Vietnam: External Liberalization, Structural Change, Economic Growth and Income Distribution

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Prepared for the international conference on "External Liberalization, Economic Growth, Development and Social Policy", January 18 – 20, 2002 in Hanoi, sponsored by the New School University (New York) and the Development Strategy Institute of the Socialist Republic of Vietnam. My grateful thanks to Lance Taylor, Erinç Yeldan, Charles Bailey and Le Anh Son for very helpful comments on earlier versions of this paper, and to the Ford Foundation and the New School University for their financial support.

1. Introduction

As with other countries, a severe economic crisis was the catalyst for reform in Vietnam. Faced with near famine, triple digit inflation, and the collapse of the trading system of the Socialist bloc, the government in 1989 launched *Doi Moi* -- a comprehensive program of external and domestic reforms that placed their country squarely on the road to a more market-oriented economy. Almost immediately, and in sharp contrast to the experience of the Eastern European transition economies, the startling transformation of the economy – including the external sector's swift rise to a dominant position -- and better living conditions of most Vietnamese, convinced many, both in Vietnam and abroad, that the government's decision to liberalize was correct. Indeed, Vietnam of the 1990s gave every appearance of capturing the promise of external liberalization, with little visible downside. From 1989 to 2000, Vietnam's annual GDP growth rate averaged 7.1%, one of the highest in the world, and hyperinflation quickly became history. Consequently, there is optimism mixed with caution as Vietnam enters a second and even more intense phase of external liberalization and accelerated reforms under terms called for in the July 2000 Bilateral Trade Agreement (BTA) with the United States and in its commitments to the ASEAN Free Trade Area (AFTA), as well as to meet conditions attached to credit provided under the World Bank's Poverty Reduction Support Credit (PRSC) and the IMF's Poverty Reduction and Growth Facility (PRGF).

Through the device of a quantitative narrative history, this paper examines the macroeconomic performance and structural evolution of the Vietnamese economy following the comprehensive external and domestic reforms launched by the government in 1989. We compare Vietnam's actual macro- and micro-economic performance to the scenario predicted by external liberalization advocates. The objective is to shed light on several questions: First, what were the macroeconomic and distributional outcomes observed during the 1990s, and should external liberalization get full credit for these outcomes? Second, can external liberalization help the national objective of creating enough good jobs for a rapidly expanding labor force? Third, can the policy reforms that took place in Vietnam be properly described as "true" external liberalization, or was it

merely a successful foreign direct investment (FDI) and export promotion campaign in the East Asian tiger tradition? Fourth, why were the socio-economic outcomes in Vietnam more positive compared to some other liberalizing economies? And finally, what can Vietnam anticipate in the second phase of external liberalization in light of its own past experience, and the experience of other countries?

Not surprisingly, our findings, to be elaborated in later sections, suggest a mixed picture. First, the socio-economic outcome was largely positive because macroeconomic growth and stability was achieved and almost all sectors of society including the poor saw a marked improvement in their living conditions. From 1993 to 1998, the proportion of people living below the poverty line fell from 58 percent to 37 percent (World Bank 1999). As measured by the Human Development Index (HDI), Vietnam's HDI rose from 0.456 in 1990 to 0.696 by 2000, which places Vietnam in the medium human development category (0.500 – 0.799), well above expectations given its low per capita income classification ($755 or less).[1] At the same time, disappointingly, productivity gains from labor reallocation between sectors[2] has not been significant, despite a high GDP growth rate, increased labor mobility between economic sectors, and greater share of the industrial sector as a percent of total output. Consistent with this, we see that although the *level* of employment in industry and construction has risen, its *share* of total employment fell to 12.7% during the *Doi Moi* period (1989-1999) from 13.5% during the "Subsidy" period (1981-1988). Other unfavorable outcomes include increased social stratification and cutbacks in the delivery of public services during the early reform years due to budget constraints (discussed in Chapter 5). Significant gains in health and education may be offset by institutional weaknesses such as inadequate consumer

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[1] According to the UNDP, the average HDI of low-income countries is 0.549 (UNDP 2001).

[2] Typically, significant productivity gains from industrialization are obtained when labor starts to shift out of agriculture (a low labor productivity sector) to higher productivity sectors such as manufacturing and services. Thus, a useful measure of progress with respect to industrialization is the contribution to overall productivity of productivity gains resulting from the reallocation of labor when employment shifts from low productivity to higher productivity sectors (Chenery et al. 1986).

protection from overmedication (discussed in Chapter 9) due in part to aggressive marketing by pharmaceutical companies[3].

The answer to the second half of the first question is that external liberalization deserves partial but not full credit for Vietnam's strong macroeconomic performance during the *Doi Moi* years. Complementary domestic reforms associated with the shift to a market economy[4], the development of offshore oil resources, and exogenous shocks in the geopolitical environment including domestic institutional reforms in East Asian economies (discussed in Chapter 3) all played critical roles. It also should be noted that the initial policy reforms had an especially potent effect because the economy was operating well below its potential during the pre-1989 "subsidy" period. The extent of resource underutilization[5] and misallocation was such that organizational and institutional changes brought about by the reforms produced substantial increases in output without requiring much additional inputs (Packard and Thurman 1996, Fforde and de Vylder 1996). The primary divide in our analysis is the pre-1989 period when output growth was constrained by a scarcity of imported inputs due to the international economic boycott ("before"), and the *Doi Moi* era marked by changes in the post-Cold War international balance of power and Vietnam's more conciliatory foreign policy stance[6] ("after"). The decision by non-CMEA countries to end the trade embargo probably contributed as much to the rapid expansion of foreign trade[7] as Vietnam's actual lowering of trade barriers.

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[3] This is not an uncommon problem among developing countries.

[4] In fact, it is the *combined* effects of external liberalization and shift to market economy that led to the outcomes observed during the 1990s, and it is not possible to separate out the two deeply intertwined factors.

[5] This is due to institutional rigidities imposed by central planning.

[6] This includes the withdrawal of its military forces from Cambodia.

[7] With the exception of Kolko (1997), Vietnam analysts in general have not paid much attention to the role of geopolitical factors in clearing the way for Vietnam's rapid growth of foreign trade.

Second, despite gains from trade liberalization, not enough jobs were created in the higher wage sectors of the economy because output growth in the higher value-added sectors -- although high – was *not high enough* relative to productivity increases that were required of Vietnamese enterprises to survive the more competitive environment of the 1990s. Thus, even during the period of rapid industrial growth and swift transformation into a very open economy, the industry sector's contribution to overall employment growth was generally negative or small[8]. This is shown in *Figure 1*, which separates each sector's contribution to employment growth. In general the low productivity primary sector accounted for 60-80% of Vietnam's employment growth, with significant contribution from the services sector during the 1992-97 period. This strongly suggests that despite the high growth rates of the *Doi Moi* years, the economy continues to operate at below capacity because of the large reservoir of underutilized labor resources. (For this reason, the assumption of full employment in neoclassical general equilibrium models to analyze the effects of external liberalization on growth and distribution in the Vietnamese economy is likely to give rise to misleading conclusions.)

At the same time, these two factors – geopolitical sea change and significant resource underemployment – help to explain an interesting puzzle: why the US dollar value of Vietnam's exports grew at an annual average rate of over 26% from 1989 to 2000, even though up until 1995 the economy saw a trend rise in the relative price of non-traded to traded goods (the real exchange rate), which brought about an increase in the relative share of non-traded to traded output (shown in *Figure 2*). Clearly there was enough slack in the economy, despite widely reported shortages of skilled labor, to accommodate both greater export demand and greater growth of the non-traded goods and services sectors.

Third, in contrast to other countries, Vietnam's first phase of external liberalization covered the current but not the capital account, and even the current account liberalization was incomplete. For this reason, the Vietnamese economy was spared the volatile swings precipitated by large inflows of highly mobile short-term capital and its

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[8] The exceptional years were 1993 and 1998 when the industry sector accounted for 34.9% and 17.3% respectively of total employment growth during those years.

abrupt reversal that were experienced by its regional neighbors such as Thailand. Moreover, what took place in Vietnam was *managed* external liberalization (or simply, "externalization"), with some backsliding during the mid-1990s, when the leadership perceived that their country had safely emerged from the economic crisis and therefore felt less urgent pressure to move quickly on the reform agenda. And yet – to take issue with the skeptics -- there was much more to Vietnam's reforms than mere FDI and export promotion. As discussed in Chapter 5, the 1989 reforms in their totality had a "big bang" transformational impact on the economy and society, with considerable dislocation of manufacturing output and employment. Moreover, although Vietnam's trade regime is considered to be highly restrictive[9], actual revenues from external trade (including import and export duties) accounted for less than 3% of the total value of imports and exports from 1989 to 1992. At its peak it climbed to 7.8% in 1995, but by 1999 it had declined to 4.8%.[10]

Fourth, an important factor behind Vietnam's more positive experience with external liberalization, in contrast to the experience of many semi-industrialized economies, has to do with the country's own relatively less developed economic status. Although Vietnamese enterprises, both state and private, were initially devastated by cheaper and sometimes better quality imports from neighboring countries, Vietnam – not being semi-industrialized – in the early *Doi Moi* period did not yet possess the broad range of industries that would have faced bruising competition from foreign imports. The situation will be different in the coming period of expanded liberalization. The economy has become more developed compared to the early 1990s, and many more enterprises

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[9] It is rated 9 on the IMF's 10-point scale of trade restrictiveness where 10 is the most restrictive (IMF 2001 p. 18).

[10] This is a very low figure compared to India. Even after liberalizing, India's ratio of import duties to the total value of imports stood at 22% in 1997 (Rao and Dutt 2001). Taking the peak value attained in 1995, Vietnam's ratio of revenues from external trade to the total value of imports came to 13.8% (because of data constraints, we are unable to separate revenues from import duties and revenues from export duties). At the same time, it should be noted that this is an incomplete measure of true levels of protection in Vietnam given the existence of quantitative restrictions and other non-tariff barriers.

may not survive a significantly less sheltered environment. This takes us to the last question, what are the likely outcomes of the next phase of external liberalization. This is addressed in Chapter 10.

The paper is organized as follows. Chapter 2 identifies the policy phases and major themes of the postwar period. Chapter 3 provides a broad historical overview of the Vietnamese postwar economy. Chapter 4 reviews the state of the Vietnamese economy under the centrally planned/"subsidy" period prior to the launching of the 1989 "big bang" reforms. Chapter 5 describes *Doi Moi* – Vietnam's comprehensive and far-reaching program of external and domestic reforms, and the country's socio-economic performance from 1989 to 1993. Chapter 6 describes the post-crisis more hesitant policy stance period from 1994 to 1997, which saw a recovery of state finances, and the slower growth phase from 1998 to 2000 characterized by a sharp drop in foreign direct investment (FDI) associated with the regional financial crisis. Chapter 7 analyzes shifts in the sources of effective demand. Chapter 8 analyzes productivity shifts and the decomposition of employment, and relates it to income distribution outcomes. Chapter 9 reviews social welfare and social policy issues associated the *Doi Moi* reforms including external liberalization. Chapter 10 discusses what may be anticipated in the second phase of external liberalization. Chapter 11 presents the conclusions.

2. Policy Phases and Major Themes

As aptly noted in the 2001 National Human Development Report prepared by a broad group of independent national specialists, Vietnam has been undergoing a triple transformation: from war to peace, from central planning to market economy, and from isolation to international integration (NCSSH 2001). Moreover, while Vietnam's shift to a more market-oriented economy may have seemed irreversible to outside observers, the actual reform path has tended to follow an "on-off" policy cycle (Fforde and de Vylder 1996, Packard and Thurman 1996, Riedel and Turley 1999). It is marked by bold policy response under dire economic circumstances when *something* had to be done, and a

hesitant stance otherwise. Under a consensus-driven, faction-balancing, horse-trading regime (not unlike other Asian regimes), those who gain from reform can prevent significant backsliding, but bad shocks are needed to galvanize the reform agenda. Moreover, the state's more market-friendly liberalization stance has not been without a strong dose of dirigisme, with the authorities routinely intervening to counteract undesirable trends, such as trade deficits that threaten to undermine broad policy objectives[11].

Taking into account this stylized rendering of Vietnam's policymaking history, our analysis distinguishes the following episodes marked by broadly homogenous policy packages and economic circumstances:

a. "Subsidy" Period: Imports a Binding Constraint (1981-1988)
b. Liberalization: Phase I. Vigorous Reforms (1989-1993)[12]
c. Recovery in State Finances/Hesitant Policy Stance (1994-1997)
d. FDI Drop & Declining Government Revenue Share of GDP (1998-2000)
e. Liberalization: Phase II. Honoring International Commitments (2001-?)

Table 1 presents the main economic indicators associated with the episodes covered in our analysis. As previously noted, during the "subsidy" period Vietnam was a closed centrally planned economy heavily dependent on Soviet bloc aid for needed foreign inputs. Overuse of price controls and subsidies, severe restrictions on private sector activity, and chronic shortages of imported intermediate goods and capital equipment were the main factors that constrained investment spending and output growth. During the 1986-88 period, largely due to economic mismanagement, the average inflation rate rose to nearly 450%. 1989 marked the first phase of trade liberalization and the opening of the economy. An exogenous shock -- the collapse of

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[11] For example, import restrictions were imposed in 1998 and 1999 to counteract the drop in FDI capital inflows and weak export growth associated with the regional financial crisis.

[12] Although the Doi Moi Party Congress was held in December 1986, the actual period of vigorous reform did not begin until 1989.

trading arrangements with the CMEA -- convinced the government that the only viable option was to embrace vigorous and comprehensive reforms.

The spectacular initial results exceeded expectations. Boosted in 1989 by the huge 87% year-on-year jump in the U.S. dollar value of exports, during the 1989-93 period Vietnam was able to increase its average annual GDP growth rate to 6.5% (from 5.6% during the "subsidy" period) while bringing down the inflation rate to 38.7%. On the demand side, the economy's remarkable speed of adjustment was evident in the external sector's overnight rise to a dominant position, as measured by the climb in the trade to output ratio[13] from 24.7% in 1988, to 58.2% in 1989, and to 111% by 2000 (see *Figure 3*). Indeed, IMF economists have noted that Vietnam's openness by this measure is twice the average of all countries eligible for its Poverty Reduction and Growth Facility (IMF 2002). Another measure of the rapidly expanding influence of the foreign sector in the Vietnamese economy is the FDI sector's rising share of gross industrial output, from 2.6% in 1989 to 35.5% by 2000. The breathtaking rapidity of Vietnam's global economic integration is a key theme of the *Doi Moi* years, and the government's expectation that FDI must play a critical role in accelerating Vietnam's economic development is a cornerstone of the *Doi Moi* policy framework.

The critical but volatile locomotive role of investment spending (not unlike the experience of many developing and transitional economies that embraced external liberalization during the past two decades) is another key theme. By 1994, buoyed in large part by the powerful surge in FDI and domestic private sector investment spending, Vietnam successfully emerged from crisis. The nation's capital stock grew quickly as fixed capital formation rose to 24.3% of GDP in 1994 from less than 15% of GDP during the 1988-91 period. However, the volatility of the investment cycle was quickly felt when FDI capital inflows dropped precipitously from over US$ 2 billion in 1997 to an estimated US$ 700 million in 1999, due largely to spillover effects of the 1997-98

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[13] Defined as exports plus imports to GDP.

regional financial crisis which devastated Vietnam's primary foreign investors, the Asian countries[14].

Changes in the state's fiscal position and fluctuations in the state sector's share of GDP -- in interplay with external liberalization -- also are key themes with important social policy implications. The state-owned enterprise (SOE) sector's sizeable weight in both export *and* non-traded sectors explained its speedy recovery during the mid 1990s from the twin woes of government-imposed financial discipline and competitive pressures from foreign imports (that accompanied trade liberalization). Because both export and non-traded goods sectors enjoyed high growth rates during this period, the state sector's share of nominal GDP jumped from its 31.1% low in 1991 to 40.5% in 1997. The improvement in state enterprise balance sheets and increased revenues from external trade helped to strengthen the government's fiscal position during the period from 1991 to 1994. Ironically though not surprisingly, with the rapid economic recovery came a slackening in the pace of reform as politically powerful economic actors successfully lobbied to protect and advance their positions.

More recently, a potentially dangerous erosion of the state's fiscal position has emerged, which IMF economists attribute to structural weaknesses in the revenue system. Since 1997, there has been a trend decline in important components of government revenues relative to GDP because in the transition to market, the government's ability to tax the emerging non-state sector is still weak, while contributions from the SOE sector as a share of total revenues have been falling. At the same time, the government's prudent fiscal stance during this period has meant a compression of expenditures. According to the IMF, the current expenditure category has been hit hardest, falling by 4 percentage points of GDP to 13 percent. The cuts in social spending have been severe, and the recurrent cost expenditures needed to maintain existing public capital assets have

[14] Although press attention focused on foreign investor displeasure with Vietnam's business environment and the slow pace of reforms, the most vociferously unhappy were Western investors who accounted for a relatively small share of total FDI. Thus, it was not so much investor disenchantment, but the straitened circumstances of the East Asian and ASEAN NICs, that was the main reason for the significant drop in FDI.

been sharply curtailed. In the medium term, a continued weakening of the state's fiscal position may prevent the government from carrying out needed social programs to protect the poor and vulnerable, while failure to carry out timely and adequate maintenance of public assets means having to pay much more later for costly repair and rehabilitation bills (or having to make do with a considerably diminished capital stock).

3. Vietnam's Postwar Economy: Overview and Structural Change

The basic story that emerges from macroeconomic data compiled by the Government Statistics Office (GSO) is that Vietnam's slow recovery from the devastation of war, trade-embargo, and central planning, was accomplished mainly by the efforts of its people with substantial aid from allies in the Soviet bloc[15]. For the first 15 years after the war ended, the country received minimal outside assistance other than from Soviet bloc countries and some international NGOs.

GSO time series data also show that it took *over 25 years* for Vietnam to narrow the gap between output and expenditure. When the war ended in 1975, total consumption and investment expenditures exceeded gross domestic output by 37%. Imports were 4.6 times exports. The gap between output and expenditure was reflected in the trade deficit, which was largely financed by loans and grants from the Soviet bloc countries (Table 2).

During the subsidy period (1981-88) the Vietnamese central bureaucracy and the CMEA system regulated foreign trade, which consisted mainly of bilateral exchange between Vietnam and individual CMEA countries (Truong and Gates 1995). With imports acting as a binding constraint, and no domestic production of capital goods, the share of gross capital formation in GDP fell to around 13%. The resulting low capital-to-output ratio and disincentives created by misguided policies (discussed in Chapter 4)

[15] During early 1980s around 40% of the state budget was financed by aid from the Soviet bloc countries (Tran Duc Nguyen 1991).

stifled labor productivity. However, because the trade embargo effectively turned Vietnam into a closed economy, until 1989 the industry sector did not have to worry about competition from imports, and consequently enjoyed a 9.1% growth rate. But labor was not sheltered by the closed economy. During this period employment in the industry and construction sector saw volatile growth (its share of total employment fluctuated in the 12.1-14.9% range), and even a 9.6% contraction in 1985.

The Phase I Liberalization period of vigorous reforms (1989-93) was impelled by the disintegration of the CMEA that prompted the drive to find new markets and new trading partners. The centerpiece of *Doi Moi*'s outward orientation was the extremely favorable Foreign Investment Law of December 1987 that set the stage for the emergence of Vietnam's foreign-invested (FDI) sector. FDI was envisaged to play a key role in Vietnam's growth and transformation. It was the means to upgrade the country's physical infrastructure, and to mobilize external resources for the technological renovation and capacity expansion of Vietnam's SOEs (Truong and Gates 1996). During this early period it was FDI's *potential* role as rescuer of financially distressed SOEs that strengthened the bargaining power of foreign investors.

The government's open-door policy coincided with the economic boom in East and Southeast Asia[16]; domestic institutional reforms in South Korea and Taiwan facilitated their outward investment, and they quickly became Vietnam's top largest foreign investors. Along with other Asian investors, they were eager to preside over the country's economic take-off. Indeed, by 1999 the four Asian tigers (Singapore, Taiwan, Hong Kong and South Korea) and Japan accounted for 55.5% of total registered FDI capital (Table 3). However, these investors were hard hit by the Asian financial crisis in 1997-98, which led to a sharp fall in FDI flows to Vietnam[17]. From an average annual growth rate of 16.3% during the 1994-97 period, FDI flowed out during the 1998-2000

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[16] This underscores the time-bound aspect of external liberalization policies. Had the financial crisis hit the Pacific Asian economies only a few years earlier, Vietnam's trade and FDI trajectory would have looked very different, external liberalization policies notwithstanding.

[17] The drop in FDI during this period also is attributed to "weaknesses in Vietnam's investment environment" (IMF 1999).

period (Table 4), causing the FDI share of Vietnam's total investment capital to contract sharply to 21.6% from 30.6% between the two periods.

During the "vigorous reforms" phase the FDI sector expanded at a phenomenal rate [18] (*Figure 4* and Table 4), and FDI gross industrial output recorded average annual increases in excess of 44%. From 1988 to 2001, over US$ 38 billion of FDI projects were approved. The structural composition of FDI inflows continues to change in response to policy incentives and better information about sectors with significant growth potential. Initially FDI was attracted to the oil and gas sector, which accounted for nearly 37% of total FDI disbursement during the 1988-93 period. But by 1998-2000, its share of FDI flows had declined to less than 15%. FDI also flowed to the highly protected import substitution industries. According to a joint report of the World Bank, Asian Development Bank and UNDP (VDR 2001), over 50% of FDI inflows went to industries with more than 90% effective protection rates. Consequently, the share of heavy industry in total FDI flows rose from less than 8% during 1988-93 to nearly 22% by 1998-2000. At the same time, manufacturing sectors that better reflected Vietnam's medium-term comparative advantages -- light industry, food, and export processing zone production -- also saw their combined share rise from 16.5% during 1988-93 to nearly 21% by 1998-2000. However, the agricultural sector's share of FDI inflows has been surprisingly low, given its importance in the economy and strong comparative advantage, reflecting current domestic institutional rigidities and frictions. The situation is slowly changing, and the agricultural sector's share has grown slightly, from 4.1% during 1988-93 to 8.4% in 1998-2000. With respect to the non-traded sector, during the 1998-2000 period, construction accounted for 9.1%, transport and communications for 3.4%, hotel and tourism for 8.4%, and office and apartment building management for 9.5% of total FDI inflows (Table 5).

The "vigorous reforms" phase also was marked by intense competition from imports, particularly in the consumer goods market, which impacted relative prices. The price

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[18] Between 1993 and 1997, FDI inflows averaged over 9% of GDP per year (IMF 1999).

index of traded to non-traded goods fell from 1990 to 1991 (Figure 2). The initial losers were Vietnam's state dominated industry sector and their employees. Yet difficulty adjusting to stiff competition was only one of many problems besetting the state-owned enterprise (SOE) sector. They also had to submit to the rigorous financial discipline that came with the government's battle against hyperinflation[19]. At the same time, the state's more tolerant stance towards private sector business activity had an offsetting effect. It proved to be sufficient encouragement to push the non-state sector's growth rate to above 8% over a prolonged period (1989-97), from the 5.2% average growth rate recorded during the subsidy period (Table 6).[20]

Not surprisingly, external liberalization and the transition to a market economy also brought about significant structural change in the monetary and credit spheres that reflect the gradual rise of the private sector. For example, credit to the non-state sectors rose from around 2.5% of GDP during the 1986-93 period to 14.5% of GDP by the end of the decade, while net foreign assets as percent of GDP has climbed from 1.8% before 1989 to 15.1% by the 1998-2000 period (see Table 7). Moreover, the rapid increase in monetary depth -- the ratio of M2/GDP more than doubled from 17.2% in the 1986-88 period to nearly 40% by the 1998-2000 period -- show that inflation fears have eased. Greater confidence in the financial system also is reflected in the rise in the private sector's savings propensity, and portfolio shift away from precious metals and stones.

With respect to overall developments in the Vietnamese economy, it is noteworthy that the expected negative link between per capita income and population growth also holds up. The high population growth rate from 1977 to 1988 has been decelerating with higher per capita income growth (Table 8). The inverse correlation is

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[19] The government's anti-inflation program assumed that the root cause was monetization of the fiscal deficit. The standard cure was to trim the budget, which included eliminating most subsidies to SOEs.

[20] However, the slower 6.2% non-state sector growth rate registered from 1998 to 2000 does not necessarily suggest a return to a less friendly policy stance. Rather, it is a by-product of the Asian crisis.

especially strong between per capita electricity output and population growth, which is not surprising because per capita electricity output is a reasonably good proxy of a country's level of economic development.

4. The Vietnamese Economy Before *Doi Moi*

While the focus of this study is on the *Doi Moi* period, the reader should bear in mind Vietnam's turbulent history, and in particular the legacy of colonial rule and devastation from "the twentieth century's longest international conflict" (Kolko 1997). The effects of French colonial rule have been documented in other publications, notably Ngo Vinh Long (1973). While much was made of colonial contributions to developing transportation infrastructure, Long pointed out that regressive asset redistribution under the French and the introduction of the sharecropping system led to decreased soil fertility and much lowered land productivity. Taxation under the French was so notoriously unjust and evil (Long 1973 pp. 62-76) that the national allergy to paying taxes, which continues to plague the government today, counts among the legacies of French rule[21]. Finally, during World War II, French and Japanese actions resulted in the 1944-45 famine, which killed about two million people.

With respect to the Vietnam-U.S. war, Kolko's (1997) concise enumeration of relevant statistics, many painstakingly compiled by Senator Edward Kennedy's Refugee Subcommittee, bears repeating:

> *... the United States and its allies exploded fifteen million tons of munitions during 1964-72, twice the amount used in all of Europe and Asia during World War Two. It sprayed defoliants*[22]*, which cause cancer, birth defects, and other illness, on a fifth of South Vietnam's jungles, over a third of its mangrove forests,*

[21] This also was the half-joking explanation made by a Vietnamese official to the author.

[22] US Ambassador Raymond Burghardt acknowledged that the US military sprayed over 72 million liters of dioxins on Vietnam between 1961 and 1970 (*Vietnam Investment Review*, March 11, 2002).

> *as well as on rice crops. About seven million South Vietnamese …became refugees and were forced into camps and cities ... Almost all of North Vietnam's industry, bridges, and transport systems were destroyed. … as many as 1,350,000 South Vietnamese civilians were wounded, with death for between a fifth and a third of this number. Over two million North Vietnamese soldiers and civilians were killed – altogether, about three million people died.*

The abrupt collapse of the U.S.-backed Thieu regime in the spring of 1975 caught the Vietnamese revolutionary forces by surprise. It soon became apparent that their talent for seizing power, as Kolko (1997) put it, was "quite unrelated to the skills essential for administering and holding it". The 1976 Fourth Party Congress opted to impose the North's socialist institutions on the South, and set an unrealistic 20-year target to switch from small-scale production to socialist large-scale production. The invasion of Cambodia in December 1978 put an end to Chinese and Western aid, and led to a stringent world economic embargo. While the economy's disappointing postwar performance was chiefly attributable to Vietnam's international isolation, the state's decision to curb private sector activity and impose central planning did not improve matters. VCP policy during the "subsidy" period also was marked by neglect of exports, little attention to costs, and absence of financial discipline (Fforde and de Vylder 1996). The campaign to collectivize the Mekong Delta was a factor in the 6.4% drop in agricultural output in 1978. An indicator of increasing misery could be seen in the sharp decline in real wages of the average public sector worker, which shrank each year by 14 - 18% from 1977 to 1980. Among the problems facing state sector employees was that their nominal wages could hardly keep pace with inflation. The inflation rate, as measured by the retail price index, hovered in the 20% range until 1980, when it accelerated past 25% (see *Figure 5*).

Initially the state sector dominated gross industrial output. Its share in 1976 stood at 77.4%, but fell to 57.1% in 1980 (shown in Figure 6). There are two reasons for this decline. First, since state sector industrial production tended to be more import intensive than non-state production, it was hurt more by the shortage of imported inputs. Second,

the non-state sector benefited from a relaxation of controls on its production activities in the aftermath of the devastating war with China, when the party decided to postpone plans to impose central planning and collectivize the Mekong Delta in order to focus on the external threat. The necessity of having to generate sufficient resources to maintain an army of 1.5 million, at a time when the economic crisis of 1979-80 was made worse by bad weather (40% of the North's rice crops were devastated by typhoons), forced the party to adopt pragmatic measures in order to stimulate production.

In January 1981, the VCP introduced the output contract system in agriculture. It allowed farming families to sell on the free market all output in excess of the contracted amount of output to be produced. With respect to industry, a complex "three-plan system" allowed SOEs to produce and sell goods not covered by quota on a free-market basis (Fforde and de Vylder 1996). The result of these initiatives was a strong surge in agricultural and industrial output, which increased by 10.6% and 9.7% respectively in 1982, and underscored the link between earlier policy disincentives and slack within the production system. The output response was greatest in commodity sectors where there was an adequate supply of domestic inputs, and where there was strong market demand.

The improved economic performance was accompanied by an acceleration of the inflation rate (from 25% in 1980 to 95% in 1982)[23], and a large gap between "free market" and "organized market" prices, which only narrowed when the latter's price jumped by 102% in 1981, and by nearly 142% in 1982 (GSO 2000b and Table 9). At the same time, the mini reforms produced a surge in smuggling and speculation activities; rampant corruption accompanied the slide in state employee real wages. With increased lawlessness came renewed efforts to clamp down. The government once again tried to regulate private trade, expand state and cooperative control of wholesale and retail sectors, and curb the autonomy of exporters (Riedel and Turley).

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[23] Several factors contributed to high inflation: first, state sector spending was necessarily large, given the financial burden of maintaining one of Asia's biggest armies. Second, the trade embargo created shortages of imported inputs, leading to supply side scarcities.

Although the Third Five Year Plan (1981-85) has been described as an "awkward compromise" between concessions to pressures from below and the VCP's bias towards re-centralizing (Riedel and Turley), this overlooks the important learning process that eventually led to more comprehensive reforms. The VCP realized that it urgently needed to have a better understanding of the actual dynamics of economic development, and the Plan documents the Party's evolving views. For example, its authors accepted the concept of a "multi-component economy" with regional differences: the North was to have three (state run, collective and individual), and the South was to have five (the North's three plus joint state-private and private capitalist). Departing from earlier ambitions to rush the nation into large-scale socialist production, the 1982 Fifth Party Congress reduced the number of large-scale projects and gave top priority to agriculture. It acknowledged that a strong agricultural sector was needed to pave the way for the country's eventual industrialization. The bias in favor of the state sector remained, however, and was reflected in its relatively stronger growth performance.

From 1984 to 1988, the economy was in the grips of hyperinflation. The retail price index grew at an annual rate of over 300%. It would be misleading, however, to place full blame on the monetized budget deficit, which averaged 6.6% of GDP, since the deficit during the vigorous reform (1989-93) period accounted for 5.8% of GDP and yet the authorities managed to bring down inflation to 38.7%. The more important culprits behind hyperinflation were wage increases given to government workers (government wages and salaries as a percent of GDP rose from 0.5% in 1984 to 1.3% in 1985), the centralized system of resource allocation that gave rise to persistent shortages and fueled black market trading, and botched anti-inflation policies. Inflation climbed from 92% in 1985 to a whopping 775% in 1986 – due in large part to the disastrous currency reform introduced in September 1985. As Vo Dai Luoc (1993) put it, "Vietnam devalued its currency by ten times in an exchange of banknotes and later increased its supply by ten times with a rise in wages." With hyperinflation came widespread hoarding. During the period of the historic Sixth Party Congress, the North put five key commodities (rice, sugar, kerosene, fish sauce and meat) back on the ration list (Fforde and de Vylder). In

March 1988 the central bank introduced new currency and again botched it. Food prices doubled within a few days, and the dong's value dropped by almost a half (Kolko).

In the period leading to the vigorous reforms phase, the government adopted a series of measures that represented important concessions to free market and private business concerns (Fforde and de Vylder 1996). Provinces and cities were instructed to close internal customs posts that were impeding the domestic flow of goods. There was greater acceptance of the private sector and state monopoly was abolished in the trade of most commodities including food items, gold and silverware. Permission to conduct import-export business was more widely granted (Tran Duc Nguyen 1991). Major policy decrees issued at the end of 1987 covered foreign investment, land, foreign trade, state industrial management, private, family and individual sectors, and agriculture (Fforde and de Vylder 1996). These reforms, particularly the land and agricultural reforms, unleashed the productive energies of a nation mostly made up of farmers. Per capita food production increased from 303 kg in 1990 to 444 kg in 2000, and revenues from agricultural exports increased more than four-fold (CPRGS 2002).

5. The *Doi Moi* Phase of Vigorous Reforms

As noted, the 1987-89 macroeconomic crisis -- marked by hyperinflation, near famine, severe shortages, the abrupt termination of CMEA assistance, and loss of markets in Eastern Europe – marked the decisive turning point. The reforms adopted during this watershed year brought about a "complete upheaval of the economic system" (Ronnas and Sjoberg 1991). To gain new trading partners, Vietnam undertook a series of foreign policy initiatives -- withdrawal from Cambodia, normalization of relations with ASEAN, China and Western countries including the U.S. – that removed the major obstacles to expanded trade with the West and neighboring countries.

A comprehensive program of economic reforms ushered in sweeping changes on many fronts (**Box 1. The *Doi Moi* Reforms**): external liberalization measures that

included unification and massive devaluation of the exchange rate and foreign trade liberalization; anti-inflation measures; rural reforms that gave farmers the incentive to expand their output; and extensive price liberalization. Resource allocation was improved because imported intermediate goods were valued at market prices, and all state and non-state enterprises were allowed to set the price of their own products (prior to this, most goods produced or imported by SOEs were sold at below free market prices). By the end of 1989 the state only retained control over transport, communication, electric, petroleum and cooking oil prices, and continued to indirectly regulate the price of other essential commodities such as rice or gold by buying or selling stockpiles of those commodities.

Without being obliged to by the IMF, the government voluntarily embraced orthodox stabilization measures such as introducing positive real rates of interest and imposing greater fiscal discipline and credit restraint. As previously noted, over half a million soldiers were demobilized, subsidies to state enterprises were drastically curtailed, and financial discipline was imposed on SOEs, forcing major restructurings and massive layoffs. At the same time, the government gave SOE managers greater autonomy and eased restrictions on private sector activity. The structure of the banking system was transformed, with diversification of both institutions and ownership. By the end of 1992 the enlarged banking sector included 4 state-owned commercial banks, 5 branches of foreign owned banks, 3 joint venture banks, 24 shareholding banks with varied ownership, and several thousand very small rural and urban cooperatives (World Bank 1993).

Almost immediately the sweeping reforms produced dramatic results (albeit with some reversals and offsetting effects as economic agents reacted to conflicting signals). The decision to raise interest rates achieved the desired effect of restoring confidence in the domestic currency. It also drove up the cost of hoarding goods, and enterprises were forced to dump them on the market to avoid bankruptcy. Thus, previously stockpiled food, paper, bicycles, and other consumer goods flooded the market, brought an end to the shortage economy (Vo Dai Luoc 1995), and exerted downward pressure on the price

level. The legalization of gold trading also strengthened public confidence, and helped to induce changes in the composition of household assets. Meanwhile, the maxi-devaluation of the exchange rate effectively wiped out the black market for foreign exchange, and was yet another factor that induced households to shift out of gold and U.S. dollars back into dong-denominated assets. The price of gold, U.S. dollars, and rice all fell, and inflation was brought to a halt by mid 1989. Dong deposits as a percent of GDP jumped from 8.5% in 1988 to 14.7% in 1989, as savers queued to make deposits at banks.

During hyperinflation, people minimized their holdings of the domestic currency and kept some of their wealth in rice stocks. In the spring of 1989, more rice was released to the market as there was less need for its function as a store of value. The effect of these portfolio shifts was to bring down the price of rice and well as the price of gold and U.S. dollars, thus clearing the hyperinflation vortex. Meanwhile, additional rice came to market owing to the rural reforms. Abolishment of compulsory delivery of agricultural products to the state at below market prices improved the agricultural terms of trade. The gradual strengthening of property rights, granting of long-term leases and permission to be "masters over their own labor" (Ronnas and Sjoberg 1991) gave farmers the incentive to boost production and brought about the revival of self-managed family farms. Agricultural output grew by 7% in 1989. From being a net importer of food, Vietnam became the world's third largest exporter of rice, due also to expanded commercial relations with the non-CMEA countries.

At the same time, the mishmash of policy innovations and inconsistencies in the structure of state-controlled interest rates (Figure 7) gave rise to certain anomalies. For example, from November 1989 to December 1990, the very low real rate of interest on commercial bank deposits of enterprises caused many SOEs to depart from the usual custom of depositing their idle funds at the State Bank. Because subsidies to state enterprises had been drastically curtailed, and SOE managers were granted greater autonomy, they resorted to highly profitable financial intermediation by lending out their idle funds to other enterprises at higher rates (Vo Dai Luoc 1995). The upshot of these

unofficial lending activities, which the government could not control, was excessive credit and inattention to risk, leading to financial problems and renewed inflation. The resulting sharp increase in the retail price index -- over 67% -- reversed previous gains; not surprisingly, this was followed by a contraction in dong deposits to 9.4% of GDP in 1990, and an exodus to more inflation-proof foreign currency deposits, causing the latter to rise to 8.8% of GDP in 1990 (from 7.5% in 1989).

Although hyperinflation was subdued and new trading partners were found, the adjustment costs were considerable. As previously discussed, it fell on public sector employees who were made redundant. Between 1988 and 1991 the SOE labor force shrank by nearly 30%: 204,000 workers were dismissed or retired between 1988 and 1989, 329,000 more between 1989 and 1990, and another 261,000 between 1990 and 1991, for a total reduction of 794,000 (World Bank 1993). The unemployment problem was further exacerbated because, in addition to a very high labor force growth rate[24], the economy had to accommodate an additional 500,000 demobilized soldiers and other workers released from the civil service, plus thousands more overseas workers who were repatriated from Eastern Europe and Iraq.

While government adjustment assistance helped to ease some of the transition pains, the number of skills training centers established by the government (55 by the end of 1992) and the number of unemployed workers that could be helped was very small relative to the scale of the problem (World Bank 1993). Redundant public sector employees were given severance pay (one month salary for each year of service and assorted increases to cover health expenses, education, and compensation for loss of housing benefits). After that they were expected to fend for themselves in an economy and society that was undergoing rapid and tumultuous change.

The burden of adjustment also fell on the state enterprise sector. The hard budget constraint and anti-inflation high interest rate policy increased their debt servicing costs.

[24] This is related to Vietnam's particular demographics: a relatively young population whose big bulge is at the age to join the labor force.

Their financial situation deteriorated, and they were forced to liquidate inventories and to restructure. Trade liberalization also brought in a flood of imports from China, Thailand and Japan, which hurt Vietnamese bicycle, household goods, textiles, clothing, porcelain, pottery and electric fan makers. In 1989 a majority of local state enterprises were in trouble. It was estimated that only 20% of all SOEs were profitable. About half were loss-makers, and 30% underutilized their productive capacity. The industry sector experienced a 4.3% contraction, and state sector gross industrial output fell by 7.1%. The non-state sector, which had been doing relatively well in 1987 and 1988, also felt the heat. In 1989 and 1990 non-state sector gross industrial output contracted by 4.2% and 8.2% respectively. The state sector manufacturing industry (especially engineering and metallurgy industries) was particularly hit hard. In 1989 it contracted by 19.5%, and by another 8.6% in 1990. The non-state manufacturing sector also contracted, but not by as much (-3.2% and –3.6% respectively in those years).

The workers of many financially strapped SOEs went without pay. Meanwhile, production by cooperatives and small handicraft industries and trade organizations also fell (Vo Dai Luoc 1995), and in 1989, industry sector output fell by 4.3%. In addition, with price liberalization, SOEs were no longer able to profit from the difference between official and free market prices. Moreover, their financial difficulties were passed on to the government in the form of reduced SOE contributions to the budget, weakening already shaky public finances. The severity of the budget constraint led to cutbacks in the delivery of public social services. The disintegration of the cooperatives that funded health care and education at the local level cut deeply into the provision of health and education services, as there was no adequate replacement by other public institutions. The government stopped investing in infrastructure, which already was dilapidated. Roads, irrigation, water supply, and power generation facilities were neglected (World Bank 1993).

Yet the Vietnamese economy managed to emerge from this period of painful structural adjustment with largely positive outcomes. FDI and foreign trade provided an important cushion by stimulating output growth in the primary and tertiary sectors of the

economy. Vietnam was spared the severe recessions that marked the early stages of transition in Eastern Europe (Truong and Gates 1996) because, even though its industry sector suffered large contractions, this sector accounted for a much smaller share of GDP compared to more heavily industrialized Eastern Bloc countries. In addition, Vietnam was able to quickly develop new export markets and change the composition of its trading partners (see *Figure 8*). For example, although CMEA partners in 1988 provided 57% of Vietnam's imports, by 1991 it provided only 5%. It was a similar story for exports: in 1988, the non-convertible (CMEA) area accounted for all of Vietnam's light industry and handicrafts exports, yet by 1992 it accounted for only 4%. As for agricultural and forestry exports, the non-convertible area accounted for 30% in 1988, but only 1% in 1992. By then Vietnam had restored normal ties with most Asian countries and the EC nations had resumed aid. It also should be noted that earlier investment in offshore oil production started to bear fruit during this period and the rapid growth of oil revenues helped to strengthen the current account.

The composition of Vietnam's exports also shifted during the 1990s away from unprocessed raw materials towards light industrial goods (see *Figure 9*). Rice exports accounted for nearly 16% of total export earnings in 1990 but its share fell to less than 5% by 2000. Similarly, the share of revenues from crude petroleum exports fell from over 27% during the 1990-93 to 18.5% by 1998-2000. At the same time, the share of light industry exports have gained in importance, and by 1998-2000, exports of textiles and garments and footwear account for 14.6% and 11.1% respectively of total export earnings.

The structural adjustments associated with the *Doi Moi* reforms brought about a transformation of ownership in Vietnam's business sector, and induced a rise in investment's share of GDP, from a low of 12% in 1985 to 14.6% in 1989, notwithstanding the recession in the industry sector. The number of domestic non-state enterprises in the industry sector nearly doubled since the 1981-88 period to over 600,000 by 1988-2000, thanks to policy reforms during the late 1980s that allowed non-state

sectors to engage in larger scale agriculture, industry and trade[25]. The more favorable policy stance toward the private sector permitted a boom in private sector business activity, especially in the urban informal sector, and boosted its investment spending. From 1989 to 1993 private sector investment increased at an average annual rate of over 21%, despite receiving very little credit from the formal banking sector. The emergence of urban credit cooperatives, set up to circumvent the rigid banking system[26], helped to fill the private sector's credit needs during late 1989 and early 1990. This period also saw the emergence and rapid growth in the number of FDI firms, and major shakeups in the SOE sector. Consolidation and liquidation decreased the total number of SOEs from over 12,000 to less than 7000 by 1995 (PIP 1996). In the industrial sector, the number of SOEs fell from over 3000 during the subsidy period (1981-88) to around 1800 by the end of the decade (Table 10).

A final note regarding the 1989-93 phase of vigorous reforms: it is not well known that during this period, a significant shift in the relative price of traded to non-traded goods in favor of the non-traded goods sector (see Table 11) took place, due in part to the government's anti-inflation policy, which favored a relatively strong domestic currency[27]. For this reason, the enterprise sector did not have strong incentive to put in the necessary efforts to enter the highly competitive export market. Indeed, many business managers who were surveyed during this period expressed the view that they could make more profits at less risk producing for the domestic market (Gates 1996), and this was borne out in their business decisions. An unexpected outcome of this shift in the terms of trade was an improvement in the government's fiscal position. The reason: because the state sector accounted for 55.3% of non-traded output and only 23.3% of traded output (as of 1994), this shift in the terms of trade in favor of the non-traded goods

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[25] Although until 1989 private enterprises were still banned from export-import operations and banking activities (Vo Dai Luoc 1995).

[26] Unfortunately, widespread fraud, facilitated by the lack of prudential controls and general disregard for the law, led to massive bankruptcies estimated at VND 700-800 billion (Vo Dai Luoc 1995).

[27] This policy goal was not difficult to achieve thanks to FDI-driven foreign capital inflows.

sector contributed to the improvement of SOE finances, and made possible their increased contribution to the state budget. Interestingly, during this period the dollar value of exports continued to rise at the robust rate of 27.4% (Table 11). One may infer from this counterintuitive development that there was enough slack in the economy so that the two sectors did not have to compete for the same resources, and that the export growth rate probably would have been even higher had the terms of trade favored the traded goods sector.

6. Recovery in State Finances/Hesitant Policy Stance Phase

By 1994 it became clear that Vietnam had successfully weathered the socio-economic crisis. Inflation was well under control, the economy was sailing along smoothly, and government revenues (including grants) as a share of GDP climbed steadily and peaked at 24.7% from its 1988 low of 11.3%. A number of well-connected SOEs were able to offset the loss of state subsidies with FDI funds for joint-venture projects. There was continued progress in normalizing relations with other countries and international institutions. The milestones included GATT observer status, membership in ASEAN, accession to protocols of AFTA membership, normalization of diplomatic relations with the U.S. and establishment of formal relations with the European Union (1995 and 1996). Most bilateral agreements were finalized under the Paris Club, and creditworthiness was re-established with the May 1996 agreement in principle to restructure London Club debt.

As noted earlier, the improved financial situation of many SOEs, and rise in their budgetary contributions, increased their influence. With the end of the crisis, the party leadership became more receptive to SOE lobbying for increased protection. They actively debated the merits of adopting East Asia development strategies emphasizing state-managed industrialization. Their partiality for large centralized chaebol-style conglomerates was seen in the March 1994 Decrees 91/TTg and 90/TTg that established two types of General Corporations, with the stated aim of increasing SOE efficiency and

ability to compete against foreign firms in domestic and international markets. The plan was to merge many smaller enterprises under a single management in order to reap economies of scale. Decree 91/TTg established 17 General Corporations (GC 91) comprising some 450 SOEs. GC 91 conglomerates were in industries deemed to possess comparative advantage or have strategic significance, and their management reported directly to the Prime Minister. Decree 90/TTg established 74 smaller General Corporations reporting to line ministries or People's Committees and covering some 900 SOEs with the objective of achieving gains from concentration in more traditional industries. Critics of this strategy called attention to the risk that these politically powerful conglomerates could become costly and unwieldy bureaucratic nightmares, diverting public resources away from higher priority projects established by the Public Investment Program (PIP) to develop the nation's infrastructure.

As foreign investors began teaming up with well-connected SOEs in import substitution industries, concern also grew that this emerging alliance was potentially a powerful lobby for protective tariffs and other import restrictions to shut out lower cost competitive imports, which would have the effect of increasing domestic costs. For example, foreign automakers successfully pressured the government to ban imports of cheaper second hand vehicles as a condition for setting up operations in Vietnam. With hindsight, given the acceleration of trade reform in Vietnam and commitment to ASEAN to eliminate tariff and non-tariff barriers to member country imports, and Vietnam's preparations for accession to the WTO, which entails simplifying import controls and a reduction in the level of import protection, it appears that these concerns may be unwarranted. Instead, a shakeout in the import substitution industries may be anticipated, and firms with the capacity to compete on a regional basis will come out ahead. One can also expect to see intense political pressure coming from SOEs and foreign-invested firms that may not survive in the more competitive market environment.

The government's policy stance, which facilitated the FDI sector's meteoric rise to become a major player in the Vietnamese economy, already has been noted. The Vietnamese leadership believed that the FDI sector could contribute to economic

development through the transfer of technology and management skills, and by opening up new export markets and new distribution channels. In this regard, they were not wrong. The FDI sector has helped to strengthen Vietnam's export capacity, and its share of exports increased rapidly, from 8.1% in 1995 to 21.2% in 1998, while its net contribution to the merchandise trade deficit narrowed from slightly over US$ 1 billion in 1995 to US$ 685 million in 1998 (Table 12).

Although there was considerable liberalization of the current account during the vigorous reforms phase (1989-93), the government was still inclined to manage trade, and quantitative restrictions and import duties were selectively applied. For example, imports of key inputs such as construction steel, cement, fertilizer, sugar, paper, glass and petroleum were subject to administrative control in order to reduce trade deficits, protect domestic producers, and conserve foreign exchange. Thus, in May 1997, the government issued a temporary ban on the import of tourism automobiles, motor bikes, writing and printing paper, construction steel, white construction glass of a certain thickness, cement, and consumer goods such as bicycles, fans, sugar, beer and beverages (CIE 1997). An important reason, besides helping domestic producers of these items, was to prevent the trade deficit, which had climbed to 11% of nominal GDP in 1996, from worsening. In this regard the government succeeded, because the trade deficit was brought down to 8.1% in 1997, 7.3% in 1998, and 2.3% by 2000.

Revenue from external trade became an increasingly important component of the state budget, growing from 1.3% of nominal GDP in 1989 to a high of 6% of GDP in 1995 (*Figure 10*). This was when revenues from external trade as a ratio of the nominal value of exports and imports of goods and services peaked at 8%. This ratio has since declined to less than 5% during the period from 1997 to 1999. According to the IMF, customs duties have fallen by around 0.5 percentage points of GDP since 1998 and account for more than one-third of the decline in tax revenue. At the same time, revenues from SOEs as a percent of nominal GDP also has been declining from its peak of 12.1% in 1994 to 7% in 1999. *Figure 9* shows a worrisome trend for the government. The decline in SOE and external trade revenue as a percent of nominal GDP has not been

offset by increases in other revenue components. For example, VAT collection as a percentage of GDP, were lower than under the old turnover tax. As a result, government revenues as a share of GDP peaked at 24.7% of GDP in 1994, and declined to 16.3% in 2000 (*Figure 11*).

Fear of reigniting inflation and its attendant problems continues to be the principal consideration behind the government's prudent fiscal stance. For this reason, the decline in revenues as a share of GDP has been accompanied by a similar decline in both current and capital expenditures. This is apparent when we consider the evolution of the budget deficit's share of GDP, from a high of 12.7% in 1989 to modest surpluses in 1995 and 1996. However, this fiscal prudence seriously limits the state's ability to provide the public goods needed to enhance economy-wide productivity. It also means that the state has fewer resources to assist the poorest members of society and to provide adequate safety nets for those who are hurt by the redistribution effects of external liberalization.

7. Decomposition of the Sources of Effective Demand

In this section we examine the role of aggregate demand as a determinant of growth. Table 13 summarizes the average growth rate of consumption, investment, exports and imports of goods and services in real terms. Following the decomposition techniques outlined in Berg and Taylor (2001), we consider how the components of effective demand have shifted during the Doi Moi years. Using their notation, the decomposition is a variant of the Keynesian income multiplier function and can be written as follows:

$$X = \frac{s_P}{(s_P + t + m)} \cdot \frac{I_P}{s_P} + \frac{t}{(s_P + t + m)} \cdot \frac{G}{t} + \frac{m}{(s_P + t + m)} \cdot \frac{E}{m}$$

I_P/s_P, G/t and E/m can be interpreted as the direct "own" multiplier effects (or "stances") on output of private investment, government spending, and export injections with their overall impact scaled by the corresponding "leakages" which are, respectively, savings, tax, and import propensities.

Figure 12 highlights the direct "own" multiplier effect of each of the demand components on aggregate supply. It shows clearly that from 1991 on, the most important stimulus came from the private sector, which continuously pumped demand into the system, first because of its negative savings rate[28], and then later from its investment spending. During the vigorous reforms period, aggregate investment spending was growing on average by nearly 16% (Table 13), and non-state and FDI industrial investment spending soared (Table 4). The private sector injection also was magnified by its very low savings propensity (*Figure 13*), which was calculated as negative prior to 1991. (It is quite possible that I_p prior to 1991 was underestimated by the government statistics office and that the pre-1991 savings rate was very small but positive. For this reason it may be best to assume that the pre-1991 private savings rate was close to zero but positive).

As previously noted, public sector retrenchment during the vigorous reform period was characterized by massive labor shedding (the total number of state sector employees fell from 4.1 million in 1987 to 3.1 million in 1991) accompanied by substantial real wage increases for the remaining state sector employees. At the same time, after a prolonged period of real wage declines, the average government worker enjoyed annual real wage increases of 30% from 1987 to 1990, which helped to keep private consumption growth in the positive range (Table 13). Thus, in contrast to the Eastern European experience, there was no collapse in demand during the vigorous reform phase. Nevertheless, it should be pointed out that private consumption spending was the slowest growth component during this period and its share of GDP declined steeply from over 93% in 1986 to less than 77% by 1994.

Figure 12 also shows clearly that throughout the 1990s, the net stimulus from the government and state sector have been mainly negative. Real increases in government

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[28] Using Berg and Taylor (2001) notation, private savings and government spending were calculated from the following identities: $G = X - C_p - I_p - E$; $(I - s_pX) = -- (G - tX) - (E - mX)$; $s_p = \{ I_p + [(G - tX) + (E - mX)]\}/X)$.

consumption spending (10.2% average annual growth rate from 1989 to 1993) were offset by a rise in government revenues as a share of GDP, as transfers from restructured state enterprises and revenues from external trade contributed to the recovery in state finances discussed earlier (*Figure 10*). The external sector's negative stance throughout the *Doi Moi* years was due to Vietnam's very high import propensity, which cut into demand.

8. Productivity Shifts, Employment Decomposition & Income Distribution

Table 14 and *Figure 14* summarize the evolution of total employment and its allocation between agriculture, forestry and fishery, industry, construction, and services during the 1990s. While workers in the primary sector (agriculture, forestry and fishery) account for nearly 70% of total employment, this sector's share of total output has declined gradually from over 33% in 1990 to less than 24% in 1999. During this period its annual labor productivity growth rate averaged only 1.6%, which is significantly lower than the other sectors. In contrast, the industry sector's share of total employment declined from 10.2% in 1990 to 9.5% in 1999, but its share of total output rose from 19.5% in 1990 to nearly 27% in 1999, reflecting its much higher labor productivity growth rate of 10.2%.

The widening labor productivity growth gap between the primary sector and the industry and services sectors helps to explain the growing urban-rural gap documented in the Vietnam Living Standard surveys (VLSS93 and VLSS98). According to the survey findings, while the overall incidence of poverty declined significantly, from 58.1% in 1993 to 37.4% in 1998, the reduction in poverty was much greater in urban areas, where it declined from 25.1% to 9.2%. Rural areas experienced a smaller decline, from 66.4% to 45.5%. Moreover, real per capita expenditure in urban areas grew twice as fast, recording a 60% increase, relative to rural areas, which recorded a 30% increase (World Bank 2000).

The primary sector workforce largely consists of self-employed farmers and agricultural laborers[29]. Its very low labor productivity supports the view that many agricultural workers are underemployed in a sector dominated by seasonal work. According to VLSS98, the average time spent on "economic activities" (remunerative work) per year for working age adults in agriculture was 1815 hours; in industry it was 2109 hours and in services it was 2354 hours (Vu Duc Khanh et al. 2001). One analysis of VLSS noted the extent of underemployment in agriculture "in the fact that the share of employment in self-employed agriculture (61.6% in 1997-98) is substantially higher than the share of hours spent working in self-employed agriculture (56.0%)" (Bales et al. 2001). It also is very likely that this sector and the informal services sector functions as the sink to absorb workers made redundant as a result of downsizing in the SOE and state administration sector.

From this perspective, the information in *Figure 1*, which separates each sector's contribution to overall employment growth, provides additional insight regarding employment shifts between sectors. The first thing to note is the low productivity primary sector's dominant contribution to employment growth, although its share declined somewhat between 1992 and 1997. It strongly suggests that the economy is operating well below its full capacity level given the large reservoir of underutilized labor resources. The second thing to note is the pronounced shifts in sectoral contributions to employment growth over the decade. For example, the industry sector saw sharp employment fluctuations, which were largely due to the massive restructuring of state-owned enterprises (SOEs) and their greater exposure to a more liberalized and competitive environment[30]. Large numbers of laid-off workers from state enterprises

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[29] The VLSS98 survey (Glewwe 2000) found that nearly 80 percent of the working population are self-employed. Indeed, the largest occupational category is self-employed farmers who make up 59 percent of the workforce. Another 20 percent are self-employed whose income source is the non-agricultural sector. The remaining 21 percent are wage and salary workers who work for the state including state-owned enterprises (8 percent), wholly Vietnamese-owned enterprises including small household businesses (8 percent), joint ventures (about 1 percent) and foreign-owned businesses (0.4 percent).

[30] The reforms of 1990-93 reduced the total number of SOEs from about 12,000 in 1990 to 7000 by the end of 1993. About 2,000 locally controlled enterprises were liquidated and another 3,000

shifted over to the urban services sector during this period and it became the most important contributor to employment growth, especially from 1994 to 1997. It also should be noted that Vietnam's shift to a more market-oriented economy, and the growth of FDI during this period, helped to create new demand for a broad range of consumer and business services.

The evidence from the Living Standard surveys (VLSS93 and VLSS98) leaves little doubt that, while per capita income has risen and most Vietnamese are better off, the gains from the first phase of reform and external liberalization have largely favored urban, educated, white-collar, and relatively well-off households. Inequality increased by all measures, with the Theil T index[31] recording the greatest change (*Table 15*). The disparity between richer and poorer households also was apparent when comparing real per capita expenditure between the poorest and richest deciles. From 1993 to 1998, reflecting their higher income growth, the richest 10% of the population increased their spending by 53.3% compared to a 23.3% spending increase by the poorest 10%. (Glewwe et al. 2000).

The greater decline in poverty in urban areas also was accompanied by greater inequality, as measured by the Theil T index, which registered a 6.1 percent rise. In contrast, rural areas, which experienced a relatively smaller decline in poverty, experienced less inequality, with the Theil T change in inequality declining by 6.6%. The widening urban-rural gap also was seen in the higher concentration of well-to-do families in urban areas: urban households increased their representation in the highest expenditure quintile, growing to 68.7% in 1997-98 from 51.7% in 1992-93. Educated households also enjoyed a disproportionately larger share of the benefits during this

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SOEs were merged with other SOEs. Employment in the SOE sector fell from 2.1 million in 1990 to 1.7 million by the end of 1993 (World Bank 1994).

[31] For a discussion of the Theil T and Theil L inequality measures, see H. Theil, (1989) "The measurement of inequality by components of income," *Economics Letters*, 42: 197-199, and Glewwe, Paul, Michele Gragnolati, and Hassan Zaman (2000), "Who Gained from Viet Nam's Boom in the 1990s? An Analysis of Poverty and Inequality Trends," Policy Research Working Paper 2275, Development Research Group, World Bank, Washington, D.C..

period. Among households whose heads received a university education, 13.4% lived in poverty in 1992-93, but by 1997-98, the poverty rate fell to 4.5%. In contrast, 69.9% of households whose heads had no schooling lived in poverty in 1992-93, and this percent declined to 57.3% in 1997-98.

What are the main drivers of Vietnam's productivity growth during the 1990s? Following the decomposition technique suggested by Berg-Taylor[32] (2000), Yeldan (2000), and Syrquin (1986), contributions to productivity growth can be separated into two components. First, there is the pure "own sector" productivity gain, which is expressed as the weighted output growth rate of that sector minus its employment growth rate (shown as AFF 1, Ind 1, Cons 1 and Services 1 in *Figure 15*). Second, there is the contribution to overall productivity growth due to the reallocation of labor employment across sectors of the economy (shown as AFF 2, Ind 2, Cons 2 and Services 2 in *Figure 15*).

The decomposition results are presented in *Table 16* and *Figure 15*. Interestingly, at this juncture of Vietnam's economic development, and perhaps for

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[32] Following Berg-Taylor (2000), labor productivity is defined as $\rho = X / L = \sum X_i / \sum L_i$. L_i stands for employment in sector i, with $L = \sum L_i$. Similarly X_i stands for real output in sector i with $X = \Sigma\ X_i$. In terms of notation, considering changes from time $t-1$ to t, or from time zero to time one, the difference operator is Δ, i.e. $\Delta X = X_t - X_{t-1}$. We set $\hat{X} = \Delta X / X_{t-1}$ to indicate a growth rate. The first difference decomposition is

$$\begin{aligned} \hat{\rho} &= \sum [(X_i / X)\hat{X}_i - (L_i / L)\hat{L}_i] \\ &= \sum (L_i / L)\hat{\rho}_i + \sum [(X_i / X) - (L_i / L)\}\hat{X}_i \\ &= \sum (X_i / X)\hat{\rho}_i + \sum [(X_i / X) - (L_i / L)]\hat{L}_i \quad . \end{aligned}$$

The first line decomposes overall productivity growth into movements in output and employment, weighted by sectoral shares of these two variables. The second and third lines show how overall productivity change can be written as a weighted average of sectoral productivity shifts (the pure "own sector" productivity gain) plus a term denoting weighted reallocations of output or employment across sectors. The reallocation weights $[(X_i / X) - (L_i / L)]$ reflect differing productivity levels in different sectors.

institutional reasons, pure "own sector" productivity gains dominate[33]. Significant gains from factor reallocation, particularly labor shifts from the low productivity agricultural sector to the higher productivity manufacturing sector, have not yet materialized. In general the industry (and to a lesser extent construction and services) sector chalked up significant "own sector" productivity gains. The primary sector ("AFF 2") dragged down the labor reallocation component of productivity gains (see "Net Reallocation Effect" in *Figure 3*) because of its large employment share. Indeed, the net reallocation effect did not turn positive until after 1994. It turned negative again in 1998 as employment growth in the services sector slowed sharply. Indeed, it was primarily the movement of labor into the services sector during the 1990s that contributed significantly to the reallocation component of aggregate productivity growth, while contrary to expectations, the contribution of the industry sector was disappointingly weak.

Was it possible for the industry sector to play a greater role in job creation? For this to take place, the demand for and supply of industry output had to have been large enough to offset the effects of massive labor displacement in the SOE sector brought on by the reform of the state enterprise system and hardened budget constraint. At the same time, the increasingly competitive business environment of the 1990s forced enterprises to attend more to cost cutting measures and productivity growth at the expense of job creation. Indeed, *doi moi*'s climate of greater financial discipline made high output growth a mandatory requirement for significant job creation in the industry sector. As it was, the sector's 12.2% annual average growth rate during the 1990s, although high compared to other countries, was not high enough to significantly outpace the labor productivity growth that was needed to stay competitive. It may also be argued that the focus on less labor-intensive import-substitution industries during this period also acted to prevent a greater reallocation of labor to the industry sector.

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[33] This is independently confirmed by analysis of the Vietnam Living Standard Surveys, showing 'that 92.0% of the reduction in poverty between 1993 and 1998, as measured by the headcount index, is accounted for by improvements in incomes of people who remained in the same sector of employment. Sectoral shifts, which were relatively small during the period, contributed only 8.8% to poverty reduction." (Bales et al. 2001 p. 56).

The link between employment, per capita output and productivity growth in the industry sector (excluding construction) and its evolution from 1991 to 1999 is presented in *Figure 16*. The reason the industry sector was unable to play a more important role in factor reallocation also is apparent when we compare the per capita output growth path with the labor productivity growth path. To have significant job creation in this sector, per capita output growth must be appreciably greater than labor productivity growth, and this did not happen. Shown in *Figure 16*, the industry sector's net effect on employment growth echoes its percent contribution to overall employment growth.

Our analysis of the changing structure of Vietnam's domestic labor market and productivity growth during the 1990s confirms that increased labor mobility between sectors has indeed taken place. During the industrializing stage of developing countries, we expect that reallocation gains associated with shifting labor from low productivity sectors to high productivity sectors would be an important contributor to aggregate productivity growth (Syrquin 1986). However, we find that productivity gains from labor reallocation between sectors have not been particularly significant during this period, except for some reallocation gains from labor shifting to the services sector, and that pure "own sector" productivity gains have played a larger role in explaining productivity growth. It suggests that Vietnam is still at the very early stage of industrializing and has yet to realize the potential for significant reallocation gains from shifting labor out of agriculture.

We also find that output growth in the higher value-added sectors has failed to outpace productivity growth. As a result, the rate of job creation in the higher wage sectors of the economy has been disappointing. In the meantime the growing supply of labor is channeled into the low-income low productivity agricultural sector, which is weighted down by chronic underemployment. For this reason, as documented in the two Vietnam Living Standard Measurement Surveys that were conducted in 1992-93 (VLSS93) and in 1997-98 (VLSS98) by the government with international assistance, Vietnam has experienced greater inequality in income distribution during this period of relatively high per capita income growth.

9. Social Welfare & Social Policy Issues

By many measures, including the UNDP's Human Development Index, under *Doi Moi* Vietnam has made impressive gains in poverty reduction, health, child malnutrition, education and other aspects of social welfare[34]. These gains are due in part to the government's longstanding commitment to providing social services, which is reflected in the significant share of the budget allocated to social spending. Public expenditure on education as a share of GDP rose steadily fom 1.3% of GDP in the 1990-93 period to 2.1% in the 1994-97 period to 2.2% in the 1998-2000 period, while public expenditure on health as a share of GDP rose and then fell, from 1.0% in 1990-93 to 1.1% in 1994-97 to 0.8% in 1998-2000. With respect to education, in 1998 average expenditure per primary school pupil was 6.8%, compared to the East Asian average expenditure of 8% per pupil in 1990 (PER 2000).

The trend rise in spending on education from a very low base is reflected in Vietnam's actual performance, which is marked by good progress within the context of significant institutional weaknesses. For example, a joint Government-Donor review of public expenditure (PER 2000) determined that Vietnam has made considerable progress in increasing enrolments and improving the efficiency and equity of education expenditures. The primary school net enrolment ratio (NER) rose from 87% in 1993 to 91% in 1998, while the lower secondary school NER rose from 30% to 62% and the upper secondary school NER rose from 7% to 29%. However, the quality of education varies considerably between different income groups, between urban and rural areas, and between geographical regions. Children from poor families are unable to obtain quality education because they can barely afford to pay regular school fees, let alone the extra cost of private lessons from poorly paid teachers[35]. Ethnic minority children have a disproportionately high repetition and dropout rate (UN Vietnam 1999), the regional

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[34] For example, international health experts consider Vietnam's TB and malaria control programs to be among the best in the developing world.

[35] Many parents claim that the "real teaching" does not take place during regular school hours, but during private sessions organized after regular school hours. This phenomenon, unheard of during the "subsidy" period, has become widespread during the transition to market period.

variation in student educational attainment is substantial (PER 2000), and the number of instructional hours for primary school students is very low[36].

The story with respect to health spending and health outcomes is similar. Vietnam's achievements in health have been remarkable and involved a major epidemiological change: the share of communicable diseases in mortality and morbidity dropped sharply from 59 percent in 1986 to 27 percent in 1997. This is due in part to the Expanded Program of Immunization (EPI), which lowered the prevalence rate of polio from 2.6 per 100,000 persons in 1986 to 0.6 in 1996. Similarly, the prevalence of diphtheria in 1996 was only 5% of its level in 1986. Neonatal tetanus has been virtually eliminated in 591 out of 610 districts, and death from measles has fallen dramatically. As a result, the infant mortality rate also has fallen steeply from 75 per 1,000 live births in 1983, to 45 in 1989, to about 28.2 during the 1992-96 period, with a similar even steeper decline in the child mortality rate. Indeed, with the important exception of child malnutrition, Vietnam's health indicators are much better than expected considering its per capita income level and in comparison with other low- income countries (Table 16). .

At the same time, reflecting rising inequalities that have accompanied the transition to the market economy, there is evidence of a growing gap in the health profile of non-poor relative to poor households (Wagstaff and Nga 2001). During the period from 1983 to 1992, there was little difference between the survival prospects of poor and better-off children in Vietnam. However, the VLSS data indicate that the impressive national reductions in child mortality achieved under *Doi Moi* have not been evenly spread, but were instead heavily concentrated among the better-off. The higher income groups saw a large drop in the child mortality rate, but the lower income groups saw little change in their children's survival prospects. Wagstaff and Nga (2001) also find that these inequalities appear to be a recent phenomenon, since it showed up in the VLSS98 dataset but not in VLSS93. According to the authors, the rising inequality could be explained by (a) differences in immunization and antenatal coverage between rich and poor, (b)

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[36] In terms of instructional hours, the primary school year is only about 660 hours compared to a world average of 880 hours (UN Vietnam 1999).

declining access to satisfactory sanitation in the 1993-98 period among the poorest quartile, (c) declining proportion of newborns delivered by medical professionals in medical facilities among the poorest quartile, and (d) faster growth of access to safe drinking water among the better-off. Not surprisingly, the burden of disease among the rural poor was found to be four times greater than among urban dwellers. According to Dunlop (1999), the Disability Adjusted Life Years (DALYs)[37] lost per thousand people was 1,062 for the rural poor, and only 229 for the urban population. Among children 4 years and under the gap was even more dramatic: 4,170 for the rural poor, 150 for urban children.

There also are large disparities in health status between different geographical regions. The Central Highlands and Northern Mountainous region have an infant mortality rate of 56/1,000 live births and the maternal mortality rate in the latter region is four times higher than in the lowlands (UN Vietnam 1999). The incidence of non-communicable diseases also have risen, while traffic accidents account for 21.6% of total mortality in 1997, a big jump from its 1976 level of 2.2% (UN Vietnam 1999). Another telling side-effect of the transition to market deserves mention: there has been a sharp rise in self-medication and widespread purchase of drugs without a prescription due to aggressive marketing, the easier availability of drugs, and falling drug prices (the medicine price index relative to CPI declined significantly from 1993 to 1997). Antibiotics are among the most commonly dispensed drugs; as a result, antibiotic resistance levels have spread at an alarming rate due to unnecessary consumption, irrational (broad instead of narrow spectrum) and ineffective (short course instead of full course) use, and threatens to undermine Vietnam's ability to control and prevent the spread of many infectious diseases (Tornquist 1999, World Bank et al., 2001a).

[37] The Disability Adjusted Life Year (DALY), a measure of the sickness burden, is the number of years lost due to premature death or sickness.

10. External Liberalization: Phase II

Vietnam is embarking on a second phase of accelerated external liberalization (trade reform and more flexible management of exchange rate policy) and far-reaching structural reforms that include banking reform, SOE reform, fiscal reform and public administration reform. The roadmap is defined by explicit commitments to implement the Common Effective Preferential Tariff Scheme (CEPT) of the ASEAN Free Trade Area (AFTA), to honor bilateral trade agreements, particularly with the United States (USBTA), to meet requirements for WTO membership, and to comply with conditions attached to credit provided by the international financial institutions (World Bank and IMF).

Among the external liberalization measures are programmed liberalization of the exchange regime including a phase out the 50% surrender requirement on export proceeds, and removal of all restrictions on current international transfers and payments (IMF 2001). The trade reforms required by the multilateral and bilateral trade agreements will bring about extensive liberalization of trade in both goods and services. There will be major reductions of import tariffs (AFTA tariffs on most tariff lines will be reduced to 20% by 2003 and to 0-5% by 2006) and phased elimination of quantitative restrictions (QRs). The removal of QRs will lower Vietnam's rating on the IMF's 10-point scale of trade restrictiveness to 6 from its current rating of 9 (IMF 2002). Liberalized trading rights will be extended to foreign-invested enterprises (FIEs). Affiliates of foreign firms located in the ASEAN countries also benefit from the CEPT if they meet the 40% intra-regional content requirement. The services sector will be wide open to foreign firms, as WTO members will demand equal treatment to that given to U.S. firms under the USBTA, which sets a timetable for opening Vietnam's domestic banking sector, the non-bank financial services sector, the insurance sector and other services to U.S. firms.

Vietnam's external liberalization and reform agenda continues to be the subject of intense discussion among Vietnamese policymakers and the donor community.

Advocates focus on the invigorating effects of opening the economy to foreign competition. They point out that it will stimulate economic growth, improve resource allocation, drive out inefficient producers, discipline domestic producers to be more competitive, bring in more effective rules and systems from abroad, provide a counterbalance to domestic monopolies, and protect the government from political capture by interest groups. Expansion of labor-intensive and export-intensive sectors will create more employment and stimulate a more efficient reallocation of resources across sectors (VDR 2002). The World Bank estimates that USBTA will make Vietnam a more attractive FDI destination and may boost exports by an additional US$ 600 million a year. However, more research is needed to test the robustness of these findings. This includes an evaluation of the potential negative impact of various OECD trade barriers (textile quotas, labeling laws to protect the U.S. catfish industry, etc.) and OECD agricultural subsidies (estimated at about US$ 300 billion per year) on Vietnam's export earnings.

Others in the donor community worry that rapid integration in the context of weak policy capabilities and weak domestic institutions, and when there is not adequate preparation, including having a clear picture of which industries and enterprises are likely to succeed and which are likely to fail, could lead to sudden and destabilizing loss of output and employment. The downside of external liberalization may include de-industrialization, increased price and demand shocks from abroad, widening income gaps between rich and poor and across regions, foreign economic dominance, environmental destruction, excessive resource exploitation, social and political instability, and loss of cultural and national identities (Ohno 2000).

The government's official position is to acknowledge that the "process of opening up the economy and integrating with the global economy creates many difficulties and challenges for Vietnam" such as having to "deal with fierce competition in international markets while the quality of its development is low, productivity is still not high, and [the economy's] ability to compete is weak." The policy agenda calls for studying the impact of trade policies in order to "adopt effective measures to minimize adverse impacts on the

poor caused by global economic integration and trade liberalization" (CPRGS2002). In this regard, donor agencies, in cooperation with Vietnamese institutions, have launched a variety of research programs to evaluate the possible consequences of external liberalization. The programs include the following:

- A joint study of Vietnamese industry conducted by the National Economics University (NEU) and the Japan International Cooperation Agency (JICA) with the goal of helping Vietnam "achieve industrialization while vigorously pursuing trade and investment liberalization". The project strategy statement notes that the government has yet to present "sufficiently concrete industrial strategies suitable for the age of integration", and that "candidate industries for promotion (or downsizing)" have not yet been identified.
- Technical assistance and policy research provided by the Multilateral Trade Policy Assistance Program (MUTRAP), an organization financed by the European Union (EU), to analyze industry competitiveness in the context of WTO accession.
- MIMAP (Micro Impacts of Macroeconomic and Adjustment Policies) research program funded by the International Development Research Center (IDRC Canada), which involve the construction of neoclassical computable general equilibrium (CGE) models to evaluate the efficiency and distributional effects of trade liberalization and tax reform in Vietnam.
- Research commissioned by the World Bank including a neoclassical CGE model to analyze the effects of Vietnam's proposed trade reform on income distribution and poverty in Vietnam (VDR 2002).
- Project on the effects of external liberalization on Vietnam's economic performance and income distribution carried out by the Institute of Socio-Economic Development and Enterprise Management with funding from the Ford Foundation. The project includes construction of a structuralist CGE model and a comparison of its findings with those of the two neoclassical CGE models.

In addition, consultants undertaking diagnostic audits of Vietnam's state enterprises (SOEs) have been directed to assess the SOEs' degree of preparedness for trade liberalization. One may reasonably anticipate that the import-substitution industries will

experience serious competitive pressure and many will not survive the second phase of external liberalization. This is due in part to the fact that WTO will no longer allow high tariff ceilings for new members, which means that Vietnam's industrial policy must assume very low tariffs (Kimura).

The preliminary results of the two neoclassical CGE models point to somewhat divergent findings, although the results of both simulations are in agreement that well-to-do urban households will benefit the most from external liberalization. The CGE model of the Vietnamese economy commissioned by the World Bank concludes that the trade reforms will directly benefit the poor (VDR 2002), but the effects of tariff removal on nominal household income will not be uniform. The CGE simulation results suggest that the two top urban quintiles and the second top rural quintile will enjoy nominal household income increases in excess of 10 percent, while the poorest rural quintile will enjoy a 2.6 percent increase (VDR 2002). Simulation of the MIMAP CGE model, which also is based on Vietnam's input-output (I-O) table and ten household groups (five rural and five urban income quintiles defined by VLSS), find that modest economy-wide efficiency gains from combined tax and tariff reform are accompanied by a sharp redistribution against rural and poor households, with the greatest benefits going to the richest urban household group. In the MIMAP model, the sharply asymmetric impact of tariff reform among rural and urban household groups are due to differences in expenditure patterns across households as well as differences in the ownership pattern of the factors they hold. Rich and urban households benefit from trade liberalization because their consumption of imported goods is greater than that of poor and rural households. On the income side, the rural work force are hurt most because they hold proportionately more industry specific factors and therefore are less equipped to take advantage of changes in relative prices induced by the tariff reforms (Nguyen and Tran 2000). In order to explain the divergent findings of these two neoclassical CGE models, it will be necessary to undertake a systematic comparison of their model equations and structural relationships in order to determine the differences in their underlying assumptions.

According to the World Bank, trade and SOE reforms will lead to labor redundancy "as some enterprises close and others shed labor in order to improve their efficiency and profitability" (VDR 2002). The effort to shift labor resources to more efficient sectors of the economy is to be facilitated by the Assistance Fund for SOE Rearrangement and Equitization, a safety net established for an estimated 400,000 displaced workers with financing from the World Bank[38].

11. Conclusions

In summary, Vietnam's remarkably strong economic performance during the first phase of external liberalization and improvement in social welfare – including a halving of the incidence of poverty – is due to the coming together of several critical factors. Emerging from the postwar period of "subsidy" and central planning, Vietnam's open-door policy and far-reaching domestic and external reforms, undertaken from 1989 on, while the ASEAN and East Asian economies were enjoying a period of unprecedented economic boom and therefore were able to play a significant role in boosting trade and foreign direct investment, produced far more positive results than that experienced in Eastern Europe and the former Soviet Union. It also made a difference that Vietnam's external liberalization measures during the 1990s were appropriate to the level of economic development and domestic policy capability, and state of domestic institutions, at the time. Moreover, the external liberalization measures did not include deregulation of the capital account, and there were times when the government intervened to prevent the current account deficit from rising to unmanageable levels.

At the same time, the successful macroeconomic outcome and significant social welfare gains have been accompanied by a widening income gap between rich and poor, between urban and rural areas, and between regions. Preliminary results of simulations of the two CGE models, discussed in Chapter 10, suggest that higher income groups in

[38] The Fund will finance compensation and retraining for redundant workers. The compensation package will include up to two months of basic salary per year of service, a lump sum payment ranging form VND 5-10 million plus retraining costs (VDR 2002).

urban areas will continue to reap a disproportionate share of the gains from external liberalization. The Comprehensive Poverty Reduction and Growth Strategy (CPRGS) paper prepared by the government concurs, noting that while "*economic growth* broadly contributes to poverty reduction, our ability to improve the status of the poor (in terms of income level, access to development resources) depends on the type of economic growth that takes place. In other words, the distribution of the benefits of growth among different population groups, including income groups, depends on the character of growth. An analysis of changes in the income level of different population groups shows that rich people have benefited more from economic growth, and this has widened the gap between rich and poor" (CPRGS 2002).

To address this concern, the CPRGS agenda highlights pro-poor measures (improved governance including strengthening of grassroots democracy to ensure better accountability, infrastructure investment in the poorest communities, better health and education for the poor, greater emphasis on agriculture and rural development, improving the environment for small and medium enterprises, and so on) to "narrow the social development gap between different regions and population groups" and to "reduce the vulnerabilities of the poor and disadvantaged groups" (CPRGS 2002). The government's ability to carry out these tasks effectively will depend on its capacity to govern and to collect revenues; it will need to develop effective measures to offset the anticipated erosion in revenues from external trade (associated with extensive tariff reduction) as a share of total government revenues. In conclusion, the second phase of external liberalization places Vietnam on a trajectory that offers great promise at considerable risk, especially if its domestic institutions and enterprises are ill-prepared to operate in a more challenging and highly competitive environment.

Box 1. The *Doi Moi* Reforms

Box 1. The *Doi Moi* Reforms

External Liberalization Measures:

- Unification and massive devaluation (by 90%) of the exchange rate
- Liberalization of controls on retention of foreign exchange by exporting firms
- Trade liberalization: reduction of tariff barriers and quantitative restrictions
- Foreign trade reforms: state and private firms have easier access to imports and better incentive to export
- Foreign Investment Law to attract foreign investment

Anti-Inflation Measures:

- Introduction of positive real rates of interest
- Budget tightening and greater fiscal discipline
- Credit restraint

Rural Reforms

- Decollectivization of agriculture
- Return to self-managed family farms
- Long term leases granted to farmers

Pro-Market Measures:

- Price liberalization: virtual elimination of price controls
- Removal of two-tier price system
- Imported intermediate materials valued at market prices
- Encouraging private sector development: new laws defining the rights and obligations of companies and private enterprises

SOE Reforms:

- Hardened budget constraint; SOEs placed on self-financing basis
- Drastic reduction of subidies; easy access to cheap credit ended
- Decentralization of decision-making and increased management autonomy

Banking Reforms

- Separation of central banking from commercial banking
- Diversification of Institutions and of Ownership
- Foreign participation permitted
- Greater autonomy and independence

Legal Reforms

- Law on Private Business and Law on Companies approved in December 1990
- Foreign Investment Law amended in 1990
- Law on Central Bank, state-owned banks and credit institutions approved in 1990
- 1992 Constitution officially recognizes multi-sector economy
- Property rights strengthened with amendment of Land Law in 1993
- Law on Environmental Protection enacted in 1993
- Bankruptcy Law, Labor Code and Law to Promote Domestic Investment enacted in 1994
- Civil Code and Commercial Law enacted in 1995

Box 2. Chronology

	GDP Growth	*Retail Price Inflation*	*Real Wage Growth*	*State Sector Growth*	*Nonstate Sector Growth*	*Significant Events*
1976	16.8%	21.9%	N.A.	N.A.	N.A.	War-devastated economy supported by foreign aid; value of imports are 4.6 times value of exports; Fourth Party Congress decision to impose DRV institutions and central planning methods on South.
1977	3.7%	18.6%	-14.3%	6.4%	4.6%	Sharp rise in export growth and in state sector investment; surprise withdrawal of Southern currency; VCP takes over property of rich Chinese; measures against Chinese merchant community disrupt rural economy.
1978	0.7%	20.9%	-17.6%	-2.1%	3.0%	Invasion of Cambodia; end of Chinese and Western aid; private trade suppressed; sharp fall in domestic supplies of imported goods and staples, as agricultural output dropped by 6.4%; consumer goods shortage; violating plan directives, SOEs get inputs directly from suppliers.
1979	0.6%	19.4%	-15.0%	1.6%	-3.6%	Short destructive war with China; economic crisis (1979-80) compounded by reduction in low price inputs and bad weather; external threat a factor in party decision to relax controls on private sector production and to temporarily abandon drive to collectivize Mekong Delta.
1980	-2.9%	25.2%	-14.8%	-16.9%	4.0%	Imports fall by nearly 14%; 40% of rice crops in North destroyed by typhoons; policy U-turn seen in politburo decision to tighten controls on private staples trade. Recentralizing package introduced in 1980-81.
1981	3.5%	69.6%	7.7%	1.6%	2.6%	Third Five Year Plan (1981-85); effort to recentralize while making concessions to bottom-up change in the form of agricultural output contracts and “three-plan system” which lets SOEs produce and sell goods in free market once quotas are met; economy recovers at cost of higher inflation, speculation, smuggling and corruption.
1982	7.7%	95.4%	-19.9%	2.3%	10.8%	Import shortfall covered by Soviet Union; 81% of Vietnam’s imports are from the Soviet bloc, up from 52% in 1978.
1983	6.9%	49.5%	-8.3%	2.0%	8.6%	Government grants wage increase to state employees; mounting pressure to recentralize.
1984	8.4%	64.9%	-19.2%	18.8%	5.6%	Food crisis; malnutrition is widespread; UNICEF estimates a daily average calorific ration of 1,900 for the general population.
1985	7.6%	91.6%	17.6%	14.8%	3.0%	Currency reform introduced in September a disaster; IMF blocks credits to VN; free market prices rise sharply; 5 key commodities – rice, sugar, kerosene, fish sauce & meat – are put back on ration list in North; official dong to US$ exchange rate is 1.2 but free market rate is 70.
1986	2.8%	774.7%	-7.4%	1.7%	3.7%	*Doi Moi* launched at historic Sixth Party Congress; aid from Soviet Union key source of support for subsidized state sector of economy; greater SOE autonomy encouraged; inflation severely reduces urban household savings; official dong to US$ exchange rate is 14 but free market rate is 261.
1987	3.6%	223.1%	39.7%	5.7%	2.1%	Abolition of interprovincial trade barriers; rice prices fall; agricultural production fall sharply; Foreign Investment Law enacted; Land Law promulgated; government eliminates subsidies, impose budget controls, adjusts

						exchange rate and pricing system; hospital and school fees introduced; "contract responsibility system" for SOEs; rationing for many commodities abolished; internal trade checkpoints removed; gap between free market and official prices narrows; official dong to US$ exchange rate is 107 but free market rate is 883.
1988	6.0%	349.4%	29.1%	7.6%	4.8%	Widespread food shortages; in March State Bank botches introduction of new currency; additional reforms: expanded user rights for farmers; de-cooperatization of agriculture; increased autonomy for SOEs; foreign trade restrictions eased; separation of commercial and central banking functions.
1989	4.7%	36.0%	20.1%	-1.8%	9.8%	Termination of CMEA assistance; comprehensive reforms: unification and devaluation of exchange rate; reduction of trade restrictions; price liberalization; positive real rates of interest rates; anti-inflation measures: credit restraint, budget tightening; SOE weak financial position exposed; SOE transfers to budget declined; massive demobilization involving 500,000 soldiers; decollectivization of agriculture; return to self-managed family farms; SOE reforms include elimination of nearly all direct subsidies and price controls and decentralization of decision-making to SOE managers; restrictions on private sector activity reduced; FDI encouraged.
1990	5.1%	67.1%	31.6%	-3.5%	11.2%	New banking laws separate central banking from commercial banking; Foreign investment law amended; corporate law establishing framework for limited liability and joint-venture company activities approved.
1991	5.8%	67.5%	9.3%	6.6%	5.3%	Private companies given permission to directly export and import.
1992	8.7%	17.5%	43.7%	10.6%	7.5%	New Constitution adopted; multi-sector economy officially recognized; trade pact with EU signed.
1993	8.1%	5.2%	47.2%	9.5%	7.1%	Land Law amended; Bankruptcy law and Environment Law approved; at November Paris Club meeting, West promises Vietnam US$ 1.7 billion in loans.
1994	8.8%	14.4%	24.5%	10.4%	7.8%	US trade embargo lifted; Labor Code enacted; with perception that Vietnam's crisis had ended, reform slowdown; FDI subject to stricter regulation, more selective criteria to have FDI contribute to VN's development objectives re: investment quality, technology transfer, etc.
1995	9.5%	12.7%	8.7%	9.4%	9.6%	Law on State-Owned Enterprises approved placing SOEs under direct supervision of Ministry of Finance; National Investment Fund established to provide preferential credit for selected sectors and disadvantaged regions; very slow progress in equitization.
1996	9.3%	4.5%	8.7%	11.3%	8.0%	Eighth Party Congress debates leading role of SOE sector; Law on The State Budget and revised budget classification improved government's capacity to produce better fiscal reports; fiscal transparency strengthened.
1997	8.2%	3.6%	14.1%	9.7%	7.1%	Asian financial crisis; social unrest in countryside; all barriers against internal trade of rice removed; private enterprises granted licenses to export rice under certain conditions; temporary import bans introduced for selected commodities with large domestic stocks, notably cement, steel, paper, motorcycles, electric fans, beer and other

						beverages, sugar, confectionary.
1998	5.8%	9.2%	-0.6%	5.6%	3.7%	Grassroots Democracy Decree approved; temporary introduction of non-tariff measures and exchange controls to restrain imports and protect domestic production.
1999	4.8%	0.1%	0.1%	4.3%	3.7%	New Enterprise Law approved; Decree 57 to liberalize export-import rights passed; VAT introduced.
2000	6.8%	-0.6%	N.A.	N.A.	N.A.	New Enterprise Law becomes effective; bilateral trade agreement with US signed; Vietnam Stock Exchange opens.
2001	6.8%	0.8%	N.A.	N.A.	N.A.	IMF and World Bank resume structural adjustment lending to Vietnam

Sources: General Statistics Office, Kolko (1997), Fforde and de Vylder (1996), Riedel and Turley (1999), IMF1998, IMF and World Bank (1999), NCSSH 2001

A. Tables

Table 1. Main Economic Indicators.

	GDP Growth (annual)	Per Capita National Income Growth	Final Consumption as % of GDP	Gross Capital Formation as % of GDP	Ag., Forestry & Fishery	Industry	Services
1975-1980	0.30%*	-1.9%*	105.9%	20.3%	0.80%	2.20%	-1.50%
1981-1988	5.60%	3.7%	101.5%	13.2%	4.80%	9.10%	4.20%
1989-1993	6.50%	4.6%	90.6%	17.2%	4.10%	6.10%	8.30%
1994-1997	9.00%	7.1%	81.9%	26.2%	4.20%	13.20%	8.80%
1998-2000	5.80%	3.9%	75.7%	28.7%	4.20%	10.50%	4.30%

Source: Transformations by author; original series from GSO.

* 1977-1980

Table 2. Key expenditure indicators as a percent of GDP.

	Final Consumption	Gross Capital Formation	Total Expenditure	Exports/ Imports (f.o.b.)	Trade Deficit	Government Current Expenditure	Private Consumption
1975-1980	105.9%	20.3%	126.3%	24.0%	22.9%	n.a.	n.a.
1981-1988	101.5%	13.2%	114.7%	36.1%	12.2%	14.4%	85.1%
1989-1993	90.6%	17.2%	107.8%	86.0%	7.5%	17.3%	73.3%
1994-1997	81.9%	26.2%	108.0%	70.2%	9.4%	17.1%	64.8%
1998-2000	75.7%	28.7%	104.4%	91.6%	4.2%	13.1%	62.6%

Source: Transformations by author; original series from GSO.

n.a.: not available

Table 3. Total Registered Foreign Direct Investment Capital (1988-1999), Millions of US$

Singapore	5,867	15.8%
Taiwan	4,592	12.4%
Hong Kong	3,613	9.7%
Japan	3,361	9.1%
Korea	3,149	8.5%
France	2,136	5.8%
British Virgin Islands	1,738	4.7%
Russia	1,519	4.1%
US	1,309	3.5%
United Kingdom	1,180	3.2%
Malaysia	1,121	3.0%
Australia	1,114	3.0%
Thailand	1,072	2.9%
Other countries	5,318	14.3%
Total	31,770	

Table 4. Total investment capital by ownership sectors.

	Percent share of total			Average annual growth rate		
	State	Non-state	FDI sector	State	Non-state	FDI sector
1976-1980	n.a.	n.a.	n.a.	6.4%	n.a.	n.a.
1981-1988	59.4%	40.0%	0.6%	3.6%	7.5%	n.a.
1989-1993	40.6%	42.0%	17.4%	26.5%	21.3%	149.3%
1994-1997	42.5%	26.9%	30.6%	13.5%	-0.7%	16.3%
1998-2000	57.8%	20.6%	21.6%	13.3%	-1.1%	-23.8%

Table 5. Structural Composition of Foreign Direct Investment

	1988-93	1994-97	1998-2000
Agriculture, forestry, fishery	4.1%	5.5%	8.4%
Oil & gas	36.7%	19.5%	14.8%
Heavy industry	7.9%	19.2%	21.8%
Light industry, food & EPZ	16.5%	22.1%	20.9%
Construction	3.6%	9.0%	9.1%
Transport & communications	5.3%	4.1%	3.4%
Hotel, tourism	10.3%	10.5%	8.4%
Office property & apartments	3.5%	6.8%	9.4%
Other services	12.1%	3.2%	3.8%

Table 6. Average annual GDP growth rate by economic and ownership sectors.

	GDP	Agriculture, Forestry & Fishery	Industry	Construction	Services	State sector	Non-state sector
1977-1980	0.30%	0.80%	2.20%	-4.60%	-1.50%	-2.8%	2.0%
1981-1988	5.60%	4.80%	9.10%	2.50%	4.20%	6.8%	5.2%
1989-1993	6.50%	4.10%	6.10%	8.10%	8.30%	4.3%	8.2%
1994-1997	9.00%	4.20%	13.20%	14.60%	8.80%	10.2%	8.1%
1998-2000	5.80%	4.20%	10.50%	3.10%	4.30%	5.2%	6.2%

Source: Transformations by author; original series from GSO.

Table 7. Selected Monetary and Credit Variables as a Percent of Nominal GDP.

	Net Foreign Assets	Net Domestic Assets	Claims on nonstate sectors	Claims on state enterprises	M2/GDP	Dong liquidity	Currency outside banks	Dong deposits	Foreign currency deposits	Inflation rate
1986-1988	1.8%	15.5%	2.4%	14.6%	17.2%	16.3%	7.7%	8.6%	0.9%	449.1%
1989-1993	7.0%	18.5%	2.5%	11.9%	26.3%	18.4%	9.1%	9.3%	8.0%	38.7%
1994-1997	5.1%	19.1%	8.5%	10.4%	24.2%	19.0%	8.8%	10.2%	5.2%	8.8%
1998-2000	15.1%	24.2%	14.5%	13.3%	39.6%	29.0%	9.9%	19.1%	10.6%	2.9%

Source: Author’s transformations using original data from IMF, World Bank and State Bank of Vietnam.

Table 8. GDP, Per Capita Income and Population
(averaged annual percent change)

	GDP	Per Capita National Income	Per Capita Electricity Output	Population
1977-1980	0.2%	-1.9%	7.1%	2.20%
1981-1988	5.6%	3.7%	8.6%	2.20%
1989-1993	6.5%	4.6%	13.9%	1.80%
1994-1997	9.0%	7.1%	21.8%	1.70%
1998-2000	5.5%	3.9%	29.9%	1.50%

Source: Transformations by author; original series from GSO.

Table 9. Inflation: average annual rate.

	Retail price	Organized market	Free market
1976-1980	21.2%	3.5%	42.2%
1981-1985	214.8%	90.7%	60.2%

Source: Transformations by author; original series from GSO.

Table 10. Number of Industrial Enterprises.

	Average number of enterprises			Annual average growth rate		
	State owned	Domestic non-state	Foreign invested	State owned	Domestic non-state	Foreign invested
1975-1980	2088			17.5%		
1981-1988	3039	333060	1	2.2%	4.2%	
1989-1993	2540	411260	74	-7.8%	5.8%	236.0%
1994-1997	1919	587897	478	-2.7%	8.1%	42.4%
1998-1999	1804	602850	920	-1.6%	0.1%	20.6%

Table 11. Traded vs Non-traded Goods Prices, Export and Import Growth Rates.

	Relative Price Traded/ Non-traded	Exports (US$)	Imports (US$)	Price of Traded Goods	Price of Non-traded Goods
1987-1988	9.8%	14.9%	13.1%	402.3%	357.8%
1989-1993	-8.8%	27.4%	9.7%	42.9%	57.2%
1994-1997	0.2%	32.5%	32.3%	12.3%	12.5%
1998-2000	2.2%	16.4%	10.4%	7.4%	5.1%

Table 12. Foreign Trade by Management Type.

	US$ million		Percent of total	
	1995	1998	1995	1998
Exports				
Total	5448.9	9360.3		
Central	2531.2	3885.8	46.5%	41.5%
Local	2477.6	3491.9	45.5%	37.3%
FDI	440.1	1982.6	8.1%	21.2%
Imports				
Total	8155.4	11499.6		
Central	3475.4	5672.4	42.6%	49.3%
Local	3211.9	3159.2	39.4%	27.5%
FDI	1468.1	2668	18.0%	23.2%

Table 13. GDP Expenditure Components. Average annual growth rate in real terms.

	GDP	Consumption	Private	Government	Fixed Capital Formation	Exports of Goods & Services	Imports of Goods & Services
1987-1988	4.8%	2.9%	2.5%	8.6%	8.6%	-0.8%	4.9%
1989-1993	6.5%	3.9%	3.3%	10.2%	15.8%	48.1%	21.1%
1994-1997	9.0%	7.1%	7.1%	7.6%	14.9%	20.6%	17.9%
1998-2000	5.8%	3.3%	3.7%	-0.3%	8.3%	11.3%	8.3%

Table 14. Main Output, Employment and Labor Productivity Indicators: 1990 – 1999.

	Output Share in 1999	Output Average Annual Growth Rate: 1990-1999	Employment Share in 1999	Employment Average Annual Growth Rate: 1990-1999	Output per Worker in 1999 (Millions of Dong at 1994 Prices)	Labor Productivity Average Annual Growth Rate
Total		7.7%		2.7%	6.65	4.8%
Ag ,Forestry,Fishery	23.8%	4.3%	69.0%	2.6%	2.29	1.6%
Industry	26.9%	12.2%	9.5%	2.0%	18.74	10.2%
Construction	7.5%	10.4%	2.5%	2.1%	19.56	8.2%
Services	41.9%	7.2%	18.9%	3.6%	14.70	3.5%

Source: General Statistics Office

Table 15. Summary of VLSS Findings on Inequality.

Inequality has increased by all measures ...

	Theil's T	Theil L	Gini
1992-93	0.1966	0.177	0.329
1997-98	0.2302	0.2013	0.352
percent change	17.1%	13.7%	7.0%

Theil T changes in inequality …

	Urban	Rural	White collar
1992-93	0.1941	0.1365	0.1937
1997-98	0.2059	0.1275	0.2478
percent change	6.1%	-6.6%	27.9%

Source: Glewwe et al. (2000)

Table 16. Contribution to Overall Productivity Growth due to Labor Reallocation Between Sectors

	Net Reallocation Effect	Agriculture, Forestry, Fishery	Industry	Construction	Services
		AFF 2	Ind 2	Cons 2	Services 2
1991	-0.60%	-1.18%	-0.01%	0.01%	0.58%
1992	-0.60%	-1.40%	-0.50%	0.02%	1.28%
1993	-0.57%	-1.35%	1.11%	0.11%	-0.45%
1994	0.33%	-1.21%	0.34%	0.55%	0.65%
1995	0.45%	-1.12%	0.25%	0.17%	1.16%
1996	0.91%	-1.28%	0.25%	-0.11%	2.04%
1997	0.66%	-1.26%	0.01%	0.01%	1.90%
1998	-0.13%	-1.16%	0.69%	0.02%	0.33%
1999	1.37%	0.47%	0.13%	0.02%	0.75%

Table 15. Employment and Labor Productivity Trends (averaged annual percent change).

		Employment (percent change)				Output per worker		
	Population	Total	Agriculture, Forestry & Fishery	Industry & Construction	Services	Agriculture, Forestry & Fishery	Industry & Construction	Services
1977-1980	2.2%	4.2%	5.7%	2.7%	-0.5%	-4.6%	-1.6%	-0.8%
1981-1988	2.2%	3.3%	4.0%	0.6%	2.4%	0.9%	7.1%	3.9%
1989-1993	1.8%	3.2%	2.7%	6.4%	3.7%	1.3%	2.1%	4.5%
1994-1997	1.7%	3.1%	1.6%	1.5%	12.2%	2.6%	11.9%	-2.1%
1998-2000	1.5%	2.1%	2.2%	0.2%	2.7%	2.1%	7.7%	0.9%

Source: Transformations by author; original series from GSO.

Table 16. Social Indicators

Indicator	Unit of Measure	1985	1993	1999	East Asia	Low Income
Health						
Mortality						
Infant mortality	Per thousand live birth	63	42	29	35	77
Under 5 mortality	Per thousand live birth	105	55	40	44	116
Immunization						
Measles	Percent of age group	19	93	96	83	64
DPT	Percent of age group	42	91	95	82	70
Child malnutrition						
Life expectancy	Years	62	67	68	69	59
Female advantage	Years	3.8	4.5	4.8	3.5	2.2

Source: *Vietnam Statistical Yearbook* (various years); GSO *Vietnam Living Standards Survey 1997-1998*.

B. Figures

Figure 1. Sectoral Contribution to Overall Employment Growth

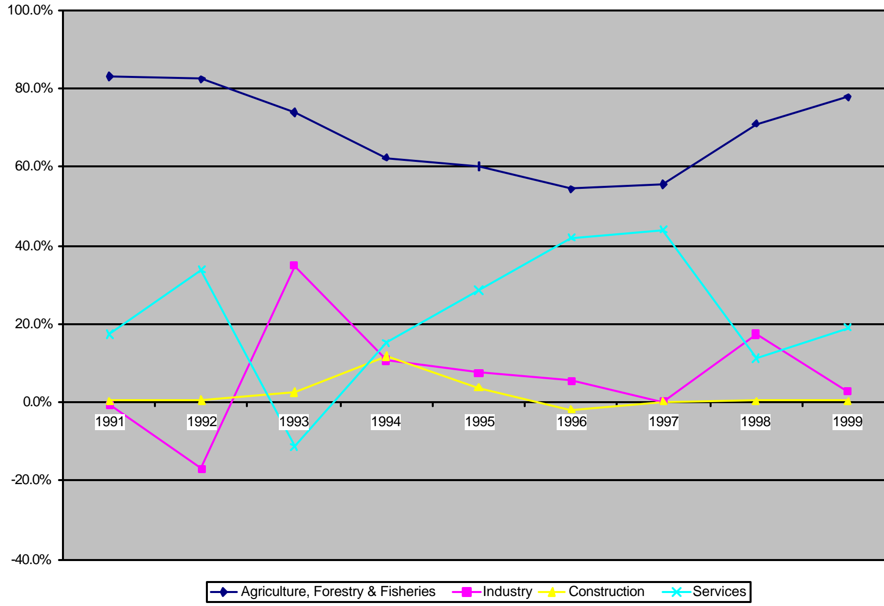


Figure 2. Relative Price and Relative Output of Non-traded to Traded Goods

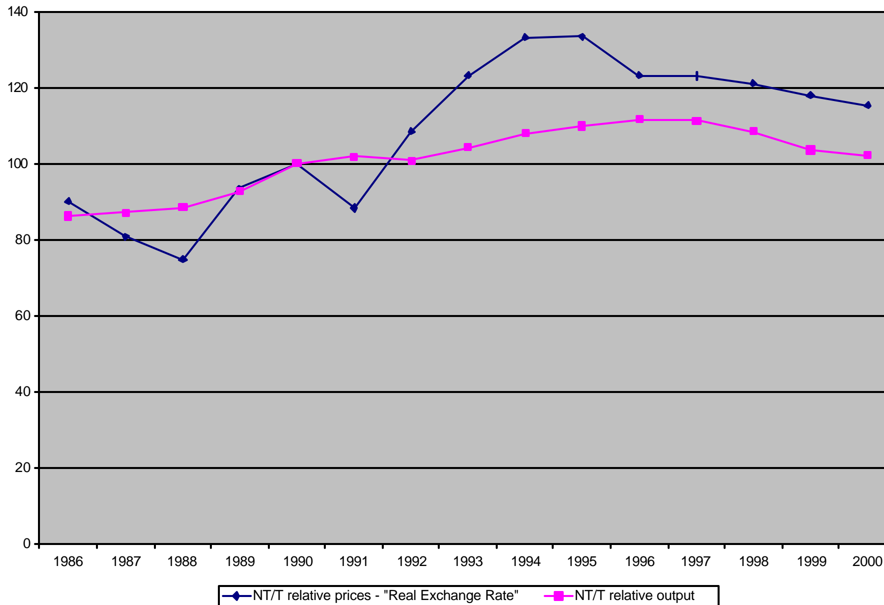


Figure 3. Trade to Output Ratio: Vietnam's Rapid Transformation into an Open Economy
(Nominal exports plus imports of goods and services as percent of nominal GDP)

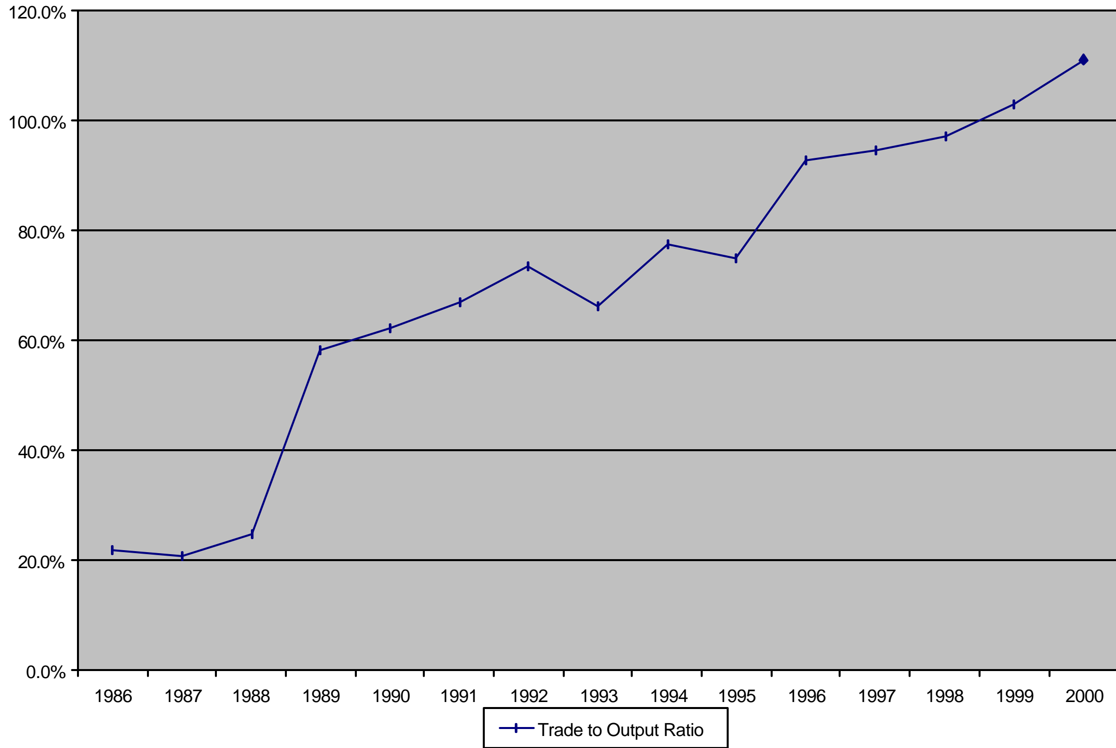


Figure 4. Share of investment capital by ownership sectors.

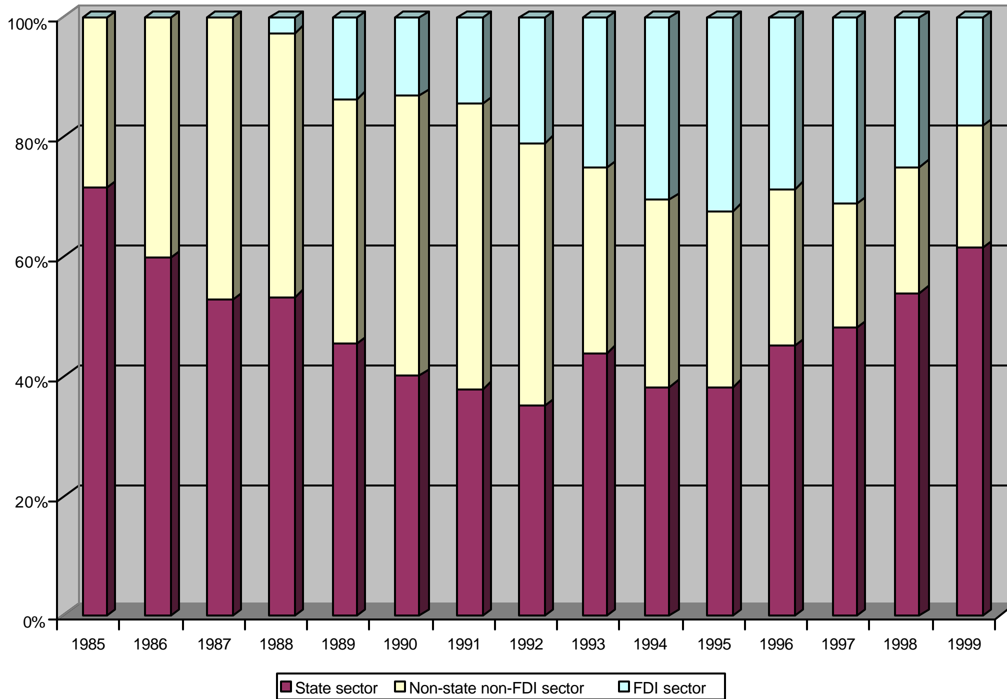


Figure 5. Key economic indicators during the "subsidy" period. Evolution of output, inflation, real wages, imports & exports.

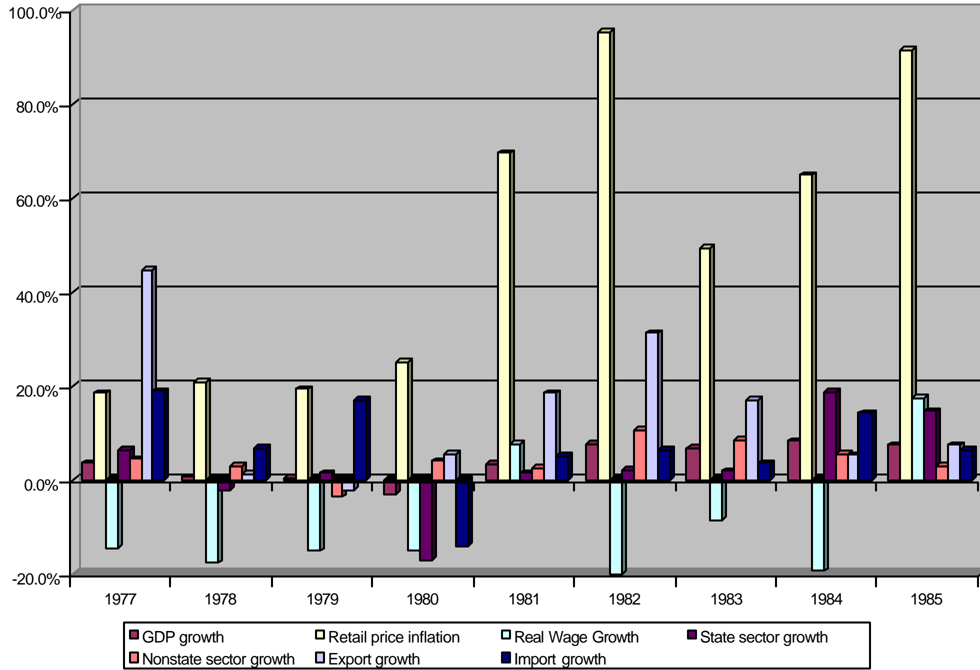


Figure 6. Gross Industrial Output. State vs Nonstate Share: 1976-1988.

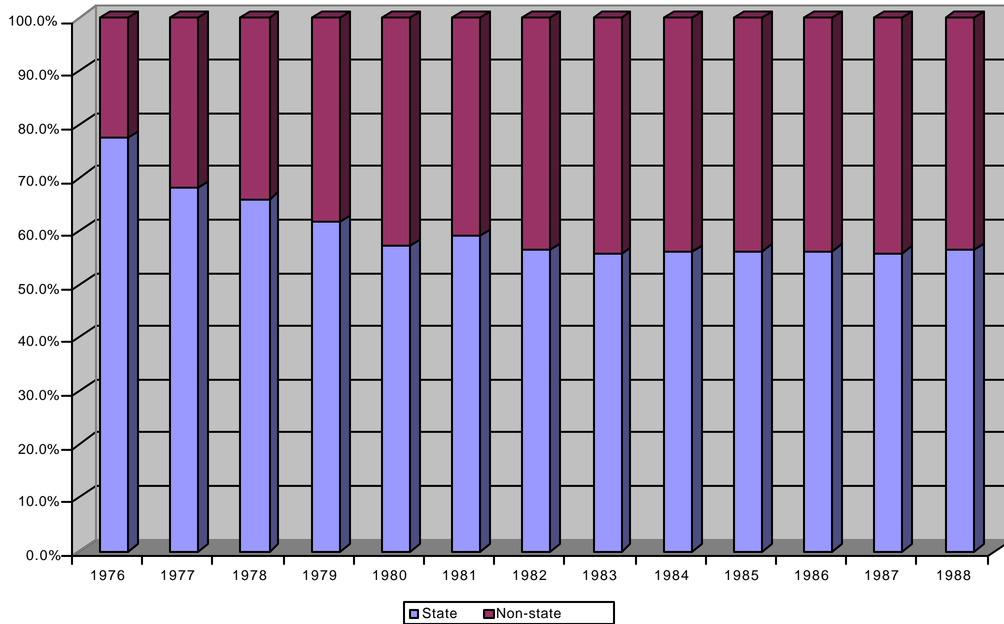


Figure 7. Interest Rates and Inflation Rate: April 1989 – May 1990.

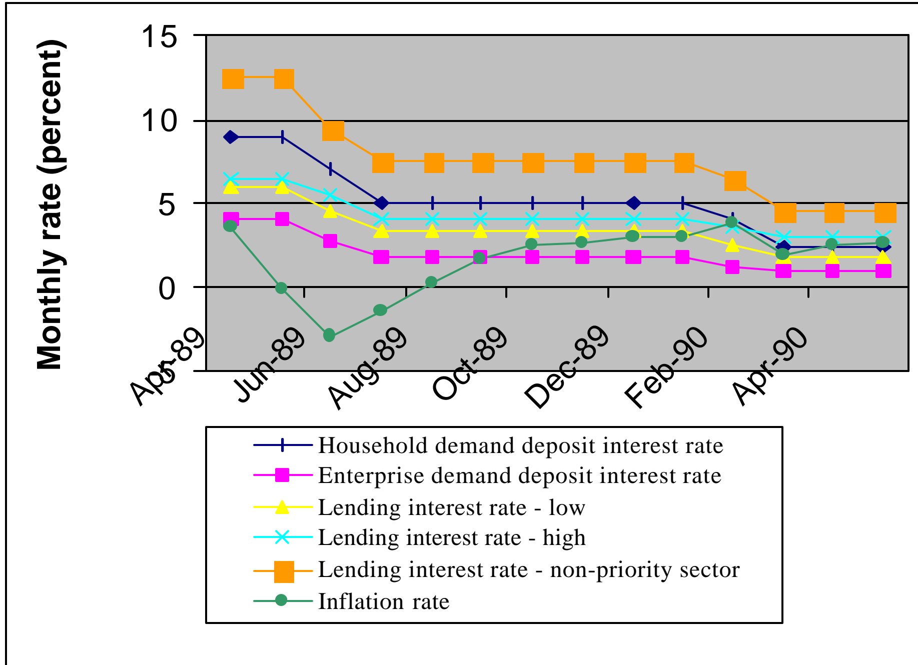


Figure 8. Trading Partners: Switch to Convertible Areas

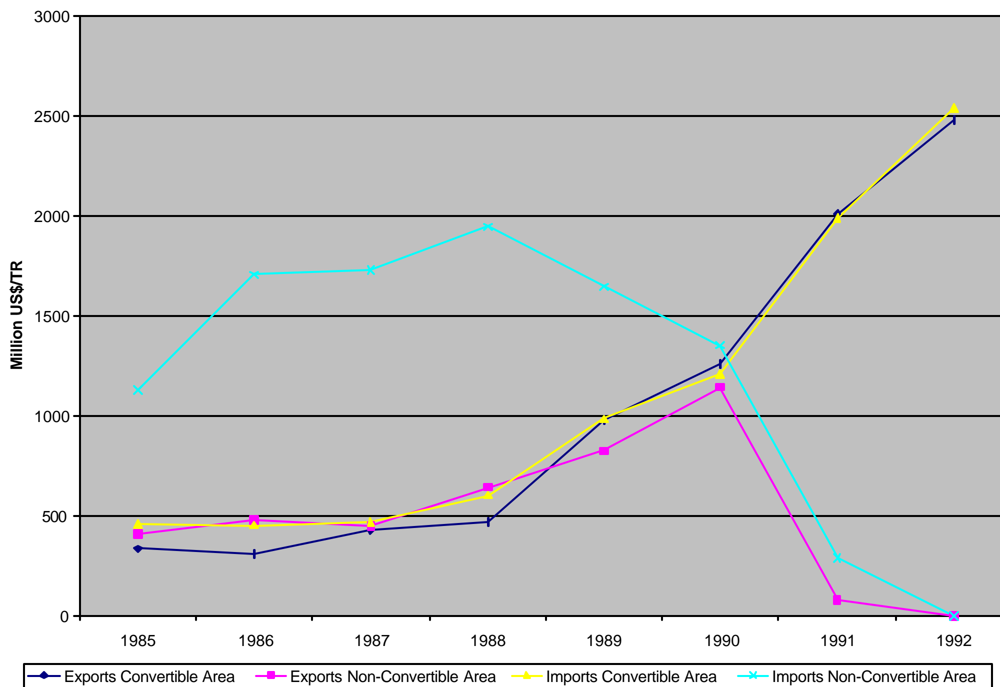


Figure 9. Merchandise Exports by Commodity as Share of Total: 1990-2000

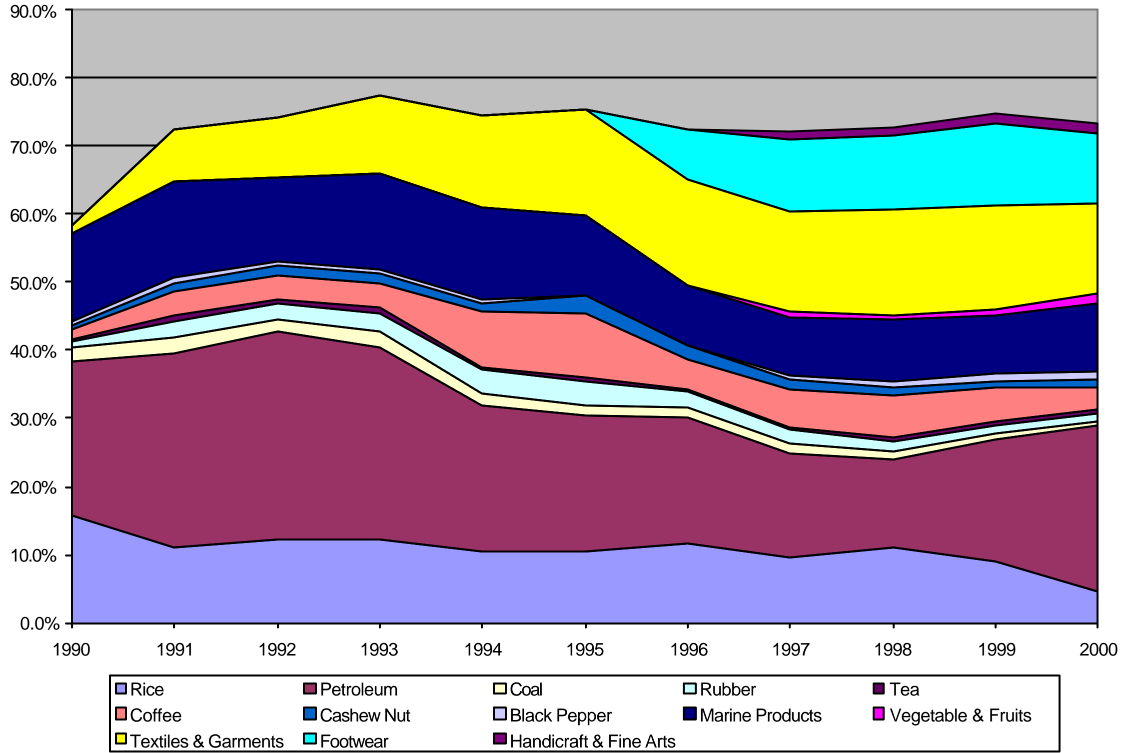


Figure 10. Revenue Components as Share of GDP (stacked).

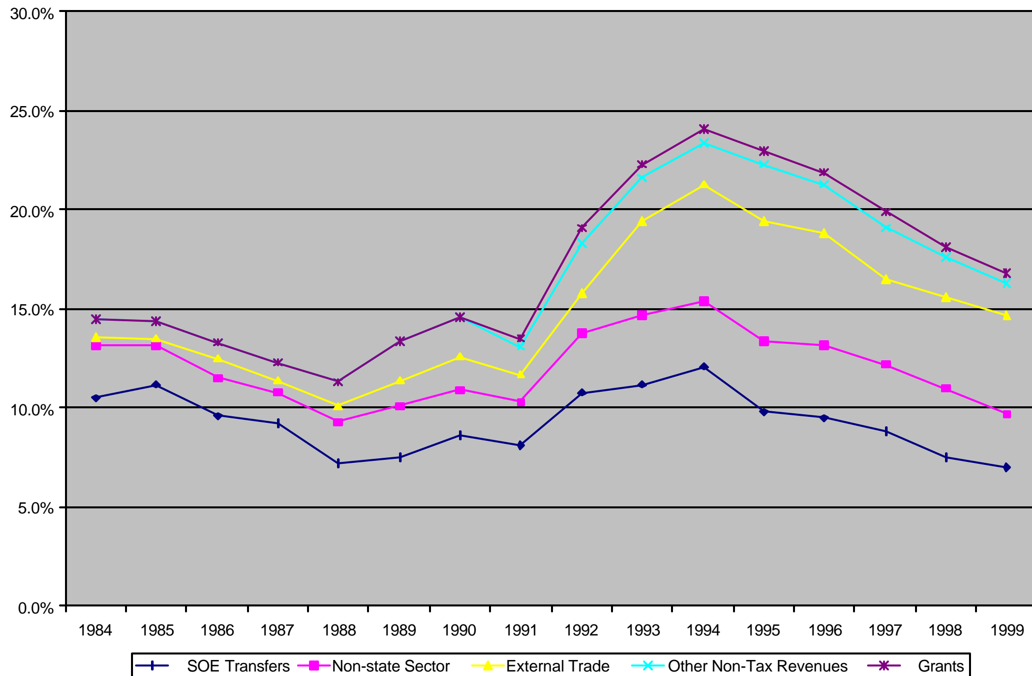


Figure 11. Revenues & Expenditures as Percent of GDP

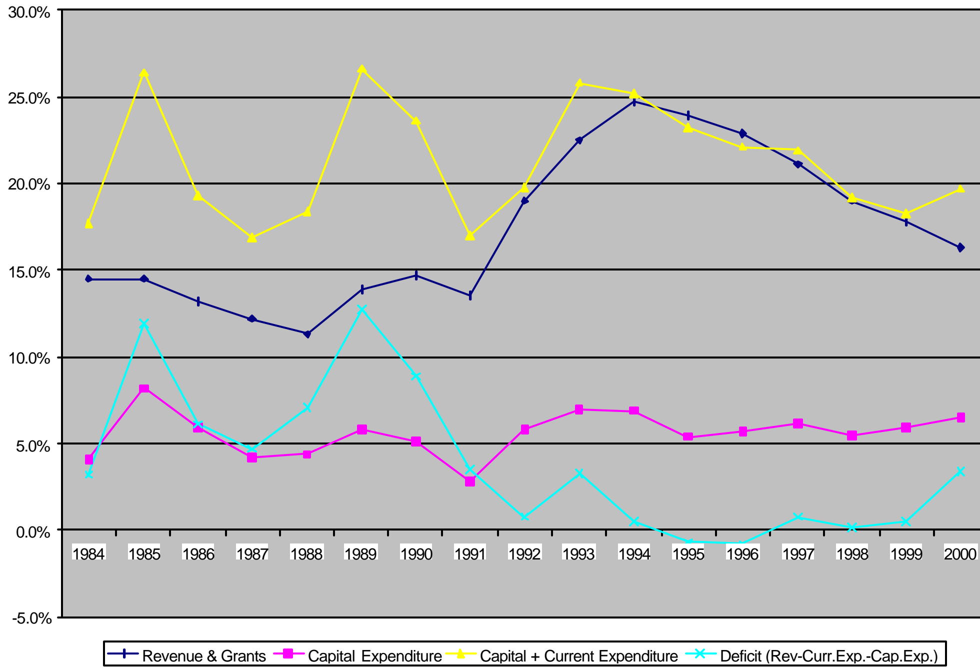


Figure 12. Sources of demand: direct "own" multiplier effects minus total supply.

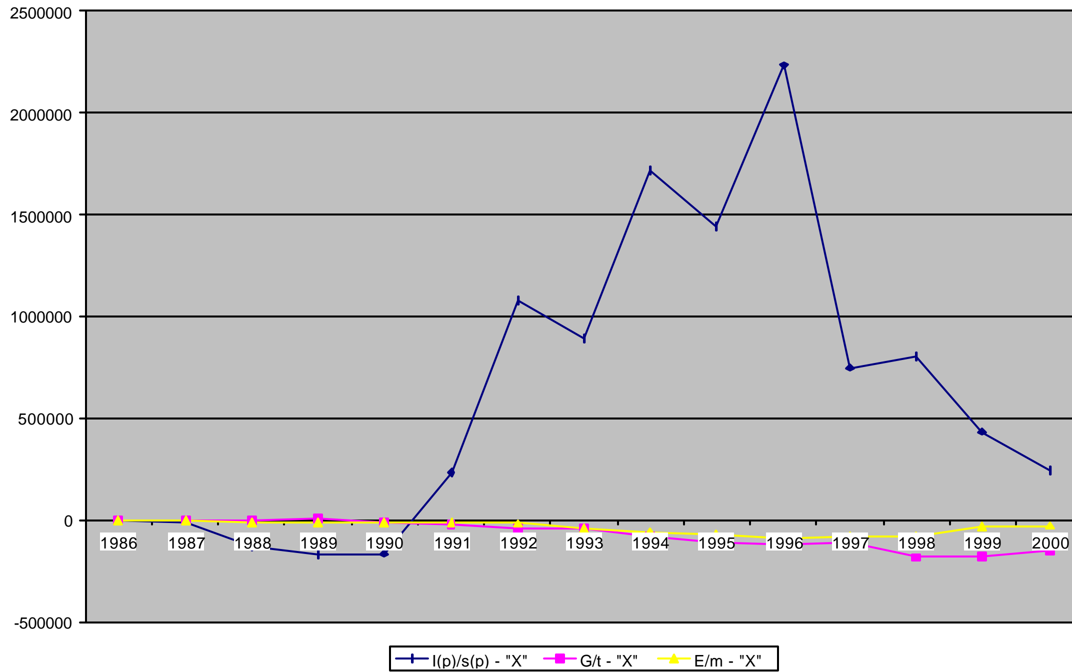


Figure 13. Leakages: Savings, Tax and Import Propensities

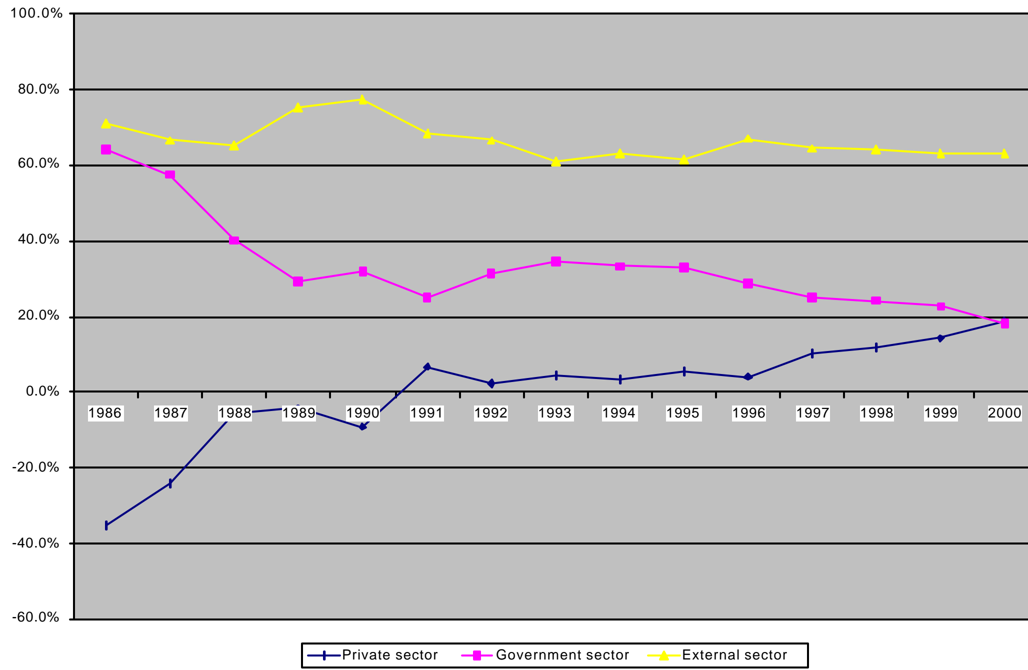


Figure 14. Total Employment by Sector.

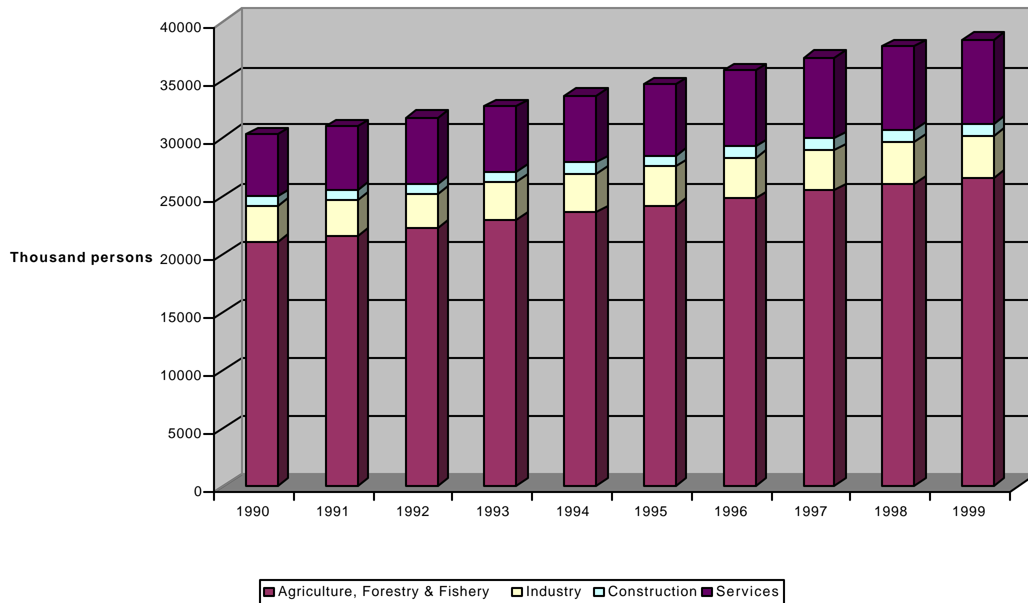


Figure 15. Decomposition of Productivity Growth into Two Components: (1) "Own Sector" Gains and (2) Gains from Labor Reallocation Across Sectors.

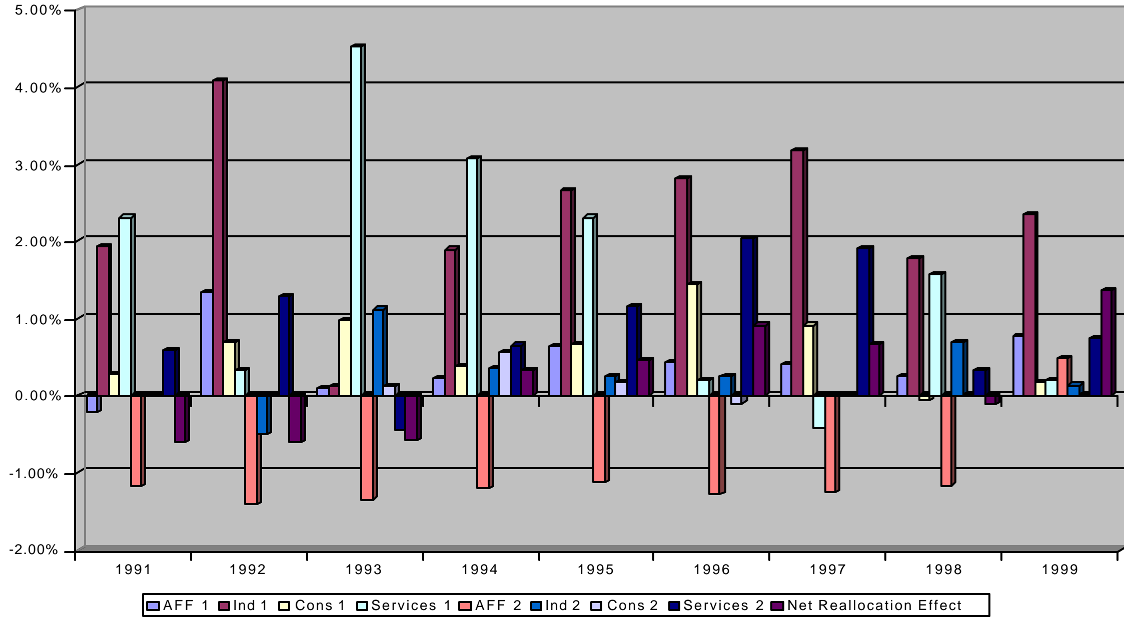
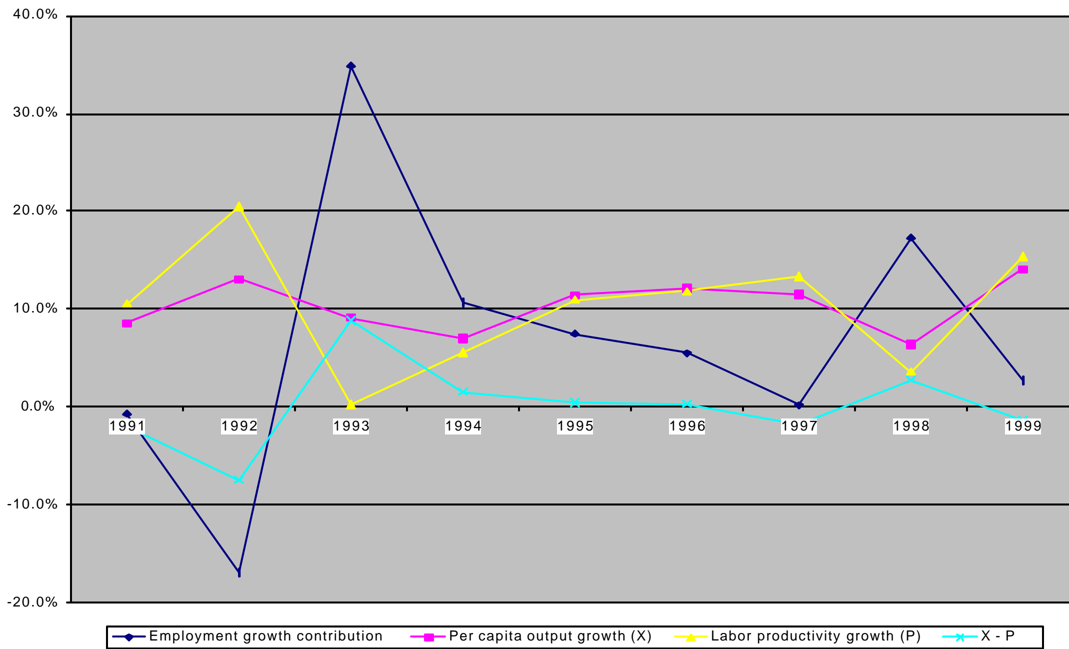


Figure 16. Industry Sector Employment, Per Capita Output & Labor Productivity Growth



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