in its main message, as it does not simply rely on a description of import and export movements but considers swings in trade flows induced by large movements in the relative prices of tradable and non-tradable goods and services, and in the international competitiveness of countries to be the main forces of change. For example, it stresses the role of commodity prices in the development of the current accounts of producers of important commodities like oil. According to this view, the decision of private households to save less does not by itself affect the trade balance if the additional demand can be satisfied by competitive domestic production. The decline in the private household savings rate could be compensated by other sources of national savings: business profits in the first place, but also by higher government saving or lower government de-saving due to higher tax receipts. Hence, in the approach that focuses on the causes of trade flows, the relationship between national saving and the trade balance is much more complex than in the other approach, as it involves all the relevant agents in one country and all the agents in all the other countries, including policymakers.

In such an environment unforeseen shocks can occur and macroeconomic prices like the nominal and the real exchange rates can go fundamentally wrong, with entire countries losing competitiveness and suffering dire consequences for growth and jobs. Hence, deficits or surpluses in the current account may not just be the result of voluntary decisions by well-informed agents or groups of agents; those imbalances may indicate overall policy errors or pathological developments in the broadest sense. Based on this view, under the Bretton Woods regime of fixed but adjustable exchange rates, long-lasting current-account deficits were considered as indicating "fundamental disequilibria" in international trade pointing to the need to depreciate the nominal exchange rate and thereby improve the international competitiveness of the country concerned.

A radical change in the perception of balance-of-payments imbalances occurred by the mid-1980s. Accordingly, the developing world's domestic financial liberalization was increasingly accompanied by capital-account liberalization so as to allow for maximum efficiency in the international allocation of resources through unfettered market forces. Obviously the free flow of capital, even if precipitating long-lasting net flows into one country associated with current-account deficits, would not indicate any pathological phenomenon according to this perspective. By the early 1990s, the view that put capital flows first and recommended a hands-off approach by governments concerning

regulation of flows and of the exchange rate was far advanced, spanning the whole of the developed world and an increasing portion of the developing world as well.

Financial turmoil and crisis, however, became the almost natural concomitant of the liberalized system. Latin America, Eastern Europe and even the notoriously stable Asian emerging markets had to face tremendous financial problems after having had high and/or lasting current-account deficits (see fig. 1.1). The resulting outcome of crisis and the related policy actions to fight the outflow of capital was dramatic for the real economies of these countries, their populations and their politics.

Consequently, many developing countries moved away from the open-capital-account-*cum*-floating-rate approach and back to a position of strength that would reduce their exposure to external events, limiting their dependence on international capital flows. To achieve this, a significant number of countries in Asia and in Latin America tried to preserve the favourable competitive positions they had reached after their financial crises and devaluations by unilaterally pegging their currency vis-à-vis the dollar at a slightly undervalued level (see *TDR 2004*, chap. IV). With that move the key assumptions of the position that advocates fully liberalized capital flows, namely that net saving flows are harmless and that capital tends to flow from capital-rich industrial countries to capital-poor developing countries, have been contradicted. In fact, since the Asian crisis capital has been flowing in the opposite direction: many well-performing developing countries do not import net savings from the rich industrial countries, where profitable investment opportunities are supposedly becoming scarcer, but are exporting their own savings (see UNCTAD, 2006). The stark fact, which is closely related, is that many developing countries are accumulating huge amounts of foreign exchange reserves that are reinvested mainly in securities, such as government bonds, in the rich countries. Indeed, global savings flows head primarily in the direction of the largest and richest industrial country, the United States and their government bonds.

Many countries with open capital accounts moved from floating to policies that give them greater control over the exchange rate and reduce their dependence on capital inflows.

2. The main players

With a few exceptions, *Japan's* current account has been in surplus since the start of the 1980s. At the same time, the Japanese performance strongly challenges the approach to explaining current-account imbalances mainly by saving-investment imbalances. According to that explanation, a current-account surplus in the industrial economies outside the United States derives from "high desired savings" of an ageing population and "low prospective returns to domestic investment" (Bernanke, 2005). If this were the case, the household savings rate should have increased in Japan and business savings – arising from profits – should have decreased in parallel with the investment rate. However, exactly the opposite of that has happened: gross household saving in Japan declined steadily from 12 per cent of GDP in 1998 to 6 per cent in 2005, while business saving increased considerably.

Additionally, government saving plummeted from a surplus or a positive saving contribution of 2.1 per cent of GDP to a negative rate of 6 per cent in 2005, thus calling into question the widespread hypothesis that current-account deficits (national dis-saving) and budget deficits (government dis-saving) are intertwined. Therefore, Japan's current-account surplus can hardly be explained by an autonomous expansion of national savings. The more convincing explanation draws on Japan's export competitiveness, due to low inflation and low unit labour cost increases as well as Japan's policy to defend the value of its currency over extended periods through central bank intervention. Recently the effects of fast economic expansion in Asia, particularly in China, and rising net foreign investment income, which now even exceeds the positive trade balance, play a particularly important role.

The other major industrialized country with a large current-account surplus, *Germany*, also has a long-standing tradition as a surplus country. This tradition was interrupted in the early 1990s in the wake of unification (fig. 1.2). Recently, the swing in the German current account to renewed surpluses is closely associated with the Government strategy of raising international competitiveness by limiting the rise of national unit labour costs. From the German perspective, wage disinflation has proved highly successful in boosting external competitiveness and net exports ever since attaining export surpluses became re-established as a key policy target in the mid-1990s. As a result, Germany's current-account balance has improved – from -1.7 per cent of GDP in 2000 to 4.1 per cent of 2005 – while its closest trading partners saw corresponding movements into deficit.

It is quite remarkable that Germany, the world's third largest economy after the United States and Japan and the world's biggest exporter, hardly features in today's intense international debate over global imbalances. Germany's huge surplus is hidden behind the euro area's overall fairly balanced current-account position.[3] Even more than Japan, Germany during the 1990s has relied on belt tightening policies and low unit labour cost increases to stimulate GDP growth through exports. The flip side of this policy has been low domestic income growth and low domestic demand, as employment growth did not compensate for anaemic income development. In this way, import growth was not only confined by limited competitiveness but by low domestic absorption as well.

Since 2002 *China's* current-account surplus has been on the rise and attained a globally significant level of $160 billion, or 7 per cent of its GDP, in 2005. This sharp rise in its external surplus position has emerged despite the fact that China is growing at a breakneck pace and, as a major oil importing country, has suffered a sharp increase in its oil bill. A number of factors are behind the recent explosion in China's external position, an explosion that is also remarkable given the fact that some of its direct regional competitors sharply devalued their real exchange rates in the context of the 1997–98 Asian crisis, whereas China did not.

This structural change concerning China seems to be closely related to foreign direct investment (FDI). FDI growth during the 1990s can be seen as a key factor explaining the rapid increase in Chinese competitiveness. Targeting world markets, foreign investors producing manufactures in China were able to combine state-of-the-art foreign technology with well-educated but low-paid Chinese labour, which secured them absolute cost advantages by a very large margin. Despite Chinese money wages in manufacturing growing strongly, between 12 and 16 per cent annually in recent years, unit labour costs in manufacturing are falling (*TDR 2005*, chap. I, section E). Labour productivity, with growth rates of close to 20 per cent in manufacturing, is virtually exploding. Moreover, with the Chinese renminbi's nominal exchange rate pegged to the dollar, falling unit labour costs in manufacturing have effectively delivered a massive but untypical "real devaluation in manufacturing".

Of course China is today under heavy criticism for allegedly preserving an "undervalued exchange rate". And, beginning in July 2005, China has undertaken steps to make its exchange-rate regime more flexible, albeit very gradually (since July 2005 the renminbi has appreciated from its previous dollar peg of 8.28 to around 8 by May 2006). However, when the role of FDI is taken into account the verdict on China's alleged undervalued exchange rate is anything but straightforward. It should be recalled that the renminbi appreciated in line with the dollar until 2001, withstanding the regional currency storms of 1997–98. In nominal effective terms the renminbi has depreciated by less than the dollar since 2002. Gains in external competitiveness arising from strong labour productivity growth in one sector, at the same time as overall money wages are growing in line with nominal GDP growth, are normally not considered to be the result of a "beggar-thy-neighbour" strategy.

As part of an orderly unwinding of global imbalances, and in view of China's very high investment rate, advocates of the saving approach urge China to reduce its saving and to consume more. But such an assertion is difficult to understand, given the fact that the private households saving rate, at 16 per cent (IMF, 2006), is not outside the normal range, while consumption in China has been growing at a rate of around 9 per cent annually since the beginning of the 1990s in real

terms. Additionally, China's investment rate (fixed capital investment as per cent of GDP), at over 40 per cent, is extremely high. This undermines the argument based on "underinvestment" or "oversaving" that advocates of the saving approach to understanding the current account would have to use to explain the net export of capital from that country.

Commodity producers, particularly the big oil producers in OPEC and the Russian Federation, form another group of surplus countries that is gaining importance as a counterpart to the United States deficit. Oil producers provide the classic example of dramatically rising current-account surpluses in the wake of, from their point of view, big positive shocks triggered by soaring energy prices and improving terms of trade. Clearly, the oil price boom since 2004 has not turned oil producers into net capital exporters because they "decided" to save more or invest less as their export revenues increased. Rather, as the main beneficiaries of the global redistribution of income induced by a rapid increase in oil prices, they are simply unable to boost their spending for imports at the same speed as their incomes rise. Basically, the additional saving in these countries is induced by windfall profits, not by the decision of any agent in the country to save more out of a given income.

The economy of the *United States* is very often seen as the original and ultimate cause of these global imbalances and it is undeniable that this economy has played a key role in the emergence of the present global disequilibrium. The prevailing view, however, that the United States attracted more and more global savings out of a given global income or a given global savings pool is questionable. Rather, it is the United States' role as driver of the global income generation process that was the precondition for the creation of these savings, as embodied in rising current-account surpluses elsewhere. Its role as the key global growth engine has pushed the United States economy to become the main demander of global capital.

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The Economic Report of the President recently described the external imbalance of the United States as a "capital account surplus", mainly caused by domestic saving and investment balances both in the United States and in the rest of the world. According to this Report, some major economies are net capital exporters because they "have supplies of domestic saving that exceed domestic investment opportunities": Japan and Germany due to falling investment rates; China and the Russian Federation owing to rising saving rates. In this view, capital inflows to the United States reflect the low rate of national savings on the one hand, and several factors of economic strength, namely high output and productivity growth and a favourable business climate favouring "global competitiveness" on the other. Consequently, "in principle, the United States can continue to receive net capital inflows (and run current account deficits) indefinitely, provided it uses these inflows in ways that promote its future growth and help the United States to remain an attractive destination for foreign investment" (*Economic Report of the President 2006*: 144, 146).

Again, the alternative view attaches more relevance to trade outcomes and puts a loss of competitiveness of United States industry on centre stage, with the noticeable exception of high-technology branches (Aglietta, 2005). The fact that industrial production grew by only 5 per cent between 2000 and 2005 in the United States, while the consumption of durable goods expanded during the same period by more than 30 per cent, indicates that the reason is not that American consumers are saving too little, but that they are consuming too many imported goods.

Again, the causal nexus between national saving and the trade balance is a rather complex phenomenon. The current-account balance is not just determined by "decisions" taken on the level of private or public agents in one country; rather, it is determined by all the influences that shape decisions to spend or save inside and outside the country under consideration. There is generally

no easy way to attribute the results of this complex interaction to the "saving decisions" of any one particular group of actors in any one particular country. All-important interdependencies exist. As private households undertake efforts to save more, this may force public and corporate savings down. Likewise, with trade-offs between the saving behaviour of the different sectors in any one country, the external balance cannot simply be attributed to the autonomous decisions of any one of them.

3. Benign or malign unwinding of global imbalances?

Today's global imbalances are to an important extent a reflection and consequence of vital systemic deficiencies. The lack of a viable multilateral financial system is the most important of these. At this juncture it owes mainly to the flexibility and pragmatism of the United States macroeconomic policy management that the systemic deficiencies in the global economic order have not led to global deflation yet, but have "only" resulted in these imbalances. But even with the United States macroeconomic policy pragmatism, the global structure of production, trade and finance has become precarious. China, based on the long-lasting renminbi-dollar peg, has transformed itself into a kind of back boiler of the United States growth locomotive. After the Asian and Latin American crises, more and more developing countries have come to follow a similar path of adjustment by stabilizing their exchange rate at a relatively low level, running sizeable current-account surpluses and accumulating huge dollar reserves.

While this practice is widely suspected to be sub-optimal, in many respects it represents the only feasible way in which developing countries can successfully adapt to the systemic deficiencies afflicting today's global economic order, i.e., the absence of symmetric obligations of surplus and deficit countries. It is no surprise that the undervaluation-*cum*-intervention strategy is especially prevalent among developing countries that have gone through currency crises in their recent past, following previous liberalization of their respective financial systems and capital accounts. Having learned the hard way that reliance on supposedly benign capital inflows rarely pays off as a sustainable development strategy, a growing number of developing countries have shifted to an alternative approach that relies on trade surpluses as their engine for investment and growth. This strategy requires them to defend the competitiveness positions they achieved in the wake of financial crises. But this also presupposes that at least one country in the global economy accepts running the corresponding trade deficit.

The problem is that the United States may have become overburdened by having played the lead role as global growth engine for too long. It could largely ignore its external imbalance because no serious conflict between it and sustaining full employment and price stability has arisen up to this point. The potential for such a conflict is itself one key risk. Globally rising concerns, including among financial market participants, about the continuously growing external imbalance is another. It must be considered unlikely that the United States' personal saving rate will decline by another 5 percentage points over the next decade or that the public budget will be allowed to deteriorate by another 6 per cent of GDP. In this case the world economy will have to do without the growth stimuli it has become used to over the last fifteen years.

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The possibility of a slowdown in the United States economy looks increasingly likely. There is the prospect that this would entail further dollar depreciation, which would tend to restore competitiveness and, together with the economic slowdown, would help re-balance the United States economy. Alas, given the existing structure and concentrated dependence of global growth on demand stimuli from the United States, it is indeed to be feared that a marked slowdown in United States growth would be spread and amplified in just the same way as the positive impulses

have been all these years. This could quite easily unravel the momentum in development progress and poverty reduction seen in developing countries in recent times, and do so without there being any obvious fault on the part of these countries themselves.

The main reason for the increasingly unmanageable global burden of the United States is not *per se* to be seen in rising numbers of developing countries running current-account surpluses. Rather, the gravity and urgency of the matter relates primarily to the fact that other key industrial countries, such as Japan and Germany, could have done more to contribute to the reduction of the global imbalances. Their huge external surplus positions, based on improved competitive positions, suggest that the required competitiveness gains on the part of the United States should mainly come at their expense. This process would be greatly eased if this were to occur in the context of buoyant domestic demand rather than the stagnant demand that has prevailed in these economies for all too long.

Japan and Germany could have done more to contribute to the reduction of the global imbalances.

China's part in a benign unwinding of global imbalances differs from these two countries' roles. Since the beginning of the 1990s, China's domestic demand and its imports have grown very strongly indeed, and the country has played a vital role in spreading and sustaining growth momentum throughout the developing world, a process that must not be derailed. Therefore, renminbi revaluation should continue gradually rather than abruptly, taking due account of regional implications. Similar to China, oil producing countries have only recently come to play a significant role in the global imbalances. Oil producers should generally use benevolent terms-of-trade developments in favour of investment and diversification of their production structure. Should elevated oil prices persist, their contribution to a benign unwinding of global imbalances consists of a stronger domestic demand growth in line with higher incomes, extra expenditure being oriented towards social and physical investment aimed at diversifying the economy.

Crucially, what is needed for a benign unwinding of global imbalances is a responsible multilateral effort rather than pressure on the developing world. A well-coordinated international macroeconomic approach would considerably enhance the chances of the poorer countries to consolidate recent improvements in their growth performance. Without such an approach, developing countries have to defend their strategically favourable competitiveness positions and use the still-favourable monetary conditions to invest more and reduce their foreign indebtedness.

D. Low real interest rates: global savings glut versus global monetary conditions

1. A savings glut?

In the economic model explaining current-account imbalances by autonomous decisions of private households, the solution to the global imbalance problem is closely related to the problem of "too high savings" in the surplus countries. In this view, the alleged surplus of saving over investment finds evidence also in the historically-low real interest rates. Indeed, both long-term market rates and short-term policy rates have been extraordinarily low in recent years in developed and developing countries. Those observers (Bernanke, 2005; IMF, 2005, for instance) attributing the phenomenon to a "global savings glut" argue that while the supply of saving has substantially increased, the demand for saving, or, in other words, investment, has not kept up pace with the rise in supply, or has even diminished. Hence, excess supply in the capital market led to the observed decline of global interest rates.

If "excess saving" could explain lower interest rates in surplus economies, the symmetrical "saving shortage" in deficit countries should have the opposite effect.

This hypothesis offers a rebuttal to the widespread charge against the United States of causing global imbalances by saving too little; bouncing the ball back into the surplus countries' court. Rising capital exports (negative foreign saving) of a number of saving surplus countries in the industrial and developing world – the argument goes – have been passively mirrored by increasing capital imports (positive foreign saving) by the United States, enabling the latter to import more goods and services than it exports and run a current-account deficit. Rising capital-account surpluses in the balance-of-payments statistics at low interest rates are seen as evidence of a global savings surplus.

Yet, at a global level and from an *ex post* perspective – which is implied by the balance-of-payments approach as it focuses on *ex post* variables as observed in statistics – saving cannot exceed investment. The visible excess in saving over investment in current-account surplus countries implies the corresponding excess of investment over saving in current-account deficit countries. A *global* saving glut is a contradiction in terms. By linking the visible current-account imbalances with globally low interest rates, the proponents of the global savings glut hypothesis identify *ex post* visible variables with the plans of investors and savers in models of perfect foresight of the future income.

Of course, balance between saving and investment at the global level does not preclude the possibility of regional imbalances, which is what the current debate on global imbalances is really all about. But rising current-account surpluses (or excess national saving) cannot occur without corresponding current-account deficits (or deficient

national saving) arising concomitantly elsewhere. A rising current-account surplus in one country, be it due to a slump in investment or more general demand weakness, currency depreciation or otherwise improved competitiveness, or income gains owing to improved terms of trade, can only arise if demand is sufficiently strong elsewhere so as to generate the income out of which the saving of the current-account surplus country is made possible in the first place. And if "excess saving" could explain lower interest rates in surplus economies – within the orthodox framework where the interest rate is the price that equilibrates saving and investment –, the symmetrical "saving shortage" in deficit countries should have the opposite effect, which means, the "saving glut" hypothesis cannot explain low levels of interest rates in the main deficit country, the United States (see annex 2 to this chapter for the theoretical background of the saving-investment relationship).

But if the idea of excess saving depressing interest rates in global capital markets is not a sound one, then why have interest rates fallen to historically low levels? Would they start rising again once the unwinding of global imbalances were under way? What other risks are present that could drive up interest rates, taking earlier experiences into account? And how can developing countries best benefit from low interest rates and protect themselves against rising rates?

2. Monetary policy and interest rates

Interest rates, both long-term market rates and short-term policy rates, have been extraordinary low in recent years in developed and developing countries. This seems to be not so much the result of a "global savings glut" but of global monetary conditions.

Paradoxically, there is widespread agreement concerning the decisive role of monetary policy for short-term rates but great hesitation to acknowledge any influence of monetary policy on long-term rates. In fact, monetary policy directly controls short-term interest rates at a given market demand for money, but monetary tightening or easing will also impact on financial conditions in general through arbitrage and expectations, thereby indirectly influencing long-term interest rates. Longer-term interest rates can move in response to monetary policy decisions or in anticipation of them. In any case, arbitrage linkages mean that the level of interest rates is ultimately determined by monetary policy: either by national monetary policy, if sufficient policy space exists, or by global monetary conditions.

Essentially, given the very low inflation environment of today, low levels of interest rates are mainly a reflection of low cost pressure and correspondingly easy monetary policies. The macroeconomic situation in Japan and the euro area, as well as in countries in East Asia and Latin America that have gone through financial crises, is highly relevant in this context. In particular, the steep real devaluation in East Asian countries after their crises and the expansion of the Chinese industrial supply introduced a deflationary bias in manufacture markets that have more than compensated up to now for the rising price pressures they have put on several commodity markets. Moreover, higher oil prices have not spoiled the benign inflation outlook as wage growth has remained moderate in the face of high unemployment rates in many important countries.

Given the very low inflation environment of today, low levels of interest rates are mainly a reflection of low cost pressure and correspondingly easy monetary policies.

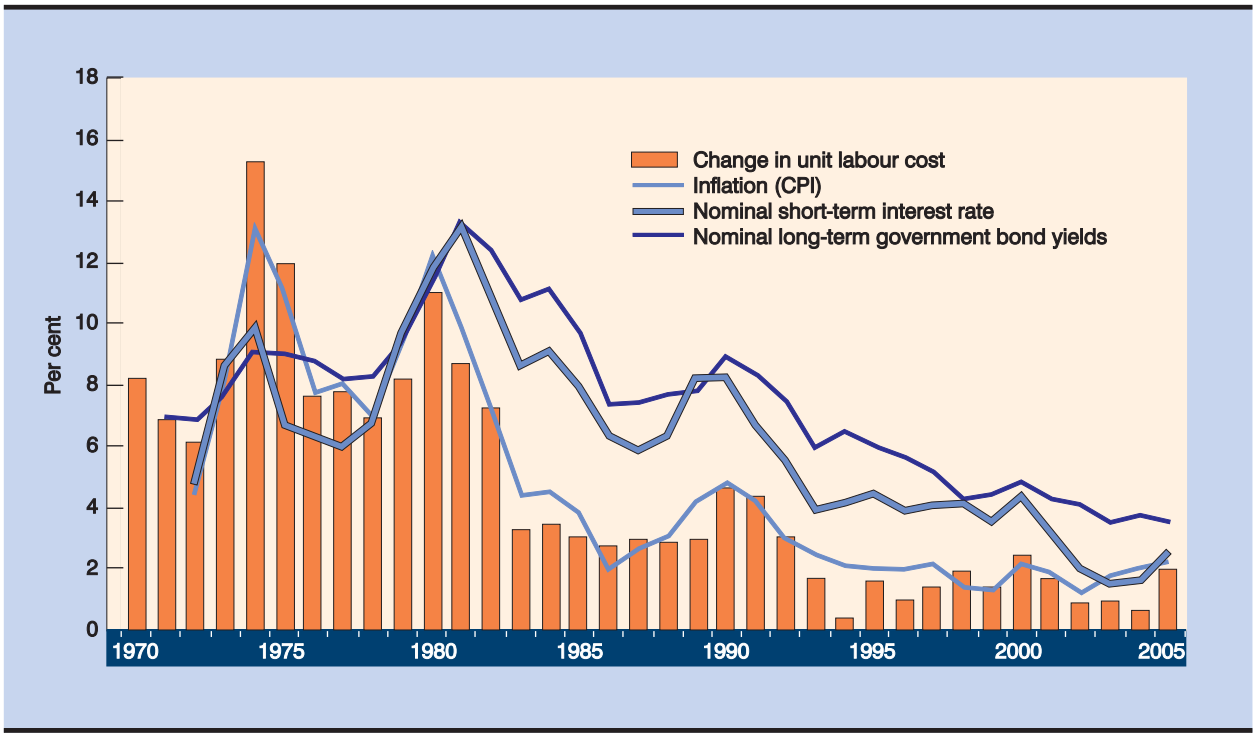
In a nutshell, then, historically-low interest rates have been due to very easy monetary policies in place since the beginning of the new century. The burst in global liquidity is owed to the monetary policy response to deficient demand in some developed countries and to low cost pressure in labour markets.

During the 1970s, nominal short-term interest rates set by the G-7 central banks soared to 10 per cent and even reached 13 per cent in the early 1980s; they subsequently declined to around 4 per cent by 1993 and were cut below 2 per cent

Figure 1.3

INTEREST RATES, INFLATION AND CHANGES IN UNIT LABOUR COST IN THE G-7, 1970–2005

(GDP weighted average)



Source: OECD, *Economic Outlook No. 78*, December 2005; IMF, *International Financial Statistics* Database; OECD, *Main Economic Indicators* Database; and national sources for Germany.

Note: Unit labour cost is the ratio of labour compensation at current prices to value added at constant prices. It represents the current cost of labour to produce one unit of output and serves as an indicator of cost competitiveness.

ten years later. The picture for yields on G-7 government bonds with a maturity of 10 years is very similar: declining below 4 per cent in recent years compared with their peak of 13 per cent in the early 1980s (fig. 1.3). The tight monetary policy of the early 1980s, in response to the preceding inflationary experience of the 1970s, caused a severe recession in industrial countries. The adverse effects of tight money were even stronger in developing countries, especially in a number of middle-income countries that had accumulated large amounts of dollar-denominated debt at variable interest rates owed to commercial banks and were therefore particularly vulnerable to monetary decisions taken by the major industrial countries, especially the United States. Subsequently, interest rates in developed countries progressively declined; even during the investment boom of the 1990s, interest rates remained relatively low. The Federal Reserve Funds rate peaked at only 6.5 per cent in May 2000, following a mild rise in inflation. As the investment boom turned into bust, interest rates were slashed aggressively. The United States Federal Reserve's aggressive monetary easing led the way to historically-low interest rates worldwide and global liquidity surged, spurred by the United States external deficit that led to a massive increase of liquidity elsewhere.

Monetary tendencies in developing countries followed conditions in industrial countries with a time lag. Short-term interest rates set by central banks in developing countries were quite high at the beginning of the 1980s, but ranged from 2 to

10 per cent in the majority of developing countries in 2005. Long-term government bond yields declined to low levels as well in recent years as yield spreads of emerging-market debts over G-7 debts shrank markedly and across the maturity spectrum. Global investors' search for yield raised the demand for high-yielding emerging-market instruments, especially as their issuers' trade positions and balance sheets started to look healthier. This was reinforced as emerging-market economies used the liquidity obtained through running current-account surpluses for repayment of debts, i.e. reductions in the supply of what global investors were keen to buy.

For other reasons as well, the historically-low interest rate cannot be explained by the mainstream theory. According to many observers, globalization has meant that capital has become relatively scarcer and labour relatively more abundant. This would seem to argue in favour of setting high real interest rates so as to induce sufficient saving, which is seen as the prerequisite for faster capital accumulation. In actual fact, however, real interest rates have fallen to historically-low levels. They have remained low despite global demand acceleration in 2004 and the gradual monetary tightening initiated by the United States Federal Reserve in June 2004.

On the other hand, the increased relative abundance of labour due to globalization, or the threat of it at least, does seem to have contributed to keeping wages and unit-labour-cost increases in check. Cost-push inflation impulses from labour markets have been absent during the ongoing recovery in both developing and developed economies. Growth in unit labour costs, the main determinant of cost-push inflation, has remained subdued. Management threats to relocate production or outsource certain activities may be one factor in explaining this moderation. An alternative hypothesis is that workers and trade unions have learned the lesson that they cannot win both the direct confrontation with employers and the indirect one with central banks at the same time, particularly in the case of an oil shock.

Workers and trade unions have learned that they cannot win the direct confrontation with employers and the indirect one with central banks, particularly in the case of an oil shock.

Nevertheless, it is worth noting that despite supposedly uniform downward pressures on wages due to globalization, those industrial countries with a strong export performance but poor GDP and employment growth, like Germany and Japan, have had more pressure on wages than those faster-growing countries with better labour market performance like the United States and the United Kingdom that are poor export performers, and, respectively, have been subjected to greater pressure from globalized labour markets. ■

Notes

1 For a detailed discussion of the determinants and implications of raw-material-intensity of production, especially in the fast-growing Asian economies, see *TDR 2005*, chap. II, section B.

2 For a general discussion of this phenomenon, see *TDR 2004*, chap. IV.

3 For instance, the IMF no longer mentions either Germany or the euro area in assessing rising global imbalances: "The U.S. current account deficit has continued to rise, matched by large surpluses in oil exporters, China and Japan, a number of small industrial countries, and other parts of emerging Asia" (IMF, 2006: 5).

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Annex 1 to chapter I

COMMODITY PRICES AND TERMS OF TRADE

UNITED NATIONS
New York and Geneva, 2006

Annex 1 to chapter I

COMMODITY PRICES AND TERMS OF TRADE

1. The commodity price boom since 2002

Since 2002, commodity producers in many developing countries have benefited from price increases for most of their products. The UNCTAD price index for non-fuel commodities rose by 44.8 per cent between 2002 and 2005 in current dollar terms (table 1.A1). While prices rose for all commodity groups, this upward movement was driven primarily by the minerals, ores and metals group, which increased by almost 100 per cent during this period. Prices of energy commodities also surged, particularly for crude petroleum, which increased by 114 per cent. At the beginning of 2006, nominal prices for metals and minerals, such as copper, nickel and zinc, as well as for crude petroleum reached historical record highs. Some soft commodities, such as coffee, rice, sugar and natural rubber have also experienced a significant upward push in prices in recent years.[1]

In 2005, commodity prices continued to increase, with the exception of vegetable oilseeds and oils, although they registered more moderate growth rates than in 2004. This reflects a certain correction at the beginning of the year on account of expectations that the commodity price boom was reaching its peak. However, prices rebounded in the second half of the year and continued rising into 2006 (fig. 1.A1). Commodity prices in real terms have therefore remained above their long-term trend, although they are still far below their levels of the 1970s and early 1980s. In 2005, the price index in real terms for all commodities was 56.6 per cent of the average of 1973–1981 and just 39 per cent of the peak of 1974. For soft commodity groups, even nominal prices thus far have not reached the levels of other previous peaks (fig. 1.A2).

The boom in commodity prices is the result of a combination of robust global demand and a slower than expected supply response, and, in recent months, a low level of inventories in a number of commodities. Moreover, there has been strong additional upward pressure from financial markets in the form of heavy investments in commodities as a financial asset. In 2005, a distinguishing feature in comparison with the previous two years was the effect of the dollar exchange rate on commodity prices. The increase in dollar-denominated commodity prices during 2002–2004 could also partly be explained by the depreciation of the dollar, as, typically, commodity prices move in the

Table 1.A1

WORLD PRIMARY COMMODITY PRICES, 2000–2005

(Percentage change over previous year)

Commodity group	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2002–2005*[a]
All commodities[b]	1.7	-3.6	0.8	8.1	19.4	12.1	44.8
All commodities (in SDRs)[b]	5.1	0.2	-0.8	-0.2	13.1	12.5	27.0
Food and tropical beverages	-0.1	0.4	0.4	2.3	13.2	8.8	26.0
Tropical beverages	-15.4	-20.6	11.7	6.2	6.4	25.5	41.8
Coffee	-25.1	-29.0	4.7	8.7	19.8	43.8	87.2
Cocoa	-22.1	22.7	63.3	-1.3	-11.8	-0.7	-13.5
Tea	6.8	-20.2	-9.5	8.4	2.1	9.1	20.8
Food	2.1	2.8	-0.5	1.9	13.9	7.2	24.4
Sugar	30.4	5.6	-20.3	2.9	1.1	37.9	43.6
Beef	5.6	10.0	-0.3	0.4	17.8	4.1	23.2
Maize	-2.8	1.1	10.4	6.5	5.0	-12.0	-1.6
Wheat	3.4	9.0	16.6	-0.7	6.8	-1.4	4.5
Rice	-18.2	-15.3	11.0	4.1	23.1	17.1	50.1
Bananas	-2.3	38.8	-9.6	-28.7	39.9	9.9	9.5
Vegetable oilseeds and oils	-20.3	-6.4	24.9	17.4	13.2	-9.5	20.3
Soybeans	5.0	-7.5	8.6	24.1	16.1	-10.4	29.2
Agricultural raw materials	3.1	-3.9	-2.4	19.8	9.9	7.1	41.0
Hides and skins	11.2	5.5	-2.9	-16.8	-1.7	-2.1	-19.9
Cotton	11.5	-19.0	-3.6	37.2	-3.3	-11.6	17.2
Tobacco	-3.7	0.0	-8.2	-3.5	3.6	1.5	1.4
Rubber	7.9	-14.1	33.1	41.7	20.3	15.2	96.3
Tropical logs	3.7	6.4	-10.5	20.1	19.2	0.3	43.6
Minerals, ores and metals	12.4	-10.8	-2.7	12.4	40.7	26.2	99.6
Aluminium	13.8	-6.8	-6.5	6.0	19.8	10.6	40.6
Phosphate rock	-0.4	-4.6	-3.3	-5.9	7.8	2.5	4.0
Iron ore	2.7	4.5	-1.1	8.5	17.4	71.5	118.5
Tin	0.6	-17.5	-9.4	20.6	73.8	-13.2	81.8
Copper	15.3	-13.0	-1.2	14.1	61.0	28.4	135.9
Nickel	43.7	-31.2	14.0	42.2	43.6	6.6	117.6
Tungsten ore	12.1	45.5	-41.8	18.0	22.9	120.7	220.1
Lead	-9.7	4.9	-4.9	13.8	72.0	10.2	115.7
Zinc	4.0	-21.0	-12.1	5.1	29.1	27.9	73.7
Gold	0.1	-2.9	14.4	17.3	12.6	8.7	43.5
Crude petroleum	55.6	-13.3	2.0	15.8	30.7	41.3	113.9
Memo item:							
Manufactures[c]	-4.8	-2.2	0.7	8.7	7.7	2.8	20.3

Source: UNCTAD, *Commodity Price Bulletin*, various issues; and United Nations Statistics Division (UNSD), *Monthly Bulletin of Statistics*, various issues.

Note: In current dollars unless otherwise specified.

a Percentage change between 2002 and 2005.

b Excluding crude petroleum.

c Export unit value of manufactured goods of developed countries.

opposite direction to that of the dollar exchange rate. A depreciating dollar meant that commodity prices rose much less, or fell, in terms of other major currencies. In the course of 2005, the dollar appreciated, although the average exchange-rate change for the year was quite similar to that of 2004. However, this was not associated with a weakening of dollar-denominated commodity prices; in terms of special drawing rights (SDRs), the commodity price index rose by 12.5 per cent in 2005, close to the increase in current dollars of 12.1 per cent (table 1.A1).

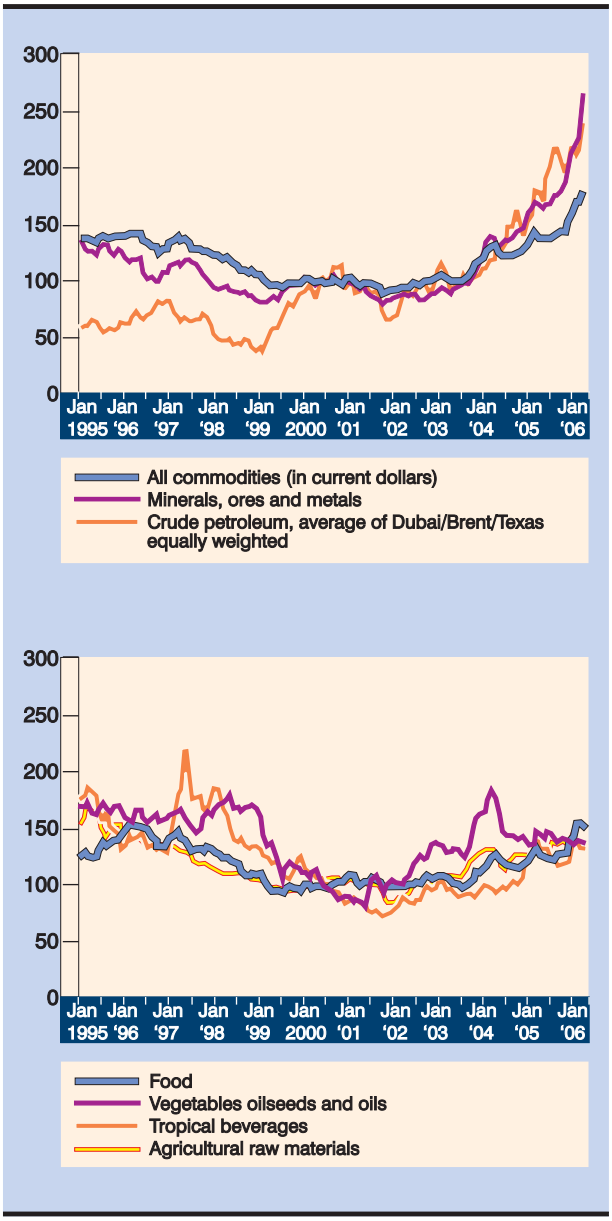
Typically, commodity prices exhibit cyclical behaviour, with alternating booms and busts. This is reflected in fig. 1.A1, which shows the evolution of monthly commodity prices since their last peak of 1996–1997. The subsequent commodity crisis was particularly dramatic, as the worldwide contraction of demand was reinforced by the financial crisis in Asia. The new turnaround was then stimulated by the dynamism and catch-up growth of the Chinese economy. For the industrial raw materials and energy sectors, this cyclical behaviour is strongly influenced by demand and correlates with global industrial and economic activity. For agricultural commodities, variations arise mostly from the supply side and in some cases (e.g. non-tree crops), where supply takes less time to react to the increasing prices, cycles may be shorter. Agricultural prices are often also influenced by external factors, such as meteorological conditions, plant diseases and pests. For instance, recent coffee prices have been favoured by smaller than expected crop output in major producing countries. Crops were affected by drought followed by heavy rains in Viet Nam, hurricanes in Central American countries, and drought and lower yields in Brazil.

At the present relatively high levels of commodity prices, there are diverging views among analysts as to which phase of the cycle commodity markets are going through, and even about the nature of the cycle itself. According to some analysts, the current cycle is no different from previous ones, and as expectations vis-à-vis prices change, prices should begin to fall in the course of the coming year. In the longer term, this trend will be reinforced by new production coming on-stream. Other analysts believe commodity prices will remain high for a long time, and will even continue to rise as a result of the constantly increasing raw material needs of China and other emerging economies. Another factor in support of this view is the long lead time for new investment in fuels and metals and minerals.

Figure 1.A1

MONTHLY COMMODITY PRICE INDICES BY COMMODITY GROUP, 1995–2006

(Index numbers, 2000 = 100)

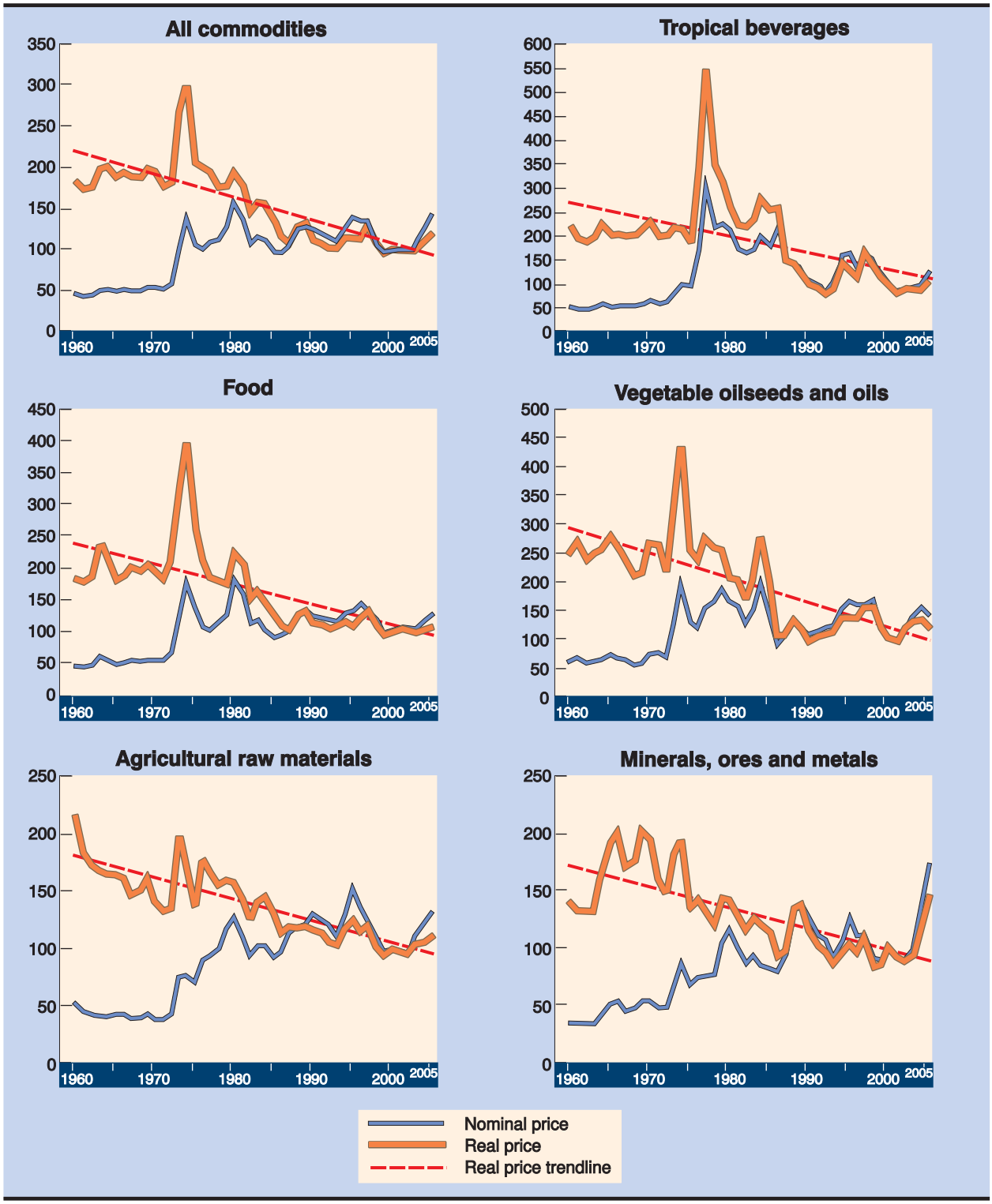


Source: UNCTAD, *Commodity Price Bulletin*, various issues.

Figure 1.A2

NON-FUEL PRIMARY COMMODITY PRICES, NOMINAL AND REAL,[a] BY COMMODITY GROUP, 1960–2005

(Index numbers, 2000 = 100)



Source: UNCTAD, *Commodity Price Bulletin,* various issues; and UNSD, *Monthly Bulletin of Statistics,* various issues.

a Real prices are deflated by the export unit value of manufactured goods of developing countries.

Table 1.A2

GROWTH IN CONSUMPTION OF SELECTED PRIMARY COMMODITIES: CHINA AND THE REST OF THE WORLD, 2002–2005

(Per cent)

	Consumption growth			Contribution of China to global consumption growth	Share of China in global consumption	
	China	Other countries	World			
	2002–2005				2002	2005
Copper	31.6	3.4	8.6	67.3	18.3	22.2
Cotton	59.5	3.0	19.6	89.2	29.4	39.2
Natural rubber	46.6	11.9	18.0	45.2	17.4	21.6
Oil	32.0	5.8	7.5	27.6	6.4	7.9
Soybeans	49.9	5.2	10.9	58.7	12.8	17.3

Source: UNCTAD secretariat calculations, based on United States Department of Agriculture, *Oilseeds: World Markets and Trade*, May 2006; International Cotton Advisory Committee, *World Cotton Situation*, 9 May 2006; Economist Intelligence Unit (EIU), *World Commodity Forecasts*, January 2005 and April 2006; International Copper Study Group, *Copper Bulletin*, April 2006; and International Energy Agency, *Oil Market Report*, April 2006.

Current vigorous demand for commodities is supported by strong global economic growth, particularly in the emerging Asian economies, such as China and India, as well as in the United States. Their external demand has also stimulated output growth in many other developed and developing countries. In addition, there are signs of economic recovery in Japan and the euro area. China has seen consistently rapid growth, at an average annual rate of about 10 per cent in the past three years, and a similar rate is expected for 2006. The dynamism of Chinese growth is the result of its rapid industrialization and urbanization process, accompanied by high rates of investment and construction in housing and infrastructure. In 2005, industrial production grew by 11.4 per cent and the gross fixed investment rate was 44.4 per cent of GDP (National Bureau of Statistics of China, 2006). China, like several other developing countries that have been undergoing rapid industrialization, has strong demand for commodities, especially because it is in a phase of development in which the intensity of use of energy, metals and raw materials is on the rise. Equally, rising standards of living will increase demand for food imports, particularly because of the limited arable land in China. Thus China has become a major player in many commodity markets, both as a consumer and producer, with a strong influence on prices (*TDR 2005*, chap. III). Table 1.A2 shows how the growth of consumption in China is influencing global markets. But although Chinese demand for commodities is expected to remain robust for some time, the outlook for commodity prices is still strongly determined by the evolution of the global economy. Therefore, it will be highly dependent on how the global imbalances are addressed. A recessionary correction could have devastating consequences for commodity markets, notably for metals.

On the supply side, the upward pressure on commodity prices has been the result of the sluggish response of production to rising demand, particularly for energy and metals and minerals. There are indications that producers have been more conservative in their investment plans than in previous commodity booms (IMF, 2006; Morrison, 2006a; and Banks, 2005a). This underinvestment is partly the result of their expectations of a price correction to more historical levels and their fears that the long period of low prices towards the end

Box 1.A1

THE CHANGING PATTERN OF COMMODITY SPECULATION

Speculative activities have always been an integral component of commodity markets. Commodity futures exchanges, which are usually natural reference points for physical trade, help the price discovery process and provide price risk protection from uncertain adverse price movements (hedging), would not function without speculation. Under normal conditions, speculation by a large variety of participants with differing views on market and price developments plays a significant role, as it tends to increase financial and market efficiency (e.g. arbitrage[1]) and brings liquidity to the market. However, during the last three years, changes in the pattern of commodity speculation may have distorted the yield curve (the relationship between near and future prices) and affected the functioning of commodity industries. Most importantly, while in the 1990s most participants were actually involved – or had an interest – in commodity production or trade, more recently speculators with no stake in the commodity sector, and using exotic financial vehicles, have become important players.

In the past, most of the speculative activities were related more to physical trades or sectors, and the objective of the speculators was either to take shares in commodity-related companies (with a longer perspective) or to place money directly in commodity futures. Although some squeezes and manipulations used to be observed in commodity markets, the correlation between spot and futures prices tended to be quite high as physical commodities could always be delivered as a last resort to the exchange itself. This particularity used to limit the scope, length and amplitude of speculation in this field, since the aim of investors was usually not to buy or sell a cargo of, say, cocoa or copper. However, in the recent past, when gloominess in markets for traditional financial products has spread, commodities have been considered an attractive asset class, based on the perception that they are different from stocks, bonds and other conventional equities and, therefore, useful for portfolio diversification. Thus investors seeking both a low correlation with traditional asset classes and above-average returns,[2] have suddenly re-routed massive financial flows to comparatively thin commodity markets. In the mining industry, returns on equity reached 25 per cent in 2005, compared with 19 per cent in 2004 and 6 per cent in 2002, which attracted investors to mining stocks.[3] In addition to increasing their purchase of stocks in commodity-related multinationals (mainly companies in mining and energy), speculators seem to have preferred indirect strategies to avoid the risk of being forced into the physical market. To do so, investors, and particularly hedge funds, put large amounts of money in commodity-based indices, which have the characteristics of traditional financial asset. About 200 billion euros are currently invested in commodities worldwide, half of them in commodity indices.[4] The driving forces behind this are less related to the fundamentals of commodity supply and demand per se than to macroeconomic and financial factors. The greater appetite for commodity-based financial instruments has been fuelled mainly by low interest rates and relatively robust economic growth worldwide. Furthermore, there has been a strong perception amongst speculators, supported by analytical studies, that commodity financial instruments are negatively correlated with other equities. Simple bullish strategies have been devised, based, for instance, on backwardation curves (when prices for delivery in the near future are above prices for delivery in the distant future). The principle of investing in a commodity index consists of entering into a forward contract and closing it when it reaches maturity. Not only do such actions exacerbate price volatility,[5] they also induce asymmetry in the price discovery mechanism.[6]

of the 1990s might recur. Additionally, under the tight market conditions, disruptions in supply caused, for example, by labour disputes in the mining sector, such as the strike at Codelco – the world's largest copper producer – in Chile in early 2006 (*Financial Times*, 2006),[2] had a significant impact on prices. Higher prices have also been due to rising production costs as a result of increased energy costs, particularly for aluminium, and the need to explore in more remote areas and exploit deeper deposits (Banks, 2005c and 2006). Mining exploration budgets continued to increase

Box 1.A1 (concluded)

Moreover, they introduce a systemic risk since the decisions of most of the influential players are synchronized.[7] The second quarter of 2006 provides a good illustration of this phenomenon, as a number of commodity markets have simultaneously shifted away from deep backwardation.[8]

The recent trend towards treating commodities as financial assets has had an impact on different stakeholders in a variety of ways. First, massive speculative flows have supported major mining and energy companies, providing them with resources to invest in exploration and increased production capacities while giving them a comparative advantage vis-à-vis smaller companies that are less interesting to investors (mainly because their stocks are seen as too speculative even for speculators and because their total capitalization is too small to allow significant investment). Second, greater price instability has been making it more difficult for agricultural and mining companies and producers to plan ahead, especially with commodities that take a few years to be produced and to reach the market place. Third, as the result of high basis risk, it is becoming increasingly difficult for producers to hedge, since the "normal" correlation between the physical and futures prices has been, at least temporarily, destroyed. Future developments will depend on the strength of the appetite for commodity-related speculation when central bank monetary policies become more restrictive and interest rates rise worldwide, particularly as commodities are currently showing an unusually positive correlation with conventional equities. In this situation, commodities may not be as attractive to speculators as they have been recently.

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1 Arbitrage can be defined as a "low-risk activity" centred on anomalies in pricing. There are several types of arbitrage: spatial arbitrage (between two markets) and arbitrage between spot and futures markets and between different futures maturities. There is also arbitrage between different instruments (i.e. between options with different strike prices as well as between futures, put and call options).

2 In 2005, returns on commodity indices and commodity-related stocks were in the order of 48.10 per cent, and over the period 2003–2005 they were in the order of 103.82 per cent.

3 PricewaterhouseCoopers, "Mine, let the good times roll: Review of global trends in the mining industry", June 2006.

4 In France, speculative investment in commodity-related financial instruments accounted for 3.16 billion euros in the spring of 2006, a 676 per cent increase compared to 1998 (*Le Monde, Dossier économie,* Matières premières, pourquoi les marchés perdent leurs repères? 13 June 2006; and *Les Echos,* La correction sur les métaux suscite des questions sur sa profondeur, 13 June 2006).

5 Finance industry sources commonly estimate that as much as a third of the price movement in some commodities has been caused by speculation (personal communication).

6 According to Hansen (2006), the problem with the new generation of index products is that they are only taking advantage of upward price trends and ignoring the significant downside price risk that passive investors have when invested in commodity products.

7 Institutional speculators often use the same types of technical analyses and computer programs, and tend to get in or out of markets simultaneously, as they have a propensity to trade in the same direction. This was the case when the Long Term Capital Management model led to problems in the markets in 1998.

8 A case in point is copper (and to some extent zinc) in which the cash-to-three-month backwardation "spread" lessened from $250 in July–September 2005 to less than $20 in April–June 2006.

in 2005, to the tune of 34 per cent. Since 2002, when they were at the lowest level of the last decade, they have risen by 168 per cent (Metals Economics Group, 2006). As production resulting from these investment projects comes on-stream, it is likely that the tight situation in the metals market will ease. However, the expansion of production may in many cases take a long time and will vary for different metals.

The price of crude petroleum has made particularly strong gains, continuing to escalate in

2005 and 2006. The oil price rose from $24.9 per barrel in 2002 to $53.4 in 2005 and it reached $68.6 in May 2006.[3] Price developments in some other commodities have also been influenced by the rise in oil prices, through the impact of higher oil prices on production costs and through substitution effects. For example, sugar prices have risen in part as a result of increased demand for ethanol as an alternative source of energy, particularly in Brazil. The demand for natural rubber has also risen significantly owing to the higher price of substitute synthetic rubber.

Most recently, oil prices have reached record levels as a result of geopolitical uncertainty in West Asia, disruptions of supply in Nigeria due to internal conflicts and the nationalization of hydrocarbons in Bolivia. In spite of strong growth in the demand for oil in recent years, global oil markets are not in deficit. In 2005, world oil supply was 0.5 million barrels per day higher than global demand (IEA, 2006). However, there are concerns that spare supply capacity is limited and that any future disruption in supply may have dramatic effects on prices. Therefore oil prices are essentially affected by expectations of future supply constraints, and the fear that supply will not be able to cope with increasing demand. Speculators are playing a fundamental role in the mounting oil prices.

Beyond the physical commodity demand and supply context, commodity prices have attracted greater amounts of investment from participants in the financial markets, such as hedge funds, pension funds, investment funds and insurance companies. Interest in commodities as an asset has increased owing to expectations of a depreciating dollar, and because they provide a hedge against inflation, allow diversification of the investment portfolio and currently provide higher returns in comparison to equity. It is also the result of the existing high liquidity in international financial markets and relatively low interest rates globally. The increase in commodity investment activity in 2005 is reflected in the 8.1 per cent growth in the volume of global futures and options trading in agricultural commodities, energy products and non-precious metals (Burghardt, 2006).[4] According to Morrison (2006b), "funds under management that track commodity indices, such as the Goldman Sachs Commodity Index, have risen from about $5 billion at the start of the decade to more than $80 billion today". Compared with this 16-fold increase, the increase in the value of world primary commodity exports was 33 per cent between 2001 and 2004 (UN COMTRADE). However, the problem with speculation, contrary to other longer-term investment, is that speculative hedge funds may suddenly decide to reap profits and withdraw from commodity markets, which increases their vulnerability.[5] For instance, in May and June 2006 episodes of commodities selling by financial investors occurred as a result of fears of higher inflation and further increases in the interest rate in the United States. Box 1.A1describes the changing pattern of commodity speculation.

The increasing commodity prices have contributed to significant improvements in the external accounts of many developing countries, especially those that are still highly dependent on primary commodities. These improvements vary according to the weight of each commodity in the export earnings of the different countries and price developments for each commodity. For example, the 136 per cent surge in copper prices between 2002 and 2005 has led to a threefold increase in the export value of copper from Chile, the major copper producer in the world, accounting for a quarter of total mine production and about half of world exports of copper ores and concentrates, in volume terms (ICSG, 2006). This has meant that the total value of Chile's exports increased by 2.3 times over three years, with the share of copper in total exports growing from 37.1 per cent to 47.1 per cent, and the share of copper mining in GDP rising from 5.8 per cent, in current prices, in 2002 to 13.9 per cent in 2005. The latter increase is almost entirely due to the price increase, because in constant prices the share of copper mining in GDP has remained stable. Thus, high copper prices contributed significantly to Chile's economic growth of over 6 per cent in 2004 and 2005.[6] Similar arguments apply to two other major copper-exporting countries, Peru and Zambia, where GDP growth rates have averaged 5.2 per cent in the last three years. Table 1.A3 presents estimates of the contribution of copper to the total increase in export values of these three countries between 2002 and 2005.

Another example of the potentially strong impact of primary commodity prices on individual countries is coffee, which was the hardest hit by

Table 1.A3

TOTAL EXPORTS AND COPPER EXPORTS IN MAJOR COPPER EXPORTING COUNTRIES, 2002–2005

(Millions of dollars and per cent)

	Total exports		Copper exports		Share of copper in total exports		Contribution of copper to increase in total exports
	2002	2005	2002	2005	2002	2005	2002–2005
	($ million)				(Per cent)		
Chile	17 053.5	38 860.8	6 323.2	18 305.6	37.1	47.1	54.9
Peru	7 713.9	17 247.1	1 187.1	3 360.1	15.4	19.5	22.8
Zambia	916.0	2 095.0	521.4	1 449.3	56.9	69.2	78.7

Source: UNCTAD secretariat calculations, based on Banco Central de Chile, *Series de Indicadores* Database at: www.bcentral.cl/esp/infoeconomica/seriesindicadores/; Banco Central de Reserva del Peru, *Series Estadísticas* Database at: www1.bcrp.gob.pe/VariablesFame/csm_01.asp; Bank of Zambia, *Quartely Media Briefing*, 13 April 2006; and IMF, *Zambia: 2005 Article IV Consultation*, January 2006.

the commodity crisis of the late 1990s and early 2000s. The value of global coffee exports, a commodity produced mainly in the developing world, rose by 68 per cent between 2002 and 2005 (Dubois, 2006). Although recent price increases have enabled a slight recovery from the crisis for coffee-producing countries, in many of them the value of coffee exports still remains below the levels of the mid- and late 1990s.

Clearly, the extent to which commodity-exporting developing countries will continue to benefit from this bonanza depends on how global demand for, and supply of, the different commodities evolve. There is a downside risk on demand related to the possibility of a recessionary correction to the current global imbalances, which would negatively affect global economic growth. In any case, as supply should also increase in response to the tight market conditions, prices will show some correction. This means that while prices may remain above their long-term declining trend for some time, it is improbable that they will remain at their present level. But in any case, it would be strategically imprudent for commodity-exporting countries to ignore the need for diversification of their exports and for structural change. One reason is that, to the extent that export earnings depend on non-renewable metals and hydrocarbons, the income and welfare gains from an accelerated exploitation of these natural resources will not be sustainable for long. Another reason is that the manufacturing sector offers greater opportunities for the creation of mass employment and the generation of value added than the primary sector. Therefore the benefits for developing countries will also depend on their ability to use their higher commodity export earnings for diversification and industrialization. By reducing their dependence on commodities, this will also make their export earnings less vulnerable to fluctuations in commodity prices.

2. Implications of commodity price developments for the terms of trade

The importance of translating gains from higher commodity export earnings into domestic capital formation in support of industrialization and structural change is also evident when looking at recent developments in international commodity markets from the terms-of-trade perspective. The evolution of the terms of trade has had a significant impact on the economic performance of several developing countries in recent years.

Since 2003, terms of trade have experienced sizeable changes: countries exporting oil and mining products saw substantial gains, while those exporting mainly manufactures and importing raw materials, especially oil, experienced losses (fig. 1.A3). Changes were less significant for countries that export mainly manufactures but also some primary commodities, such as Brazil, Malaysia, Mexico, South Africa and Viet Nam. The terms of trade have varied the most among exporters of agricultural commodities, reflecting large differences in the movements of prices for specific products and also differences in the share of oil in their imports: while there have been gains for some countries of this group, others have registered losses; for instance, in 2005, terms of trade improved for coffee exporters, but deteriorated for cotton exporters, such as Benin and Burkina Faso, and soybean exporters such as Argentina and Uruguay. As a result, the relatively smooth trend in the average terms of trade of this group hides considerably changes for individual countries.

Changes in the terms of trade have a direct effect on the domestic income of a country, which may lead to secondary effects on consumption or investment in that country. However, the gains in domestic income as a result of higher terms of trade may be partly offset by an increase in profit remittances from countries where transnational corporations control a large proportion of export activities. These remittances are listed in the national accounts statistics as factor payments abroad.[7] Table 1.A4 provides an estimate of how the changes in the terms of trade and income payments have directly affected the national income of different developing-country groups and, as a consequence, may have indirectly affected their domestic demand and growth.

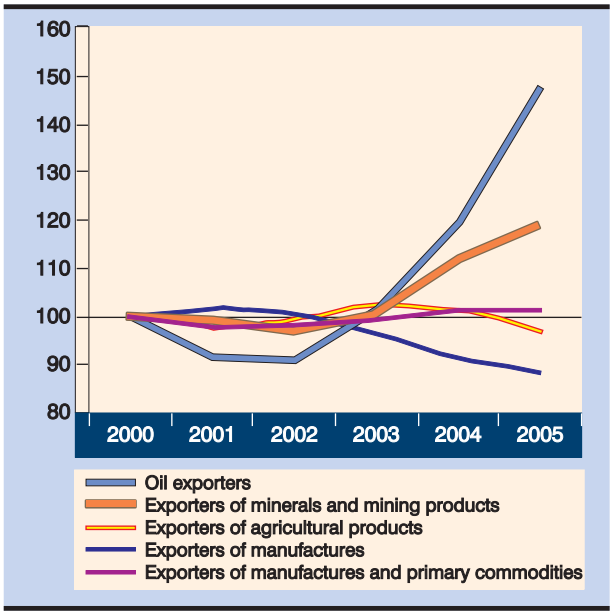
Between 2003 and 2005, the deterioration in the terms of trade of manufacturing exporters (i.e. most of the East and South Asian economies) meant a relative loss of income for this group of close to 1 per cent of GDP per annum. However, this deterioration does not necessarily imply absolute losses in real product and income as long as it is accompanied by productivity gains and an expansion of export volume.

The impact of terms-of-trade changes has varied greatly among commodity exporters. Oil exporters obtained, on average, windfall revenues equivalent to 6.7 percentage points of their GDP, which dramatically improved their domestic income. In some countries, particularly the sub-Saharan oil-exporting countries, a sizeable proportion of these gains was offset by higher outflows of profit remittances and interest payments on external debt. In West Asia, on the other hand, where oil

Figure 1.A3

NET BARTER TERMS OF TRADE, SELECTED DEVELOPING COUNTRIES, 2000–2005[a]

(Index numbers, 2000 = 100)



Source: UNCTAD, secretariat calculations, based on UN COMTRADE; United States Department of Labor, Bureau of Labor Statistics, *Import/Export Price Indexes* Database (www.bls.gov/mxp/home.htm; Japan Customs, *Trade Statistics* Database (www.customs.go.jp); IMF, *International Financial Statistics* Database; UNCTAD, *Commodity Prices Bulletin*, various issues; and ECLAC, *Balance of Payments Statistics* Database.

a Preliminary estimates.

production is controlled to a greater extent by State-owned firms, outflows of profit remittances constituted a much smaller percentage of the gains from terms of trade. Moreover, net factor payments were positively influenced by inflows from returns on assets held abroad, including growing international reserves. In Venezuela, a reformulation of contracts with private companies has increased the share obtained by the producing country, bringing a positive "net income" effect. Other developing countries, as well as some developed countries, are also revising the terms of rent distribution. All in all, the huge income gains in most oil-exporting countries have boosted domestic spending, both private and public, and accelerated growth of GDP as well as imports.

Countries exporting mining products have also benefited from significant income gains from terms of trade, amounting, on average, to close to 3 percentage points of GDP between 2003 and 2005. However, in this group of countries, the outflow of profit remittances appears to be particularly large due to the large share of mining activities controlled by TNCs and the fiscal benefits offered to private companies operating in that sector. It is estimated that two thirds of the income gains from terms-of-trade changes have been offset by higher net income payments abroad.

The group of commodity-exporting countries that are exporting neither oil nor mining products, on average, experienced neither substantial gains nor losses from the terms of trade, and the negative impact of net factor payments on their national income was mainly on account of interest pay-

Table 1.A4

IMPACT OF CHANGES IN TERMS OF TRADE AND NET INCOME PAYMENTS ON NATIONAL DISPOSABLE INCOME IN SELECTED DEVELOPING-COUNTRY GROUPS, AVERAGE FOR 2003–2005

(Per cent of GDP)

	Effects from changes in terms of trade	*Effects from changes in net income payments*	*Net impact*
Africa	2.1	-0.9	1.2
Latin America	1.4	-0.8	0.6
East and South Asia	-1.0	0.1	-0.9
West Asia	5.9	0.4	6.3
Exporters of manufactures	-0.8	0.0	-0.8
Oil exporters	6.7	-0.5	6.2
Exporters of mineral and mining products	3.2	-2.2	1.0
Other commodity exporters	0.2	-0.6	-0.4

Source: UNCTAD secretariat calculations, based on United Nations Statistics Division, United Nations Common Database (UNCDB); IMF, *Balance of Payments Statistics* Database; ECLAC, *Balance of Payments Statistics* Database; EIU, *Country Forecast*, various issues; national sources; and UNCTAD estimates of unit value and volume of exports and imports.

ments on the relatively large stock of external debt accumulated by many countries within this group.

In sum, the terms of trade have evolved favourably for a large number of developing countries, and for many countries that registered terms-of-trade losses, these were compensated by higher export volumes. The resulting real income gains have been very substantial for exporters of fuels and ores and minerals, which is reflected in higher domestic expenditures. For this group, the related improvements in fiscal and external balances made it possible to pursue more expansionary economic policies. Countries that are exporters of primary commodities other than oil and mining products seem to have been the most vulnerable, especially those that depend largely on a small number of export items and on fuel imports. ■

Notes

1 For a more detailed analysis of short-term price developments by commodity, see UN-DESA/UNCTAD, 2006.

2 For more details, see Banks, 2005b.

3 Average of Dubai/Brent/Texas equally weighted (UNCTAD, *Commodity Price Bulletin*, various issues).

4 This corresponds to a 12.9 per cent increase in agricultural commodities, a 9.58 per cent rise in energy products and a 6.87 per cent fall in non-precious metals. The latter may reflect a market correction in early 2005 as mentioned above. However, there are indications that speculative activity had accelerated by the end of 2005 and early 2006.

5 For more detailed discussions of the recent interest of investors in commodities, see *Financial Times*, 2005; Acworth, 2005; Banks, 2005d; and Russell-Walling, 2005.

6 UNCTAD secretariat calculations, based on Banco Central de Chile, Series de Indicadores Database: www.bcentral.cl/esp/infoeconomica/seriesindicadores/index_aeg.htm.

7 For a more detailed analysis of the gains and losses from terms of trade and their distribution, see *TDR 2005*, chap. III.

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Annex 2 to chapter I

THE THEORETICAL BACKGROUND TO THE SAVING/INVESTMENT DEBATE

UNITED NATIONS
New York and Geneva, 2006

Annex 2 to chapter I

THE THEORETICAL BACKGROUND TO THE SAVING/INVESTMENT DEBATE

1. Introduction

Despite decades of intensive research, the underlying forces driving development and catching up are still relatively mysterious. Only a few facts can be taken for granted. One is the central role of the accumulation of capital and improvements in technology. The close correlation between overall growth and investment growth is evident, along with the simple fact that no country has ever jumped from agriculture-driven growth to industry-driven growth without largely expanding innovation and investment. About the main determinants of investment the jury is still out and on the academic battlefronts positions have hardly converged.

On the necessary conditions for investment much has been said. Obviously, in primitive societies and on Robinson Crusoe's island nobody could invest without reducing consumption of the available food and water beforehand. But does that mean that in more highly-developed societies people have to become thrifty first, reducing their expenditure to allow investment, or that the more they save the more is invested? Even if that were the case, why are some relatively thriftless societies prospering whereas others with a much lower propensity to consume are lagging behind? What are the sufficient conditions for investment-led growth?

2. The controversy

The theory of saving and investment is, up to the present time, rather rudimentary. Its core still is the more-or-less sophisticated breakdown of an identity. The gross domestic product of a closed economy (or the world) is split into a part that is consumed immediately (during the period of production) and a part that is saved to be consumed later. For a closed economy it is found what is assumed, namely, that saving equals investment (see box 1.A2).

For a single open economy, disposing of both national saving and foreign saving (with positive foreign savings being the logical correlate of a current-account deficit), the identity of saving and investment is given with total investment equalling foreign saving and national saving. Hence, according to the orthodox view prevalent during the last two decades, "if saving falls short of desired investment, ... foreigners must take up the balance, acquiring, as a result, claims on domestic income or output" (Obstfeld and Rogoff, 1996). Or, as Krugman puts it: "An external deficit *must* (italics in original) have as its counterpart an excess of domestic investment over domestic savings, which makes it natural to look for sources of a deficit in an autonomous change in the national savings rate" (Krugman, 1992: 5).

Statements like these suggest that the identity implies causality, giving "saving" a specific, leading role in the process. However, the crucial question behind these identities is about causality. Does the fact that – from an *ex-post* point of view – a gap has emerged between saving and investment in a single country even hint at an "autonomous" decision of any economic agent in any of the involved countries? Can the plans of one group of actors be realised without taking into account a highly complex interaction of the plans of other actors and price and quantity changes under conditions of uncertainty about the future? Do *a priori* judgements based on perfect foresight in models of "desired" saving and investment really account for the various possible outcomes and multiplicity of causal relationships in an "open society", namely a society that is not evolving on a predetermined inter-temporal path and a society that is open to international influences and shocks?

Obviously, splitting up consumption and investment among certain groups of actors like private households, the government or "foreign countries" does not add any information about causality to the identity. It still remains a simple definition. To give it informational content, the variables have to be identified that determine the movements of saving, consumption and investment, and in consequence the product (income), of the regional conglomerate under consideration, along with those of all its neighbouring regions. Moreover, the accounting identity does not give any indication about the efficiency of the process leading to *ex-post* equality of saving and investment, and thus cannot be treated as an equilibrium condition without explicitly naming the equilibrating factors and their role in the adjustment process.

The weakness of the orthodox approach becomes evident if it has to deal concretely with changes in the behaviour of economic agents in

an economy subject to objective uncertainty, which means an economy where economic agents do not know much about the future; an economy that is exposed to unforeseeable shocks. For example, if the saving rate of private or public households or of other countries like oil producers suddenly rises, companies, faced with falling demand and falling profits, will react with falling investment if they do not possess more systemic information than just the information about the drop in demand.

Only if it is assumed that they expect growth to be higher later because of the rise in savings can they react in the "right" way, according to the orthodox approach. Hence, in this world they would increase their investment expenditure *because* demand is falling off. They just switch the financing of the higher amount of investment from equity (cash flow, profits) to interest-bearing loans. The mechanism for accomplishing this remarkable transition is a fall in interest rates. Obviously, in this world falling current profits do not impact negatively on profit expectations, because otherwise even falling interest rates would not induce a positive outcome.

The implication of this approach is paradoxical: after the increase of the savings rate of private households, companies can acquire the same level of profit as in a situation of unchanged consumption. But now they have to invest more than before – exactly the amount spent by consumers earlier and now saved – although final demand has dropped. The implication is that they demand interest-bearing credit to fill the profit gap opened by the decrease of consumption, which means that in this case exactly the same amount that investors are additionally demanding on the capital market they would have acquired "for nothing" if private or public households were spending as much as before.

A comparison of the two cases shows that the case with higher savings is clearly inferior to the case with lower savings of private households, since the funds that companies need to protect their profit rate are now more expensive than before. In other words, companies have to invest more than before, although they may have piled up unsold stock already as a result of involuntary investment and/or capacity utilization is lower. Only if we assume that – even in adverse economic conditions – maintaining the level of profits is by all means what drives investors, the outcome is positive in the long run since a larger sum is invested in this economy than before and, at least according to some models of economic growth, the long run growth rate is higher.

Only if the assumption of constant or zero profits is accepted *a priori* can the system's dynamics be explained exclusively in terms of private consumption smoothing over time as investors and entrepreneurs passively adjust to any kind of microeconomic decision by households without ever endangering either the equilibrium values of the model or its inherent stability. In other words, such an economy is not only exclusively driven by autonomous consumer decisions; the model assumes totally reactive entrepreneurs who never take into account actual business conditions while deciding about investment. Instead, as a rule, the present deterioration of their business is taken as proof for a warranted (expected) improvement in the future.

The question for policymakers in any country is whether they should rely on this model or rather whether they should question its ability to grasp the most important ingredient of everyday economic life, namely, the role of time and the availability of information in affecting the sequence of decisions that economic agents take under conditions of objective uncertainty about the future. In a world of money and uncertainty, the decision to save more and consume less can have grave repercussions on the goods market before it impacts on the capital market. The decision "not to have dinner today" (Keynes, 1936: 210) depresses the business of preparing dinner today without immediately stimulating any other business.

Thus, any realistic sequencing would see the entrepreneurs' "saving" fall exactly and *uno actu* by the amount that the savings of private households increase (government dis-savings fall or foreign savings increase – or government deficits fall or a current-account deficit increases). That is why the secular decline in the saving rate of private households in the industrialized world starting at the beginning of the 1990s – the savings rate of the G-7 countries almost halved, falling from around 9 per cent in 1992 to 4.5 per cent in 2005 – is mirrored in the secular rise, from

Box 1.A2

TWO MODELS FOR CHOICE

The investment-saving theory has been extremely simple up until now. If Y is the gross domestic product and the income of a closed economy (or the world), then the whole product (or income) obviously can be split into a part C that is consumed immediately (in the period of production) and a part I (or S) which is not consumed in this period and therefore is invested or put on stock in order to increase the product Y in a later period (the sum of fixed investment and changes in inventories is total gross investment). We can write the product or the income as:

$$Y = C + I \text{ or } Y = C + S$$

And we "find" for the closed economy what was assumed, namely, that:

$$S = I$$

An open economy with international trade can dispose over national savings (S_n) and foreign savings (S_f), with the latter being the correlate of the current-account deficit if its value is positive. Hence:

$$S_n + S_f = I$$

The recent academic discussion has not focused on the underlying philosophy of the $I = S$ approach but simply returned to a rather uncritical use of the identities that characterized the discussion in the 1920s. This despite the fact that some 70 years ago, in his "fundamental equations" in the Pure Theory of Money, which forms the first volume of his "Treatise on Money", Keynes clarified the inherent logic of the classical approach. The famous equality of saving and investment is either true if the observer describes the situation of a certain economy from an *ex-post* point of view, or if the economy under consideration is in a state of perfect equilibrium. The latter describes a stationary economy, an economy where real income is constant and where there are no incentives for entrepreneurs to change the existing level of activity, as the level of profits is exactly zero. In all other cases, development and catching up included, it is not S = I that rules the course of events but an equation like:

$$Q = I - S$$

with Q as profits or losses of entrepreneurs, i.e., the residual income that to a large extent rules the dynamics of the market system (Keynes, 1930: 136–138). In this world, any act of individual

8.5 per cent to 11.5 per cent of the savings of corporations. Hence, thrift of private households is not a virtue per se but has to be analysed in the context of all the other forms of saving by other agents, including company saving.

This implies that in a world of uncertainty, variable income and flexible profits, the intention of individuals to save an absolutely higher sum than before may completely fail because the future income they realize at the end of the period may be lower than their expected income at the beginning of the period. Even if households succeed in raising the ratio of saving to actual income (the savings rate), the absolute amount of income saved (and invested) may be lower, as the denomi-

Box 1.A2 (concluded)

saving by the non-entrepreneurial sectors (governments, private households or the rest of the world) reduces profits, the saving of companies, because it decreases effective demand of the company sector as a whole.

The difference between the two models is remarkable and, unfortunately, very often not adequately reflected even in development theory or economic theory in general. With profits Q being the most important equilibrating force between saving and investment, the world changes fundamentally and the old perfect capital market model can no longer describe it. In Keynes' own words: "The classical theorists resemble Euclidean geometers in a non-Euclidean world ..." (Keynes, 1936: 16). In his discussion of "the classical theory of interest" (Keynes, 1936: 14–18) Keynes concludes that the classical theory is "... faulty because it has failed to isolate correctly the independent variables of the system. Saving and investment are the determinates ... not the determinants of the system" (Keynes, 1936: 183).

It is perplexing to see that much of the mainstream academic treatment of the development problem dismisses the dynamic approach by confusing it with a profoundly diminished, static Keynesian theory. Ros (2001: 8) puts it very clearly that "we should not confuse these development problems with the effective demand problems on which Keynes focused. Not much is lost, for example, by assuming Say's Law when looking at income differences across countries ... differences in resource utilization account for a very small fraction of the large gaps in income per capita across the world". Obviously, in a statement like this exactly the wrong question is asked. It is not the difference in income *per se* that has to be explained, but the ability of countries to enter a process of self-sustaining growth and the inability of others to trigger such a growth process. The result of these dynamic processes will be catching up or falling behind; but, and this is overlooked by this treatment of apparently short term phenomena, these processes are intractably intertwined with both demand problems and policy intervention in the long and in the short term.

To take Say's Law ("supply creates its own demand") for granted and to analyse development processes as if saving would always smoothly adjust to investment assumes away the most demanding of all economic problems. Contrary to modern interpretations J.S. Mill (1909), and along the same lines J.A. Schumpeter (1954), saw Say's Law just as a rule for rational behaviour of economic agents in the long term. In their interpretation, Say's Law simply states that the needs of people do not restrict supply because those needs are indefinite. It was meant as an argument against theories of need saturation that were quite popular at that time. David Ricardo, in his "Principles of economics" in 1814, already put it this way: "If people ceased to consume they would cease to produce" (Ricardo, 1814: 293). Hence, Say's Law does not exclude the kind of event that disturbs the process of economic development so fundamentally: shocks on the demand side of the economy, including shocks stemming from the deterioration of monetary conditions.

nator of the saving rate, real income, may have fallen due to the decline in demand and profits, with an induced fall in investment.

The economics of saving and investment in an international context follows the logic of their domestic treatment. In a non-stationary environment, any increase in expenditure (increase in a net debt position of one sector) increases profits and any increase in saving (net creditor position) reduces profits. Whether the act of saving or of investment happens here or there, whether the beneficiaries (or the disadvantaged agents) are located in the country where the shock originated or in other countries, does not change the course of events. The decision of a certain group of eco-

nomic agents (private or public, domestic or foreign) to spend less (to save more) out of their current income diminishes profits and growth. The other way round, a drop in foreign savings may mean higher domestic profits and more investment instead of a drop in investment.

If a current-account deficit, or a growing "inflow of foreign saving", emerges in the wake of negative shocks on the goods market, for example due to falling terms of trade or a lasting real currency appreciation, the real appreciation directly diminishes the revenue of companies if market shares are protected by a pricing-to-market strategy. If companies try to defend their profit margins, a fall in market shares and, as a rule, a swing in the current account towards deficit, is unavoidable. Higher net inflows of foreign savings, which are logically associated with an increase of net imports (higher imports or lower exports), can by no means compensate for the fall in overall profits or even help the country to invest more than before. If the process leading to the swing in the current account reduces the real income of the economy under consideration (destroying profits or other income having repercussions on profits) then the situation before and after the swing cannot simply be compared by looking at capital flows in isolation. In this case a higher net capital inflow indicates a negative shock.

Generally, and this is very often forgotten in the theoretical dispute between the two models, the adjustment of saving to investment is overlaid by exogenous shocks of all kinds in the real world. Interest rates may not fall if monetary policy is fighting a higher price level stemming from a negative supply shock, as has been the case during the oil price explosions in the industrialised world in the 1970s and recently. Interest rates may even go up in a cyclical downturn if financial markets dictate higher interest rates to a developing country due to increasing risks of a default. The negative effects of falling private demand on profits may be aggravated by pro-cyclical fiscal policy in developing countries if "the markets" expect a quick reduction of public budget deficits (see "the confidence game" in chapter IV of this *Report*). An overvaluation of the real exchange rate may disturb the adjustment process by forcing monetary policy to react pro-cyclically or by directly enforcing the pro-cyclicality of monetary conditions.

3. The policy options in theory

The political consequences of the two theoretical approaches are totally different. In the dynamic model of flexible profits the implications of globalization, the opening of markets and of policy interventions can have tremendous effects on the overall outcome in terms of growth and jobs. By contrast, the fixed-profits model does not ask for much room for manoeuvre for economic policy, and where it considers economic policy options they are the direct opposite of those put forward under the flexible-profits model.

For policymakers in a developing country it is of vital interest to know on which model policy recommendations that they receive are based. Frequently it is argued that there is a rational choice between the two models and that economic policy in developing countries can opt for interest rate flexibility instead of flexibility of profits and real income:

> In one view, saving is seen as resulting from a choice between present and future consumption. Individuals compare their rate of

> time preference to the interest rate, and smooth their consumption over time to maximize their utility. The interest rate is the key mechanism by which saving and investment are equilibrated. The other view sees a close link between current income and consumption, with the residual being saving. In this view, saving and investment are equilibrated mainly by movements in income, with the interest rate having a smaller effect (IMF, 1995: 73).

It is important to bear in mind that "utility maximization" in the fixed-profits-model describes an entirely different objective for the society under consideration than does "income generation" in the flexible-profit-model. Smoothing consumption may maximize utility in a very narrow and static sense in a world without entrepreneurial behaviour, that is, if the economy just moves along the consumption frontier or along a pre-defined growth path. Maximizing utility in a dynamic setting that allows, say, for temporary monopolies, new technological solutions and investment will shift the production (and thereby the consumption) frontier outwards by increasing potential output beyond the means created by the planned saving of private households.

If real income of the "open society" is treated as a variable that can be influenced by policy and exogenous shocks on the micro- as well as the macro-level, the search for variables "equating" saving and investment in a smooth way ends up "solving" the problem by assuming it away.[1] Applying strictly the idea of the interest rate as an equilibrating mechanism of saving and investment implies that real income (the product) of the economy under consideration is either constant or is growing with rates that cannot be systematically changed by policy interventions. In such a model the dynamics of the society are defined away, as economic agents have perfect foresight about the future and complete information about their economic environment. Can cycles, unexpected shocks and – most importantly – development driven by unexpected entrepreneurial innovation and investment and political decisions be explained by such an approach?

The direct comparison of the two models suggests that movements of income are as good as movements of the interest rate for equilibrating saving and investment. The "instruments" of a change in real income and a change in the interest rate can only be seen as alternatives if it is assumed that the growth rate of real income cannot be influenced by any kind of (non-equilibrium) entrepreneurial or economic policy activity. But then the whole discussion is useless from the beginning. Consequently, governments have to choose whether their economic policy approach shall rest on the idea of investment induced by "thrift-savings" or on the idea of investment induced by profit-savings.

Obviously, depending on the model used by policymakers, the economic policy strategies of developing countries are totally different and reflect differing levels of need to define the room for national policy. In the orthodox model the adjustment of investment to savings is an automatic process that, without government or central bank intervention, brings about the optimal result in terms of growth and jobs. In the other model, there can be extra profits or losses of companies and the economy is inherently unstable. In this case, government and/or central bank intervention is needed to stimulate investment, as interest rate flexibility may not be sufficient to stabilize the economy and since the whole process may be overlaid by negative exogenous shocks.

If the movement (increase) of income is the main goal of economic policy, then economic policy should focus on a process where investment plans regularly exceed saving plans. In such a world, even with the private incentive to "thrift" left unchanged, the economy as a whole may expand vigorously. The "savings" corresponding to the increased investment are generated through investment and the original investment is "financed" through liquidity created by bank credit based on expansionary central bank policy. Increased investment stimulates higher profits, as temporary monopoly rents of the company sector rise. These profits provide for the macroeconomic saving required from an *ex post* point of view to "finance" the additional investment. In this approach that could be called the flexible profits approach "the departure of profits from zero is the mainspring of change in the ... modern world ... It is by altering the rate of profits in particular directions that entrepreneurs can be induced to produce this rather than that, and it is by altering the rate of profits in general that they can be in-

duced to modify the average of their offers of remuneration to the factors of production" (Keynes, 1930: 141).[2]

Hence, in a world of uncertainty and of permanent deviation from the fiction of perfect competition, shocks on the goods and the capital market lead to quantity and profit adjustment rather than price adjustment. If labour is mobile or wages are determined in a way that the labour market is ruled by the law of one price, which means that wages of different skill groups are a given variable for each single company, companies compete by differing productivity performances. An innovation or a new product, as a rule, triggers a relative fall of unit labour costs for the innovating firm. The lower cost level may be passed on into lower prices, increasing the company's market share, or it may increase the company's profits directly if prices remain unchanged.

In such a world, the response of quantities and profits does not reflect a pathological "inflexibility" of prices and wages but rather introduces the main ingredient of real world market systems, namely, the fight for absolute temporary advantages of companies. In its inter-temporal dimension this fight is about the combination of higher productivity with given wages. In its international dimension it is about the combination of lower wages with a given high productivity (*TDR 2004*, annex 1 to chap. IV).

In a world of differing productivity performances of companies, prices of intermediary products and wages are given for the individual firm but profits are flexible. Seen the other way round, if prices and wages reacted flexibly to individual events on the company level, profits would be sticky. In a dynamic setting where prices and wages are determined by the market, the flexibility of individual profits provides the steering wheel and investment is the vehicle to drive the economy through time. In this world, the branch of industry, a particular region or a state are not the main actors, and any analysis focusing on these entities without leaving room for the role of profits and entrepreneurship does not capture the nature of the process of dynamic development.

Basically, the savings-based approach argues just the other way round. This model expects shocks from trade or technology to be buffered by a flexible reaction of prices or wages, whereas quantities react less and may even remain constant. Profits do not respond to shocks, since the system of perfect competition – by assumption – is always steered so as to avoid any change in profits. In this approach, increasing imports from developing countries forces wages and unit labour costs in the North to fall and thus the prices of domestic products adjust to cheaper imports. A rise in unemployment can only be avoided by stretching the wage structure between workers of different skills as well as between branches and firms exposed to the new competition and those who are not.

The fundamental differences between the two models can easily be illustrated in the case of foreign direct investment (FDI). In the orthodox setting, capital moves from high-wage countries to low-wage countries to reduce the quantity of capital required as well as its overall cost by implementing a more labour-intensive technology in the latter. In the other view, the relocation of production to low-wage countries in most cases takes place by moving the existing capital-intensive technology of the high-wage country to a low-wage location. Thus, it is not the smaller quantity of capital and the reduction in overall capital costs that determines the relocation, but the chance to realize a temporary monopoly rent, which is higher the lower the wage level of the capital-importing country and the lower its overall growth rates of productivity and wages.

In conclusion, in a realistic setting of prices, wages and profits, economic policy attempts at improving growth performance and heading for catching-up are not in vain. The savings-lead approach favoured by the mainstream view in economics is misleading. If markets do not automatically deliver positive and stable growth rates of real income and catching up, then the dynamic view, highlighting the incentive of temporary monopoly rents for pioneering investors, is more than ever relevant for the development of the system as a whole. The orthodox approach, putting primary focus on the decision of consumers to "smooth consumption over time" under conditions of perfect foresight, offers an elegant version of Walrasian market clearing but hardly captures the main features of modern economies. ■

Notes

1 The standard assertion of many authors is a notion of the kind that "In equilibrium, however, the world interest rate equates global saving to global investment" (Obstfeld and Rogoff, 1996: 31). But, as saving and investment are always identical *ex-post*, the notion of "equilibrium", as well as the associated equilibrating role of the interest rate, is misleading.

2 This is the position UNCTAD, in many *Trade and Development Reports*, has called the "profit-investment-nexus".

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