



E P R E S S

Viet Nam: a transition tiger? The pattern of economic growth

Abstract for chapter 12

There was a prelude to growth in the 1980s: economic stagnation was coupled with the government's poorly coordinated and initially ineffective attempts to reduce imbalances through currency, price and wage reforms. The turning point came as a result of a package of measures introduced in 1989 to reduce inflation as a vigorous response in real output to the early reform efforts.

During the first half of the 1990s the Vietnamese economy moved from economic crisis to buoyant growth, sustained until the East Asian economic crisis began to impact on Viet Nam.

This chapter examines the success of export-led growth following the East Asian crisis of 1997 with particular emphasis on sectoral developments in agricultural policies and growth, as well as an examination of industrial growth – a sector which has grown much more rapidly than agriculture.

Keywords:

agricultural exports, coffee, cooperative, *Doi Moi*, domestic private sector, East Asian crisis, economic crisis, economy, exports, family farm, foreign aid, foreign investment, growth, heavy industry, industrial exports, industrial sector, infrastructure, International Monetary Fund (IMF), light industry, market reforms, oil revenues, paddy, reform, rice production, telecommunications

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THE PATTERN OF ECONOMIC GROWTH

PRELUDE TO GROWTH: ECONOMIC STAGNATION IN THE 1980s

The economic difficulties facing the country in the period leading up to the implementation of *Doi Moi* were described earlier. Following an initial economic recovery immediately after formal reunification in 1976, attempts to impose central economic controls and conflicts in Cambodia and in the border area with China contributed to economic stagnation and increasing macroeconomic imbalances during the late 1970s. Annual economic growth averaged only 0.4 per cent in the five years to 1980. With population increasing by about 2.3 per cent each year, this represented a decline in per capita income. Prices increased by an average of more than 20 per cent each year. Individuals attempted to meet basic needs by producing and trading outside official channels.

Despite some economic recovery and growth in national output in the first half of the 1980s, public sector and trade deficits continued to increase sharply. By the mid 1980s, inflation soared and output growth fell sharply. Agricultural growth slowed, and paddy production per capita fell by 1 per cent in 1986 and a further 8 per cent in 1987. Following the poor harvests of 1986 and 1987, large areas of the country experienced near-famine conditions.

The reliability of the economic growth data for the 1980s is particularly uncertain. Data was collected to estimate net material product under a centrally planned accounting system. The available series indicates low but positive

growth for the years 1985–89. However, a decline in agricultural value added was recorded in 1987 and a decline in industrial output in 1989. At best, per capita economic growth was around 2 per cent per annum, and was probably lower.

The *Doi Moi* process outlined in the previous two sections of this study was initiated during a mounting economic crisis in the late 1980s. There was a gradual relaxation of the administrative controls on private sector activity and domestic trade. In early 1987, many of the checkpoints that had been established to limit domestic trade were reduced, and private markets for agricultural goods developed rapidly.¹ In mid 1987, substantial price reforms were introduced with the official price of most non-essential consumer goods raised to close to the market price and rationing cut back. At the same time, the dong was substantially devalued. However, government attempts to reduce imbalances through currency, price and wage reforms were poorly coordinated and initially ineffective. Large macroeconomic imbalances persisted, and economic prospects were uncertain.

THE TURNING POINT: 1989–92

The critical turning point in Vietnamese economic performance came in the period 1989–92, when growth in GDP rose from 4.7 per cent per annum (1989) to 8.1 per cent per annum (1992), and inflation had been reduced to less than 20 per cent (Figure 12.1). The economic history of the period 1989–92 is therefore of particular interest.

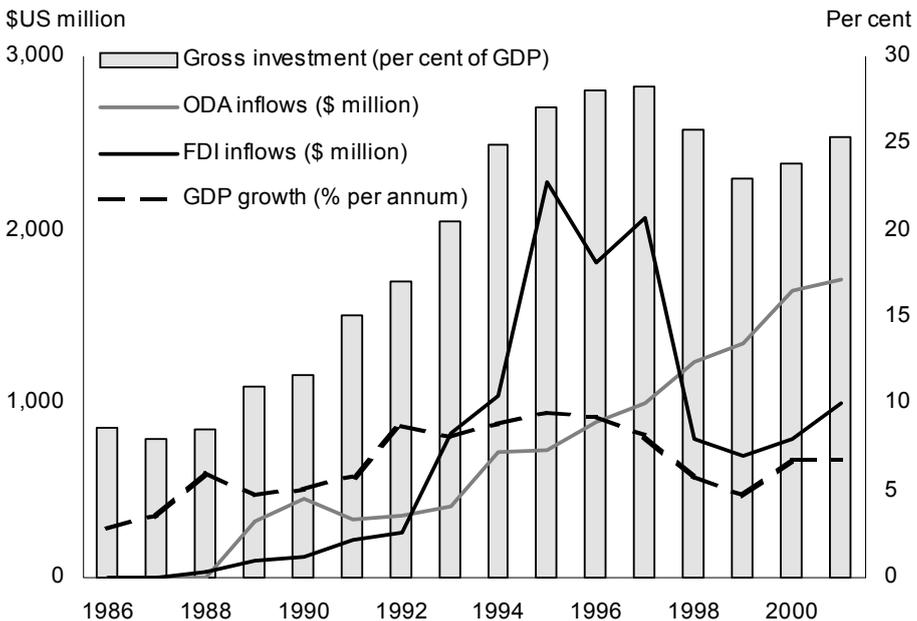
The striking improvement in economic performance happened in a period in which Viet Nam experienced a sharp decline in external assistance. External assistance from the Eastern Bloc declined sharply and then abruptly stopped in 1990–91 as a consequence of the dramatic political changes in the Soviet Union. Access to finance from the International Monetary Fund, World Bank and the Asian Development Bank continued to be blocked by the US government until 1993, and few OECD countries provided assistance at the time.

Recently, claims have been made that Viet Nam is an example of the success of foreign aid in promoting poverty-alleviating growth (Development Economics Vice Presidency 2002). Claims could possibly be made for the effectiveness of external assistance in later periods, but the crucial period for reform and the turning point for economic performance was characterised by a sharp reduction

in the level of foreign aid. Indeed, a simplistic interpretation of Figure 12.1 might suggest that higher levels of investment were required to achieve constant and then declining levels of growth during the mid 1990s. This apparent decline in investment efficiency occurred as ODA and FDI inflows were increasing. Of course, the real story is much more complex.

Economic management in the years 1989–92 had to meet the difficult challenge of achieving a degree of monetary and price stability at the same time as encouraging expansion in the real economy during a period in which the economy faced a tight external constraint. Policymaking in that period involved a large degree of economic crisis management. The response on the part of the Vietnamese authorities was a pragmatic combination of implementation of market liberalisation (Chapter 7) and fairly orthodox macroeconomic stabilisation.

Figure 12.1 Financing development and growth, 1986–2001



Source: Data from General Statistical Office (various years), *Statistical Yearbooks*, Statistical Publishing House, Hanoi; and International Monetary Fund (various years), *Recent Economic Developments*, International Monetary Fund, Washington, DC.

In 1989, the Vietnamese authorities implemented a rigorous IMF-style policy package (without IMF assistance to soften the social costs).² When the program was introduced, the economy was experiencing hyperinflation, with price increases of 774 per cent in 1986, 223 per cent in 1987 and 394 per cent in 1988. In the semi-reformed economy, there were enormous imbalances between the official economy and free market transactions.

The package of measures introduced in 1989 helped to reduce inflation to 35 per cent in 1989. The initial success was not sustained because of the inability of the government to control money supply growth given the weak fiscal base and the need to avert a collapse in the real economy.

In 1991, as the full effects of the decline in trade with the CMEA countries took hold, there was a significant decline in both exports and imports. The avoidance of a decline in real GDP at that time (GDP grew 5.8 per cent in 1991) was an indication of government policy success, although price stabilisation had not yet been achieved. Inflation again rose to 67 per cent in 1990 and 1991, before the government again tightened monetary policy and the real economy expanded, bringing inflation back down below 20 per cent. Since 1992, inflation has remained below 15 per cent.

The critical factor influencing economic performance was a vigorous response in real output to the early reform efforts. The cumulative effects of the land reforms, liberalisation of domestic trade, price reforms, including an increasingly realistic foreign exchange regime, and greater macroeconomic stability, stimulated a strong supply response. In 1992, both agricultural and industrial output expanded rapidly. As crude oil exports expanded, the decline in exports was reversed and imports could be increased. The economy turned the corner with little external assistance.

ACHIEVEMENT OF RAPID GROWTH: 1993–97

During the first half of the 1990s, the Vietnamese economy moved from economic crisis to buoyant growth. This was sustained until the East Asian economic crisis began to impact on Viet Nam in 1998. Real GDP growth rose to an annual rate of 8 per cent in 1992, and stayed at 8–9 per cent through 1997. Increasing supply and prudent government financial policies ensured inflation was kept under tight control from 1992.

An important qualitative aspect of the economic performance was that growth extended to all sectors, with relatively strong growth in agriculture making an

important contribution to overall growth. While, in a statistical sense, the industrial sector led GDP growth, expanding at an average annual rate 13–14 per cent per annum in each year 1993–97, the growth rate in agriculture in the range 3.5–5 per cent per annum in each year over the same period was also impressive compared with long-term historical trends and international experience. Agriculture still had sufficient weight in the economy (in 1994, it still accounted for 27 per cent of GDP) that lively growth in agricultural output was an irreplaceable component of the high overall growth. The high rate of agricultural growth ensured national food security, which had been at question in the 1980s, but also contributed substantially to exports and ameliorated the widening gap between urban and rural incomes (Table 12.1).

In this period, the inflow of external finance became more important. Foreign direct investment rose to US\$832 million in 1993, US\$1,048 million in 1994 and US\$2,074 million in 1997. During that period, Viet Nam participated in the boom in East Asian investment. Aid flows built up more slowly and during the 1993–1997 period remained of minor importance in overall development financing compared to the flows of private investment.

Table 12.1 Annual growth rates, 1994–2000^a

| Year | Inflation | GDP ^b | Industrial output | Exports | Non-oil exports |
|-----------|-----------|------------------|-------------------|---------|-------------------|
| 1995 | 12.7 | 9.5 | 14.5 | 28.2 | 30.9 |
| 1996 | 4.5 | 9.3 | 14.2 | 41.1 | 43.5 |
| 1997 | 3.6 | 8.2 | 13.8 | 24.6 | 28.9 |
| 1998 | 9.2 | 5.8 | 12.5 | 2.4 | 5.3 |
| 1999 | 0.1 | 4.8 | 11.6 | 23.2 | 16.2 |
| 2000 | -0.6 | 6.8 | 17.5 | 25.2 | 15.9 |
| 2001 est. | 0.8 | 6.8 | 14.2 | 3.8 | 12.5 ^c |

Notes: ^aThe IMF report from which the data in this table are abstracted also presents IMF staff estimates that give a lower GDP growth rate for 1997–2000 apparently mainly because the IMF staff estimate growth rates for services significantly below official estimates. IMF staff estimates show the service sector growing less than 1 per cent 1998–99—considerably below the GDP growth rate and even below population growth. Official government estimates show services growing below the GDP growth rate and as such seem reasonable enough. On balance, the government estimates appear more plausible.

^bConstant 1994 prices. ^cGrowth during the first 10 months of 2001.

Source: Official government estimates as presented in International Monetary Fund, 2002.

Vietnam: selected issues and statistical appendix, Country Report 02/5, International Monetary Fund, Washington, DC.

PROXIMATE SOURCE OF SUCCESS: EXPORT-LED GROWTH

The obvious and immediate engine of growth was the expansion in exports. Between 1989 and 1997 the dollar value of Vietnamese exports rose seven-fold. This high export growth rate had a pervasive influence. It generated fast income growth. In the agricultural sector, it sustained a growth rate in excess of the expansion of the domestic food market. Rapidly increasing export earnings, supplemented by capital inflows, generated the foreign exchange needed to fund imports, including capital goods. Entry into new branches of trade stimulated technical transfer and innovation. Buoyant foreign exchange earnings made it easier to liberalise the foreign exchange regime and protection levels.

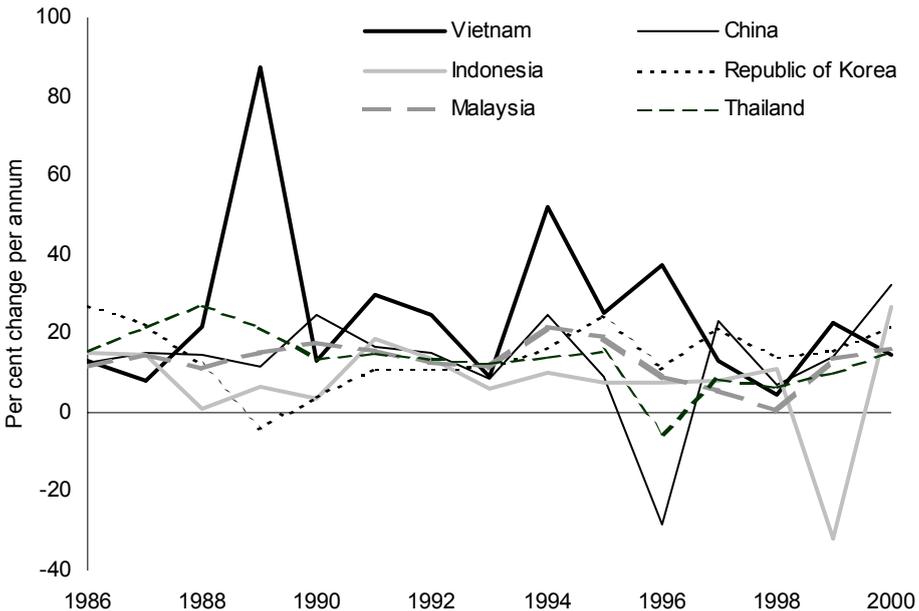
Underpinning the early growth in exports were

- the initiation and subsequent growth of petroleum exports
- agricultural expansion, which both ensured food supply and made a significant contribution to export growth
- a rapid expansion of seafood and aquaculture exports during the 1980s and 1990s
- a diversification of agricultural exports to coffee, tea, cashews, pepper, cinnamon, rubber, fruit and vegetables, especially during the mid to late 1990s
- a rapid expansion of exports of garments and footwear throughout the 1990s so that by the middle of the decade they accounted for a large share of exports
- a steady expansion of handicraft exports (fine arts, pottery, glassware and embroidery) and wood products
- the emergence of electronic equipment as a fast growing export by the end of the decade (exports of electronic equipment declined in 2001 in line with the sharp rise in international demand for electronic products).

Geographic proximity to high income, and/or rapidly growing, Asian economies has also been important as these countries are the major markets for Vietnamese exports. Japan was the major market for Vietnamese exports in 2001, followed by China, Australia, Singapore and the United States.

An important characteristic of the export performance has been its diversity. The initiation of the export of crude oil at the beginning of the decade was important, as it helped fill the foreign exchange gap resulting from the end of aid from, and the decline in trade with, the CMEA. Crude oil exports expanded

Figure 12.2 Export growth in selected Asian economies, 1986–2000



Sources: World Bank, 2002. *World Development Indicators*, World Bank, Washington, DC; General Statistical Office (for Viet Nam data, 1986–89).

from US\$79 million in 1988, to US\$756 million in 1992. By 1995, petroleum exports topped US\$1 billion per annum, one-fifth of total exports (Table 12.2).

In the subsequent period (1996–97), petroleum exports continued to grow, but fell as a share of total exports, as agricultural and light industrial exports grew at high rates. 1998 saw a continuing increase in the quantity of oil exports, but a decline in their value as a result of sharp price declines, thus compounding the problem of generally flat export growth following the onset of the East Asian crisis. During 1999–2000, fast expansion in the quantity and value of oil exports contributed to the export growth of more than 20 per cent per annum.

In one sense, the presence of crude oil is an exogenous factor, although its exploitation did require complex negotiations with foreign partners and the encouragement of foreign private and state investment. However, while the gains from mineral exploitation can be interpreted as a windfall, the international record demonstrates that the uses made of such windfalls can vary quite widely—

Table 12.2 Export performance, by main commodity, 1988–2000 (US\$ million)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 ^a |
|-----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------------------|
| Selected items | | | | | | | | | | | | | |
| Crude oil | 79 | 200 | 390 | 581 | 756 | 844 | 866 | 1,024 | 1,346 | 1,423 | 1,232 | 2,092 | 3,503 |
| Rice | - | 317 | 272 | 225 | 300 | 363 | 425 | 496 | 855 | 870 | 1,020 | 1,025 | 667 |
| Marine products | 124 | 133 | 220 | 285 | 302 | 427 | 551 | 431 | 551 | 762 | 858 | 974 | 1,479 |
| Garments | .. | .. | .. | .. | 190 | 239 | 476 | 431 | 1,150 | 1,503 | 1,450 | 1,746 | 1,892 |
| Footwear | .. | .. | .. | .. | 5 | 68 | 122 | 200 | 531 | 978 | 1,031 | 1,387 | 1,465 |
| Rubber | 17 | 27 | 29 | 50 | 54 | 74 | 133 | 159 | 163 | 191 | 127 | 146 | 166 |
| Electronics | .. | .. | .. | .. | .. | .. | .. | .. | .. | 440 | 497 | 585 | 783 |
| Total | 733 | 1,320 | 1,731 | 2,042 | 2,475 | 2,985 | 4,054 | 5,198 | 7,337 | 9,145 | 9,365 | 11,543 | 14,449 |

Note: ^a Estimate

Sources: For 1988–91, International Monetary Fund 1994. *Vietnam: recent economic developments*, International Monetary Fund, Washington, DC. For 1992–94, International Monetary Fund, 1998. *Vietnam: selected issues and statistical annex*, International Monetary Fund, Washington, DC. For 1995–2000, International Monetary Fund, 2002. *Vietnam: selected issues and statistical appendix*, International Monetary Fund, Washington, DC.

there are plenty of examples of mineral booms having little sustained development impact, or generating 'Dutch disease' problems.³

In the event, during the 1990s Viet Nam avoided 'Dutch disease' effects. Despite the usefulness of the oil revenues, the growth in oil production never resulted in the export economy becoming dominated by oil, at the expense of other exports. Non-oil exports expanded alongside the oil industry. This can be contrasted, for example, with the experience of Nigeria (with roughly the same per capita income level as Vietnam), where the rapid expansion in oil revenues was associated with a decline in the competitiveness and levels of traditional exports.

The surge in rice production, which resolved the national food security problem, also supported the swift growth of Viet Nam to the front ranks of the international rice trade, making Viet Nam one of the big three rice exporters (along with the United States and Thailand). By 1999, rice exports peaked at 4.5 million tons. In the first half of the decade, grain production increased by about 1 million tons each year, with more than 3 million tons of rice becoming available for export by 1996, a significant contribution to the rapid growth in total exports. Efforts are currently being concentrated on improving the quality of rice exports.

In addition to the early success with rice exports, an important and sustained contribution also came from other agricultural and marine products. Although the collapse of the CMEA trading bloc in 1991 had a negative impact on exports of industrial ('cash') crops, Viet Nam quickly developed other markets for such crops as coffee, cashews, rubber and tea, and more recently fruit and vegetables.

Successful expansion of agricultural exports was a direct benefit of *Doi Moi*. Policy reforms had strengthened incentives. Production of food, industrial crops, livestock, fishing, and aquaculture products all grew at very high rates, responding to price and land reforms, investment of time in accessing new ideas and seeds, investment in terms of income foregone while coffee plants were maturing, and limited investments in post-harvest facilities.

Expansion in some tree crops (particularly rubber) also initially reflected a return from state farm investments in the 1980s, and then was increasingly supported by the fast growth in private (smallholder) production. In minor export crops, such as cashews and pepper, Viet Nam has moved from negligible production to being a major player in world markets. Exports of marine and

aquatic products (for example, shrimp, fish, cuttlefish and crab) have also grown at a very high rate, topping US\$1 billion for the first time in 2000.

During the 1990s, Viet Nam was particularly successful in expanding coffee production, displacing Indonesia as the world's third largest producer in 1999 (after Brazil and Colombia) and then overtaking Colombia in 2001 with coffee exports totalling 931,200 tons.

Viet Nam's experience with coffee has also demonstrated the potential risks involved in primary commodity exporting. Starting as a small producer, Viet Nam was initially a price-taker, responding to prices determined in international markets, to which its own contribution was still minor. While a small supplier, Viet Nam was subject to the fluctuations in the international coffee market, but could still expand production without having to take into account the impact of its own output on prices. That changed, however, as Viet Nam became a big enough player in the world coffee market for its own contribution to have a significant impact on world supply and as such contribute to price instability. As a result, benefits from the dramatic increase in coffee production have been offset by the fall in coffee prices on international markets to historic lows in real terms. As a result, coffee production and exports are expected to fall in 2002.

The key to ongoing export success is to move on to new products when Viet Nam's share in a given world product rises to a level at which it cannot expect to expand its sales by further increasing market share. This has been possible to some degree by diversification within the agricultural export sector, but further expansion will increasingly have to be based on growth in industrial exports.

In this regard, an important feature of Viet Nam's export performance has been the diversification into industrial exports. As Western and Asian markets replaced traditional trade with the CMEA at the beginning of the 1990s, light manufacturing exports expanded, reflecting the re-orientation of existing state-owned light manufacturing firms to the requirements of new markets and the increasing contribution of private foreign direct investment. Clothing and textile exports topped US\$1 billion in 1996 and footwear did likewise in 1998. Contributions to this growth came from adjustment to new market opportunities by existing state enterprises and direct foreign investment (including joint ventures with state firms). There was a good deal of regional interest in the possibilities for using Viet Nam, with its low labour costs, as an

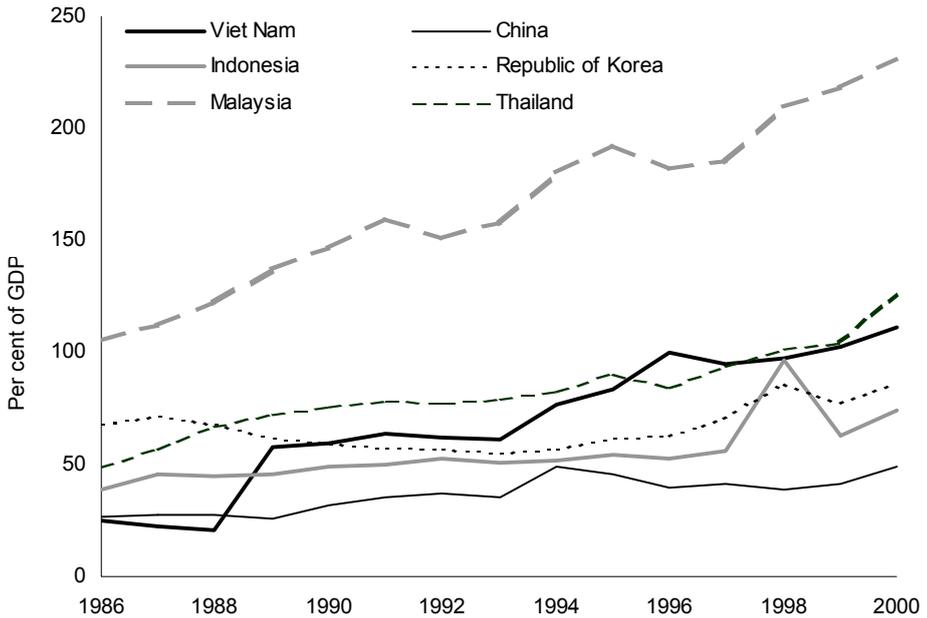
export platform at a time when boom conditions in other East Asian economies were pushing them into other stages of the export product cycle. Many buyers from the region came to Viet Nam and, sensing opportunities, provided basic inputs (raw materials), know-how and equipment in return for future production. Much of this indirect foreign investment never appeared in official statistics as foreign investment.

Despite the strong export diversification and growth, the IMF (1999:59), citing 'pervasive NTBs and relatively high tariffs', judged Viet Nam's trade system as 'one of the most restrictive of Fund members' at the end of the 1990s. Other external observers have argued that Viet Nam has adopted import substitution policies that place undue emphasis on protecting capital-intensive industry (and state enterprises) and have restricted trade in areas where the country has greatest comparative advantage.⁴ The private sector has, until recently, has been restricted in directly engaging in trade (other than for goods produced by that firm).

Nevertheless, export growth has been extraordinarily high and, with the exception of oil, most of this has involved the export of labour-intensive agricultural and light manufacturing products. Jenkins (2002) reports that the share of manufactured industrial goods increased from 14 per cent of exports in 1991 to 37 per cent in 1999 and that, if processed agriculture products are included, 'manufacturing accounts for two-thirds of exports in 1999'. Jenkins estimated that the employment impacts of recent trade developments have been positive and that, while there 'were some industries where import substitution occurred, most notably motor vehicles and other transport equipment...in most industries the share of imports in domestic demand increased'.⁵ He estimated that the share of imports in domestic demand for manufactured goods increased from 56 per cent in 1995 to 61 per cent in 1999.

The degree to which the Vietnamese economy opened up during the 1990s is illustrated in Figure 12.3, which shows comparative data for trade turnover as a percentage of GDP for selected Asian economies. Viet Nam has transformed from a closed economy, with a very low ratio of trade to GDP, to an economy with total trade turnover greater than annual GDP. This ratio is high compared with the Philippines or Indonesia, is on a par with Thailand, but is considerably lower than that of Malaysia.⁶

Figure 12.3 Total trade turnover in selected Asian economies, 1986–2000 (per cent of GDP)



Source: World Bank, 2002. *World Development Indicators*, World Bank, Washington, DC; General Statistical Office.

GROWTH FOLLOWING THE EAST ASIAN CRISIS OF 1997

The reverse side of the benefits flowing from successful integration into the global economy is vulnerability to external shocks. Given the role played by the fast growth of foreign investment and exports in fuelling the 1993–97 expansion, it was inevitable that Viet Nam would be vulnerable to downturns in the regional and global economies. With the onset of the East Asian economic crisis, growth in the economy slowed and foreign direct investment declined sharply.

Nevertheless, the economy exhibited a degree of resilience in the face of the East Asian crisis of 1997. Viet Nam performed better than many other economies in the region (Korea, Malaysia, Indonesia, Thailand, Philippines

and Singapore have all experienced one or more years of output decline since 1997) and better than most observers (including the government) expected.

The Vietnamese economy weathered the East Asian crisis rather well, and per capita incomes continued to increase, albeit at a reduced rate. The downturn in the world economy in 2001 has had an additional negative impact, resulting in low export growth and overall economic growth lower than long-term plan targets.

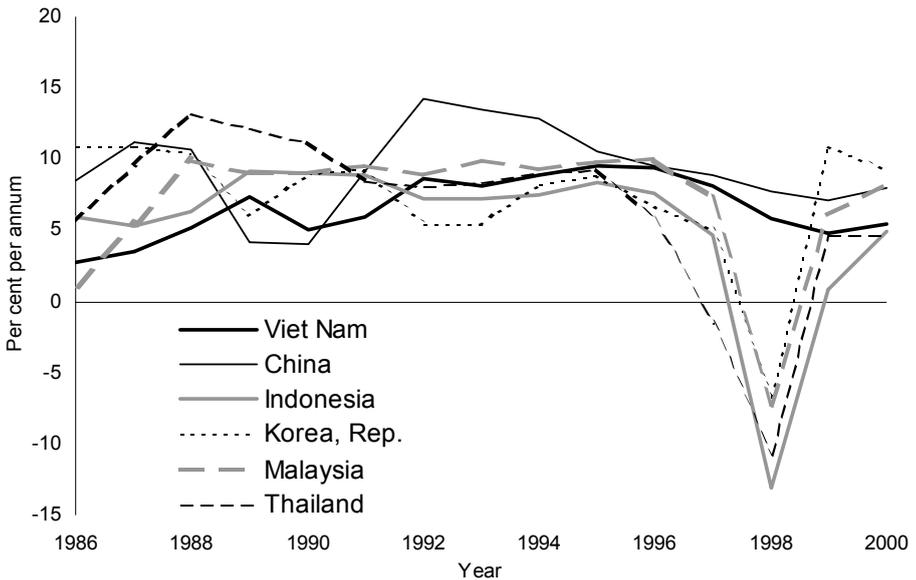
A number of factors contributed to the resilience of the Vietnamese economy. The diversified export base helped. Although export growth fell to less than 3 per cent in 1998, exports returned to double digit growth rates in 1999 and 2000. This was partly the result of the buoyancy of petroleum exports, but also because of the fast expansion of footwear, garments and marine products, as capacity created in the earlier period came into use.

One way the East Asian crisis seriously impacted on Viet Nam was through the sharp decline in foreign investment. Regional investors had played a leading role in the build-up of foreign direct investment. After 1997, foreign direct investment declined and the government slowed down planned public investment. The downward pressures on capital formation were partly offset by increased domestic private investment, which became increasingly important in the post-1997 economy. There was a rise in the domestic rates of savings and investment, and foreign aid flows continued to accumulate, reflecting with a lag the rapid growth of commitments following the ending of the US embargo in 1993.

Somewhat ironically, Viet Nam also benefited from the slow pace of reform of the financial sector. Foreign banks had been allowed to open branches, but domestic capital markets were only at a very early stage of development. Most international private financial flows were to finance foreign direct investment. There was little portfolio investment or external flows into the banking system or local financial markets. Although there was an element of speculative boom before 1998 (particularly in relation to foreign investments in the real estate sector), there had been no financial bubble fuelled by international financial flows and expansion in bank credit, as experienced elsewhere in the region, and by the same token there was no speculative shock as the bubble burst.

In general, the play of market forces has the maximum positive impact in periods of international economic expansion. During periods of economic crisis, the political case for moderating the effects of the market becomes more

Figure 12.4 Growth rates in selected Asian countries, 1986–2001



Source: World Bank, 2002. *World Development Indicators*, World Bank, Washington, DC.

Table 12.3 Growth rates in selected Asian economies, 1996–2001

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|-------------|------|------|-------|------|------|------|
| China | 7.7 | 7.0 | 1.8 | 7.6 | 8.3 | 3.9 |
| Hong Kong | 9.6 | 8.8 | 7.8 | 7.1 | 8.0 | 7.3 |
| South Korea | 6.8 | 5.0 | -5.3 | 3.0 | 10.5 | 0.1 |
| Taiwan | 6.1 | 6.7 | 4.6 | 5.4 | 5.9 | -1.9 |
| Indonesia | 3.5 | 3.7 | 1.5 | 6.9 | 5.4 | 5.3 |
| Malaysia | 10.0 | 7.3 | -7.4 | 6.1 | 8.3 | 0.4 |
| Philippines | 5.8 | 5.2 | -0.6 | 3.4 | 4.0 | 3.4 |
| Singapore | 7.7 | 8.5 | 0.0 | 6.9 | 10.3 | -2.0 |
| Thailand | 5.9 | -1.4 | -10.8 | 4.4 | 4.6 | 1.8 |

Note: Asian Development Bank, World Bank and Government of Vietnam estimates of growth are not always consistent.

Source: Asian Development Bank, 2002. *Asian Development Outlook*, Asian Development Bank, Manila.

persuasive. In some cases (for example, contemporary United States), this may strengthen the case of domestic interest groups arguing for trade protection. In the case of Viet Nam, it could be argued that the continued importance of the state investment, and the measured pace of enterprise and financial reforms, may have provided an element of countercyclical stability in a period of international economic difficulty. However, the slowdown in the international economy did not result in any lessening of the pace of reform. Indeed, the slowing of the pace of foreign investment appears to have contributed to an increasing focus on the importance of the domestic private sector.

SECTORAL DEVELOPMENTS: AGRICULTURAL POLICIES AND AGRICULTURAL GROWTH

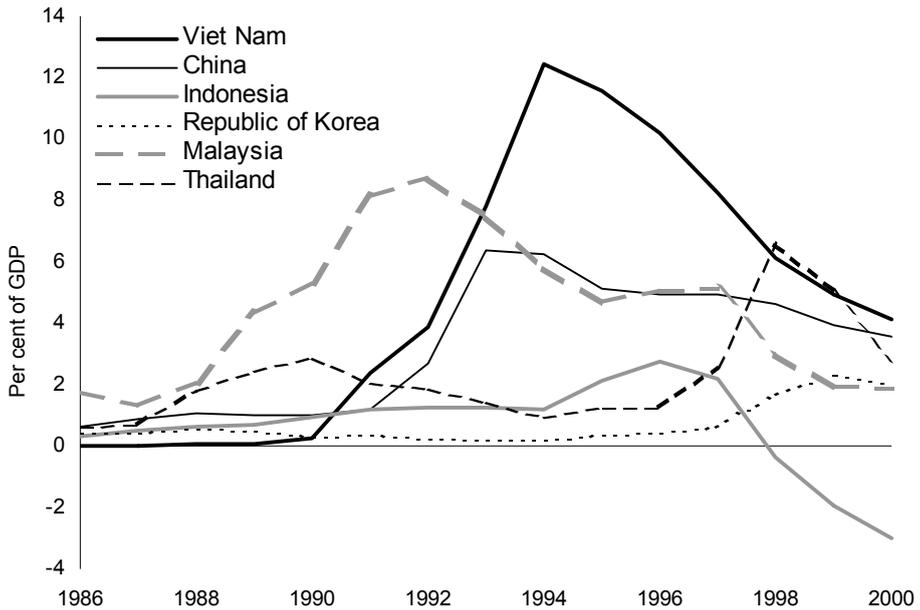
The importance of agricultural growth

A central pillar of Viet Nam's success in the late 1980s and 1990s was the sustained high rate of agricultural growth. This was of crucial importance for a number of reasons. Growth in agricultural exports made an important contribution to export growth. In 1995, agricultural, forest and aquatic products accounted for 46 per cent of total exports. Although that figure dropped to 33 per cent by 1999, over that period the increase in agricultural, forest and aquatic exports of US\$1,253 billion accounted for one-fifth of total export increase,

In the simplest statistical terms, given the relative importance of agriculture, the achievement of high rates of overall growth would have been unlikely without a buoyant agricultural sector. Buoyant agricultural growth has also generated non-agricultural rural employment opportunities in services, input supply and food processing industries.

Even more important, the successes in reducing poverty were only possible with significant growth in rural incomes. Rice is not only the main product of Vietnamese agriculture and the dominant food staple, but also provides the basic income source for a large segment of the population of poorer farmers. Data from the 1992–93 and 1997–98 Viet Nam Living Standards Surveys indicate that four-fifths of households in the lowest income quintile were occupied in agriculture, a proportion that has remained stable. For the highest quintile of households, 34 per cent were engaged in agriculture in 1992–93, a figure that dropped to 19 per cent in 1997–98. The 1992–93 survey also indicated that almost three-fifths of the per capita income of people in the

Figure 12.5 FDI inflows in selected Asian countries, 1986–2000
(per cent of GDP)



Source: World Bank, 2002. *World Development Indicators*, World Bank, Washington, DC.

lowest expenditure quintile were generated by agricultural activities, compared to less than one-fourth for the highest quintile.⁷ The reverse was true for income generated through non-agricultural self-employment activities. These activities accounted for 15 per cent and 52 per cent of total per capita income for the lowest and highest quintiles, respectively. For all quintiles, the income from wage labour activities was around 20 per cent.

Nutritional standards were low in the 1980s, and output increases of nearly 2 per cent per annum were necessary just to match population growth. The growth in food production was therefore an essential condition for economic and social progress for the mass of the population. The boost in rural incomes meant that despite a widening gap between urban and rural incomes, which could be expected to act to pull population from rural to urban areas, the push factor encouraging people to leave the countryside was limited and migration was as much from one rural area to another as from countryside to city. That limited the pressure for heavy expenditures on urban development.

Perhaps most important, the success of the agricultural sector relaxed the pressures and anxieties of ensuring national food security. In the mid 1980s, Viet Nam had been faced with the need to import substantial quantities of food. Fluctuations in the rice harvest, at a time when the external financial situation was precarious, had placed national food security in question, resulting in incidents of widespread near-famine. The growth in rice output was therefore a key component of Viet Nam's economic success. In the 1980s, food shortages resulted in widespread suffering and national food security was a leading preoccupation. The shift from food shortages to being a leading grain exporter was important both economically and politically.

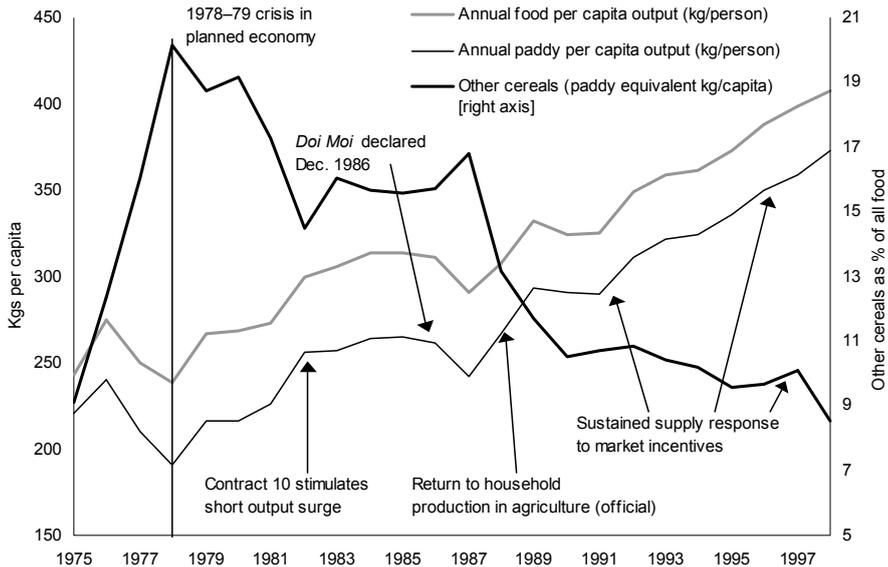
Total rice production did not meet domestic demand up to 1988, necessitating imports of 700,000 to 1,600,000 tonnes annually. From being a net importer of rice, Viet Nam became self-sufficient and then a net exporter of rice. By 1992, staple food production was 24.2 million tonnes (paddy equivalent), of which paddy was 21.6 million tonnes, while 1.95 million tonnes of rice were exported. Food output continued to grow, and total grain production rose to 26.2 million tonnes paddy equivalent in 1994 and an estimated 27.4 million tonnes in 1995. Rice exports were an estimated 2 million tonnes in 1994 and 1995. The growth in food production was sustained throughout the decade. In 2000, despite floods in the southern and central regions and drought in the north, food output reached 35.6 million tonnes (paddy equivalent), up 1.4 million tonnes from 1999, including 32.6 million tonnes of paddy.

Over the longer term the existence of a large exportable rice surplus provides a cushion whereby the impact of fluctuations in production on domestic supply can be limited.

Determinants of agricultural growth

The Vietnamese reform process began with reforms in the agricultural sector in 1985. The process of change since then has involved continuous modification to policies and institutional arrangements, which often involved the government acting to accommodate spontaneous changes in grassroots activities. Given the timing of the reforms and the subsequent acceleration in growth there can be no question that the move to a more decentralised, market orientated system of agricultural production was a decisive factor in promoting agricultural growth. McCarty (2001) shows the impact of key policy changes on food grain output (and the ratio of paddy to other cereals) since 1975.

Figure 12.6 Per capita food production in Viet Nam, 1975–88



Source: McCarty, A., 2001. Governance Institutions and Incentive Structures in Vietnam, paper presented at Building Institutional Capacity in Asia (BICA) conference, Jakarta, 12 March 2001. Available at www.riap.usyd.edu.au/bica/2001/confpaper.htm.

The basic unit for agricultural production in Viet Nam is the family farm. There are some 10 million agricultural households. State farms are restricted to about 4 per cent of Viet Nam's agricultural land and concentrate on the production of industrial crops, such as rubber, and food crops, such as sugar, where there are considerable economies of scale in production.

Even during the period of tight state control of agriculture, the family holding had remained at the base of the system, although subject to considerable control from the cooperative. Following the reforms of the 1980s, the family farm became even more important as the basic production unit. Cooperatives continued to control access to land and water and the farmer bartered a portion of the farm output with the cooperative for input and services supplied.

The role of the cooperative declined particularly rapidly in the south, but in some areas (particularly in the north and centre of the country) the cooperatives were able to retain a strong position as a supplier of inputs to individual households. The household controlled production decisions and

the surplus left after meeting various obligations to the cooperatives and to local authorities (which can be onerous). The private sector has become increasingly involved in the marketing and transport of agricultural output.⁸

Reforms affected all aspects of rural economic life. The development of the household farming unit as the core of rural production determined the nature of the rural economic system. The growth of the private trading and transport system has resulted in a competitive, low cost and innovative rural trading system in most parts of the country.

The land area used for paddy production increased through the extension of multiple rice cropping. Although the wet season paddy area declined marginally (4 per cent) between 1987–92, the area planted for the winter–spring crop increased by 24 per cent, and the summer–autumn crop by 59 per cent, over the same period (World Bank 1994b). Che (1997) provided estimates of factors contributing to increased rice output (Table 12.4).

After the initial gains achieved following the agricultural reforms and the resulting increase in farmer incentives, many external observers were somewhat pessimistic about the potential for continued output growth.⁹ Typical of international opinion was the conclusion of the World Bank 1994 study of agricultural marketing that

...in the absence of substantial new investments in irrigation and drainage, in the mid 1990s yields are likely to peak at 3.4 tonnes per hectare, multiple cropping increases will slow, and total production of paddy will level off at around 23 million tonnes. Even with new investments (given the time required to complete systems), for the next years, production growth may decelerate to average 1.9 per cent per annum over the decade (World Bank 1994a:23).

Table 12.4 Average annual growth rates in paddy output and inputs, 1976–94

| Period | Output | Labour | Land | Materials | Capital | TFP ^a |
|---------|--------|--------|------|-----------|---------|------------------|
| 1976–80 | 0.4 | 0.4 | -0.8 | -1.1 | 2.2 | 0.6 |
| 1981–87 | 4.2 | 0.3 | -1.2 | 3.3 | 1.7 | 3.3 |
| 1988–94 | 6.1 | 1.3 | -0.5 | 5.6 | 10.6 | 3.1 |

Note: ^a TFP is total factor productivity calculated as Solow Residuals.

Source: Che, Nhu, 1997. The Effects of Internal and External Trade Liberalisation on Agriculture Growth: a case study of Viet Nam, PhD Dissertation, The Australian National University, Canberra.

However, it was not solely the 'magic of the market' that resulted in sustained agricultural growth. No doubt the flexibility and improved incentives resulting from market reforms was the most important force in the growth process, but sustained growth in smallholder agriculture also required the support of effective infrastructure and services, particularly in the provision of irrigation and transport, the promotion of new crops and the supply of improved inputs.

An important component of success was that, alongside the market reforms, the state organisations responsible for infrastructure have operated effectively, and state-owned enterprises responsible for servicing the agricultural sector have in many instances adjusted to the complexities of the new economic environment. Although private firms are now playing an increasingly important role in promoting innovation (for example, introduction of hybrid maize and horticulture seeds), state organisations also played an important role in promoting new crops and cultivation methods, for example, by introducing such crops as cashew in the 1980s, promoting the massive development of coffee in the Central Highlands and supporting the introduction of new varieties of paddy. With the introduction of new varieties and improved cultivation methods, yields have risen significantly.

The state was also important in maintaining and expanding infrastructure. Important investments included rehabilitation of the storm protection system and rehabilitation of the transport network. Investments in irrigation have facilitated multiple cropping. The Vietnamese government has also repeatedly demonstrated a high level of commitment and effectiveness in disaster management—Viet Nam is subject to frequent climatic disasters, but often manages relief efforts with only modest international support.

It is not entirely clear how the combination of state support, development of private marketing and processing and household agriculture has worked. In a general sense, the basis of success seems to be that market liberalisation has been accompanied by a reasonable level of state capacity in providing the support required by farmers. There is merit in criticisms that the system is sub-optimal, there is plenty of evidence that many state organisations are not very efficient, and no doubt that further reforms in state-owned and run rural delivery systems are needed. The achievement of sustained agricultural growth nevertheless suggests that a reasonable level of effectiveness was achieved. In particular, continued output growth beyond the initial gains from market reform

confounded the predictions of knowledgeable observers that growth was expected to slow in the early 1990s.

During the reform period many state research and service institutions suffered from financial distress, sometimes resulting in a diversion of energies from their main task. The references in consulting reports—and in official government and Party pronouncements—to the inefficiency of state enterprises are legion. Nevertheless, the system has worked well enough, often through a mixture of pragmatic response by state institutions in competition with each other, accommodating newly emerging private firms, cooperating with foreign businesses and, in some notable cases, demonstrating a continuing professional commitment to research and advisory work.

One distinguishing characteristic of the system is the high degree to which all organisations generate revenues from cash transactions, even government departments funded by the state budget. This means that, even when the state budget is unable to fund activities or pay reasonable salaries, agencies often take initiative in seeking cash through the sale of their services. The pervasive practice of boosting incomes through one form or another of fringe payment is obviously open to abuse, but as a transitional mechanism it has worked well enough in keeping many institutions in operation despite stringencies in official budget allocations.

Thus Vietnamese agricultural growth has succeeded both as a result of market reforms providing incentives to the farmer and through continued public provision of infrastructure, including extensive efforts to rehabilitate irrigation systems and improve the transport network, and a pragmatic and rather *ad hoc* approach to the reform of the system of input provision and technical support.

One area in particular which requires better documentation is the process whereby innovations in rural production are introduced. Observed performance suggests that in the agriculture sector there has been a successful combination of state-sponsored change and farmer response, but a more detailed analysis is required.

In the longer term, sustained agricultural growth will require large infrastructure investment, especially in water management and transport infrastructure, the strengthening of research, extension and other agricultural support services and encouragement of competition in the agricultural trading system. And, as successful export growth has increased the integration of

Box 12.1 The seed sub-sector

An example of the mixture of public service and private provision supporting agricultural growth can be drawn from the seed sub-sector. Improvements in seed varieties and seed quality have accounted for an estimated 15–20 per cent of the increases in crop yields. Before *Doi Moi*, the seed sector was in principle tightly organised into four distinct administrative levels

- the central level (research, production of pre-basic seed—national seed companies)
- the provincial level (production of basic seed—provincial seed agencies)
- the district level (production of first generation certified seed by seed stations)
- the local level (multiplication of seeds by specialised brigades in the cooperatives).

Since the introduction of *Doi Moi*, the whole process of seed multiplication and distribution has been liberalised *de facto*, so that all economic sectors, including state-owned enterprises, private companies, farmers' groups and farmer households participate actively. The resulting system is somewhat chaotic but has distinctly positive characteristics. The industry now comprises a large number of different agencies. At the base, the farm household has a choice as to which seed will be used, while the cooperatives are no longer organised to produce seed in the same way as under the pre-reform system.

Formal agencies include two state-owned national seed companies, one each in the North and South, under the umbrella of the Ministry of Agriculture and Rural Development Provincial Seed Agencies (PSA) comprising Provincial Seed Companies (in the North and Central regions) and Seed Centres (in the Southern region) owned by the provincial governments; a number of government research and breeding institutions, responsible for research and development, which also produce and sell seed directly to farmers and a few private companies, mainly based on foreign direct investment, which produce and/or import and sell hybrid cereal seed and vegetable seed to farmers.

Competition in the seed market has increased. A PSA typically faces competition for its open pollinated varieties from seed companies in the neighbouring provinces, one or both of the national seed companies, the agents of government research and breeding institutions, cooperatives and farmers' groups. In the market for vegetable and hybrid maize seed, there is competition from other state-owned enterprises, private seed producing companies and importers. In a number of cases, the PSA cooperates with private companies and serve as their 'sales agents', buying and selling hybrid and vegetable seed with an attractive margin. The formal seed industry only supplies a small fraction of the open pollinated varieties used for paddy production, but hybrid seed, mainly promoted in the North,¹⁰ is necessarily produced through the formal system.

The market for hybrid grain seed is increasing rapidly, even in the formal sector the emerging institutional structure seems quite complex. Almost all the higher level research, university and breeding institutions, which might have been expected to specialise in the pre-basic and prior levels of activity, engage in some activities supplying seed directly to the market. While this provides the higher level research and breeding facilities with income to support their activities and keeps them directly in touch with the needs of farmers, it is probably sub-optimal because by-passing the intermediate stages results in pre-basic seed not being reproduced through the seed production chain to extend the benefits of improved seed more widely.

Vietnamese agriculture into international markets, fluctuations and downward trends in export prices will have an impact in terms of changing product mixes, increasing export quality, opening up new markets and introducing new crops.

INDUSTRIAL GROWTH

As may be expected at this stage of Viet Nam's development, the industrial sector has grown much more rapidly than agriculture. Despite the high rate of agricultural growth, agriculture's share of total economic activity has been declining over the last ten years. This is a typical feature of successful growth, whereby somewhat paradoxically agricultural expansion helps sustain a high rate of overall growth, which in turn results in a declining share of agriculture in total production. Thus, although the great success in food production and agricultural exports were key factors in Vietnam's successful growth performance, agriculture's contribution (including forestry) to GDP fell to an estimated 25.4 per cent of GDP in 1999, down from 38.7 per cent in 1990. The high rate of industrial growth achieved during the 1990s was another key factor contributing to the overall growth achievement.

Industrial value added (GDP at constant prices) declined in the difficult transitional year of 1989. The recovery was fast, however, and industry and construction achieved 13 per cent growth in 1992 and subsequently sustained growth at above 10 per cent per annum (except for 1998 and 1999, when, under the impact of the East Asian crisis, industrial growth fell back to 8 per cent per annum). Although the structure of GDP has shifted towards industry, the proportion of the labour force working in industry and construction has not increased, remaining in the range of 12–13 per cent of the labour force.

Developments in the industrial sector have been complex. The larger (mainly national level) state enterprises continued to make substantial investments in heavy industries, such as cement and steel, often as a joint partner with foreign firms. Government rhetoric remained committed to the idea of a heavy industrialisation strategy as being essential to development. Arguably this had led to over-investment in some sectors (for example, over-investment in coal and cement during the 1995–2000 Five-Year Plan) and output expansion in some activities which may be difficult to sustain in the context of commitments to open trade under the the ASEAN Free Trade Area (AFTA) Common Effective Preferential Trade scheme and the US–Viet Nam bilateral trade agreement.

Table 12.5 Industrial output (VND billion)

| Year | Total output | Domestic | FDI ^a | Growth rate in total output ^b |
|----------------------|--------------|----------|------------------|--|
| Constant 1982 prices | | | | |
| 1985 | 103.3 | .. | .. | 109.9 |
| 1986 | 109.6 | .. | .. | 106.1 |
| 1987 | 120.6 | .. | .. | 110.0 |
| 1988 | 137.8 | .. | .. | 114.3 |
| 1989 | 133.4 | .. | .. | 96.8 |
| 1990 | 137.5 | .. | .. | 103.1 |
| Constant 1989 prices | | | | |
| 1990 | 15,361 | 14,011 | 1,350 | 103.1 |
| 1991 | 17,437 | 15,471 | 1,966 | 110.4 |
| 1992 | 20,876 | 18,117 | 2,759 | 117.1 |
| 1993 | 23,547 | 20,412 | 3,135 | 112.7 |
| 1994 | 26,751 | 23,214 | 3,537 | 113.7 |
| 1995 | 30,431 | 26,584 | 3,847 | 114.5 |
| Constant 1994 prices | | | | |
| 1995 | 103,375 | 77,442 | 25,933 | 114.5 |
| 1996 | 118,097 | 86,535 | 31,562 | 114.2 |
| 1997 | 134,420 | 95,542 | 38,878 | 113.8 |
| 1998 | 151,223 | 102,865 | 48,358 | 112.5 |
| 1999 | 168,749 | 110,235 | 58,514 | 111.6 |
| 2000 | 198,326 | 125,910 | 71,285 | 117.5 |
| 2001 (prel.) | 226,406 | 125,910 | 79,908 | 114.2 |

Note: ^a FDI output is output by 'foreign invested firms' which includes output by joint enterprises.

^b Previous year=100.

Source: General Statistics Office, 2001. *Statistical Yearbook 2001*, Statistical Publishing House, Hanoi; General Statistics Office, 2000. *Statistical Data of Viet Nam Socio-Economy 1975–2000*, Statistical Publishing House, Hanoi.

An important part of state-owned industry is made up of light industry and small and medium-sized enterprises. Some have decayed under pressure from increased competition and reduced subsidisation, but a number were successful in finding new export markets, particularly in cooperation with foreign investors.

Implementation of the state investment program contributed to the high rate of industrial growth. While some state industrial investments resulted in the production of goods that were able to compete in home and export markets, it also resulted in a significant element of over-investment in some industries

and pressures to protect inefficient domestic producers from low-cost imports (for example, sugar).

There was also some foreign investment in excess capacity in classic import substitution activities, such as vehicle assembly, but that was a small part of the total investment in the industrial sector. There was no across-the-board emphasis on import substitution of consumer goods behind tariff barriers.

The trend in protection has been downwards. A wide range of cheap imported goods has been available in Vietnam, even in the early stages of the *Doi Moi* process. Quite apart from adjustments to the tariff regime which have been implemented under *Doi Moi*, the efficiency of Vietnamese smugglers places a limit on the degree of protection that can be offered to domestic industry. For many consumer goods it is difficult if not impossible to suppress smuggling, because of the long borders and the proximity of low cost producers (most notably China).

Industrial production therefore was under pressure to compete with imported goods, and in many areas there was lively competition between domestic producers even within the state-owned sector. In key areas of continuing public monopoly, the picture has been more mixed. In telecommunications, for example, great strides were made in the early 1990s in transforming the external telecommunications system, which had been dependent on antiquated lines of communication through Moscow. Considerable progress was also made in increasing the coverage and density of the internal telecommunications system. Despite the considerable technical improvements, however, international services remained expensive by international comparative standards, with the benefits of technical improvements only being slowly passed on to customers through price reductions. High communications costs act as a brake on Viet Nam's ambitions to increase its participation in the information technology market in the next stage of its development.

Likewise, although there have been large investments to ensure that power provision has kept up with the demand generated by the rapid economic growth, power rates have risen because of the need to generate substantial cash flows to contribute to the investment costs of further expansion.¹¹

Industry was also a focus of interest for expanding private foreign investment.¹² A Foreign Investment Law had been promulgated as early as 1987, opening up opportunities for foreign direct investment. A major part of the foreign investment was through the vehicle of joint ventures with state-

owned enterprises.¹³

Output from foreign-invested enterprises increased from negligible levels to more than one-quarter of total industrial output by 1995, and continues to grow more quickly than state sector output, accounting for 35.5 per cent of total industrial production in 2000 (preliminary estimate). The first major foreign investments were concentrated in the petroleum sector, so that in 1995 about 42 per cent of the output of foreign-invested enterprises was in the mining (mostly oil) sector. The foreign sector still only accounted for about 17 per cent of manufacturing output. By 2000, however, mining activities accounted for only 32 per cent of 'foreign-invested' industrial output, while the foreign sector had grown to account for 30 per cent of total manufacturing output.

An important impetus, particularly for regional investors (notably Singapore, Taiwan, Korea and Malaysia), was to make use of Vietnam's low-wage but reasonably educated workforce, in a period in which the success of their development efforts at home had resulted in increasing wage costs as labour markets tightened and their workforces began to benefit from their growing national incomes. This was particularly so in the boom years before the regional financial crisis in 1997.

Over the 1995–2000 period, foreign-invested firms expanded exports from US\$440 million (1995) to US\$3,320 million (2000 preliminary), or from 8 per cent to 23 per cent of total exports (32.5 per cent of the increase in total exports came from foreign-invested firms). Thus foreign investment made a significant contribution to the expansion of Vietnamese exports, but did not play the major role. The major component of industrial and export growth was the domestic sector.

To sustain its successful export performance, Viet Nam will have to go on meeting competition from export platforms in the region and further afield. In the short term, if there is a revival in the world economy and a resulting acceleration in international trade, this should not present great difficulties. But, over the longer run, if the Vietnamese labour force is to enjoy the rising incomes which are the objective of development, then the same agility shown in the past decade in adjusting to international market opportunities will have to be applied to raising labour productivity and adjusting the product and export mix to more sophisticated exports, capable of accommodating higher income levels.

NOTES

- ¹ The extent to which administrative constraints were relaxed varied considerably throughout the country depending on the actions of local level administrative authorities.
- ² As mentioned in Chapter 7, the program included positive real interest rates, drastic exchange rate adjustment and efforts to contain the state budget.
- ³ The term ‘Dutch disease’ was coined to describe the negative consequences of the North Sea natural gas boom for the Netherlands economy. The dangers are that a mineral boom can lead to an exchange rate that is overvalued in relation to the needs of other export sectors and to a ‘soft’ government budget, with increases in public welfare spending discouraging more productive economic activity.
- ⁴ For example, Kokko and Zejan (1996) argued that, ‘in spite of the impressive export growth recorded during the first half of the 1990s, it is still appropriate to characterise Viet Nam’s development strategy as import substitution’. Kokko et al. (2001) argued that ‘lagging growth... was caused by weaknesses in the import substituting parts of the economy’. CIE (1999) cautioned that ‘the problem at the moment is that the general thrust of policies is to encourage *inefficient* import substitution’.
- ⁵ Rhys Jenkins (2002) argues that ‘[i]t is clearly not the case that import substitution was a significant factor contributing to slow employment growth in Viet Nam in the second half of the 1990s’.
- ⁶ Countries with smaller populations, like Malaysia and Singapore, will typically have a higher ratio of trade turnover to GDP because their smaller scale means they are likely to have a comparative advantage in a more limited range of products. Larger countries, like China, the United States and Indonesia will typically have lower ratios of trade turnover to GDP.
- ⁷ Using the 1992–93 survey, a very basic measure of severe poverty was based on the income level estimated to be necessary to sustain consumption of 2,100 calories per day (which was estimated to be the case for incomes equivalent to VND 1.07 million per person per year at 1992–93 prices to cover food and non-food consumption). The poverty line of 2,100 calories for total consumption expenditures, of which 65 per cent was food expenditures, included rice consumption of 171.5 kilograms per person per year, or 263.8 kilograms of paddy (using a conversion factor of 1:0.65). Using that measure, households with incomes below the poverty line (that is, subject to severe poverty) accounted for 51 per cent of the population.
- ⁸ In describing a system subject to a continuing process of change, it is difficult to pinpoint the precise nature of the system at any given point in time. This account therefore emphasises the process of change over time without attempting a precise description of the speed and extent of change at any one moment.

- ⁹ In personal exchanges with senior agricultural advisers in the early 1990s, the view was expressed that the gains from reform having been reaped, deceleration in growth could be expected.
- ¹⁰ Hybrid rice seed is being introduced from China. The Vietnamese seed industry has begun to develop its own capacity in the complex process of producing hybrid rice seed.
- ¹¹ In relation to infrastructure investment, many Western commentators, aware of the risks of over-design and excess capacity, and advisors have emphasised caution. Japanese commentators, however, have tended to be much more ambitious in their estimates of investment requirements. By and large, the Japanese advice has proved more appropriate, as the pace of economic growth has been such that lower investment in infrastructure would have resulted in constraints on industrial growth.
- ¹² Initially the biggest concentration of foreign investment was in petroleum; there was also substantial investment in real estate development, including hotels.
- ¹³ Which means that the statistical breakdown in earlier statistical series between state and private industrial output (which shows growth in state industrial production outstripping private production) has to be interpreted with some care. In the series now in use, output by the so-called foreign invested sector includes the production of joint enterprises.