

# External Liberalization, Growth and Distribution in the Philippines\*

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## **1 Introduction**

The worldwide trend towards financial openness that appeared in the early 1990s undoubtedly led to the growth of financial asset markets in less developed economies. Foreign funds found their way in to domestic capital markets, which were then labeled “emerging markets.” In the beginning several developing economies appeared to be benefiting from the free flow of foreign capital, which augmented their domestic savings and allowed higher growth paths. Jubilation over these developments was short-lived however. These emerging market economies suffered severe recessions as a result of the Asian financial crisis of 1997. Foreign capital moved out as fast as it arrived. Extensive analysis has been done concerning the causes and effects of Asian crisis.

Years before these capital account liberalization efforts, in the 1980s several countries including the Philippines initiated trade liberalization schemes as part of structural adjustment efforts under IMF-World Bank guidance. These programs were supposed to trigger changes in the industrial structure from one of import dependence to an export-oriented and competitive one. While these external liberalization efforts on the real and the financial side of the economy were believed to foster sustained economic growth, proponents of the programs were never explicit about the distributional effects.

This study attempts to examine the effects of external liberalization efforts in the Philippines on growth and distribution. This requires that several complex issues be sorted out – how the timing, the length and the depth of trade and capital account reforms interacted with macro conditions and how macroeconomic policy, as part of these reforms, was directed and coordinated during the period these were instituted. To accomplish this task, the important political and economic events that took place during the period these reforms were undertaken are analyzed in relation to

movements of relevant variables. This is supported by simple quantitative decomposition techniques of key macroeconomic relationships. The decomposition techniques owe its origins to structuralist writings of Taylor (1983), Berg and Taylor (2000).

The second section gives a description of Philippine economic performance. For completeness, the narrative begins from the time the Philippines acquired its independence. The focus of the study will however be from the period 1980 to the present because this is the period when the reforms were put in place. The discussion highlights the presence of stronger and more frequent bust-recovery cycles since the 1980s, which have been detected by various researchers (See Fabella (1994), De Dios (1998), De Dios (2000) and Bautista (2000)). A decomposition of aggregate demand gives quantitative perspective of historical events that took place and also shows how aggregate demand components reflect the policy stance at particular periods under study. The third section analyzes distribution effects through a decomposition of employment. By this, it is hoped that distributional effects of liberalization and deregulation could be better understood. The final section discusses areas for further research and concludes.

## **2 Philippine Macroeconomic History and Analysis**

### **2.1 Background: 1949 to 1979**

The infusion of foreign resources (mainly US reparation money) allowed the Philippine economy to recover from damages suffered during the Second World War. This was short-lived as a significant part of the aid was squandered in high import spending of final goods. The first balance of payment crisis in 1949 brought about import and exchange controls which led to a full decade of strong import substituting industrialization strategy. This allowed the economy to prosper in the 1950s. One of the key elements of the import substituting industrialization strategy was the erection of strong import quota restrictions supplemented with high tariffs to protect the industries at their infancy.

However, the expected structural transformation under this industrialization strategy — maturity of industries using domestic inputs to produce goods that were previously imported —did not happen. Import-substituting firms encouraged by the strategy remained dependent on imported raw materials, intermediate inputs and capital equipment as the strategy failed to achieve backward linkaging due to a domestic market that remained small due to a lack of redistributive efforts (especially a lack of genuine redistributive agrarian reform), a lack of cohesive industrial strategy, and corrupt practices in the issuance of import licensing, as alternating governments in the fifties used this monopoly power to expand their rent-seeking activities. This import-dependence, corruption-charged politics, a war-devastated agricultural sector, and an overvalued peso determined by exchange controls made sure that trade and current account deficits became the rule.

Reasonable growth rates were recorded in the 1950s. However, towards the end of the decade, another balance of payment crisis loomed and pressures to devalue the peso increased. Multiple exchange rates systems were implemented to stave off a de facto devaluation. Inflation rose, and in 1960 the GDP growth rate fell to 1.2%.

A regime defending the import-substitution strategy was replaced in 1962 by a new government calling for some trade and foreign exchange liberalization<sup>1</sup>. The peso was allowed to succumb to exchange market pressure as the exchange rate moved from 2.02 to 3.85 pesos per dollar. IMF help was sought (Montes, 1987). The IMF would be instrumental in designing economic policies for the Philippines starting this period. It is ironic that the Philippines, which has been the most obedient to traditional, conservative economic policies of the multilateral institutions among the

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<sup>1</sup> The Garcia administration championed the import substitution strategy, but was weakened by corruption charges in dispensing with the import franchises. The balance of payment crisis helped defeat Garcia in the presidential elections and brought the Macapagal administration to power. Macapagal campaigned publicly for the liberalization of the economy and the seeking of assistance from the IMF.

countries in the region, would become the basket case for the non-socialist countries in the region.

While the 1962 devaluation eased the pressure on the BOP for a while, import growth consistently outstripped export growth in the remaining years of this decade. This was because the export promotion strategy adopted to replace the import-substituting strategy was difficult to implement. Reliance on volatile agricultural export markets (coconut and sugar, which met stiff competition either from substitutes or from exports of other countries) and the lack of a manufacturing base for exports (with the garments and textile sector far from being competitive), did not bring about the necessary export spurt. The sluggishness of the foreign trade sector throughout the decade (despite the investment incentives to export firms) contributed to another BOP crisis in 1970 (See Jurado, 1976), which was directly triggered by an inability to pay multilateral loans used to finance an infrastructure-building spree by the Marcos government<sup>2</sup>. This was the first foreign debt crisis of the Philippines.

To cushion the impact of the 1970 BOP problem, the Philippines entered another IMF-sponsored structural adjustment program that aimed to correct the structural defects of the economy. The World Bank and the Asian Development Bank pushed for an even more outward-oriented strategy. The structural adjustment program and new development strategy included a radical devaluation of the peso, the promotion of manufactured exports (centered on garments and electronics) and incentive schemes to attract multinationals that are export-oriented<sup>3</sup>.

The move towards a centralized government with the imposition of martial law in 1972 made it easier for the government to spend for capital outlays using foreign money. During this period,

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<sup>2</sup> In 1965 Marcos defeated Macapagal and from the start embarked on high public spending.

<sup>3</sup> Foreign direct investments had been dominated by multinationals catering to the domestic market, mainly in the chemicals and manufacturing sectors of a still import-dependent economy.

foreign borrowing was the main mode of financing public investment. Because of this, the decade of the 1970s was marked as the period of “debt-driven growth.” The debts were not only derived from multilateral sources but, starting in the middle of the decade, from foreign banks awash with ‘petro-dollars’ incurred by central government as well as public and private corporations run by people close to Marcos.

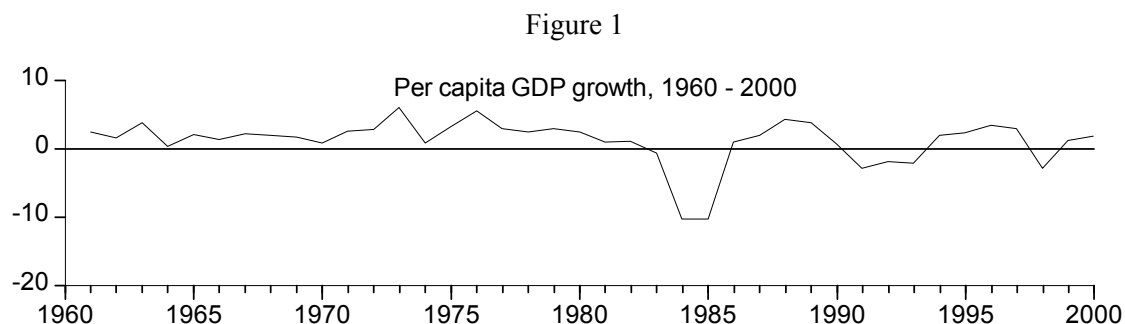
Also during this decade, a series of exogenous shocks led to large swings in domestic business activity. The highest growth for the decade of 8.5 percent in 1973 due to the export and commodities market boom was followed by 3.5 percent growth in 1974 after the first oil shock. Because available foreign resources were directed towards low productivity investment and ‘white elephants’, little genuine economic transformation took place. In this decade, one sees an inconsistent implementation of an outward-looking strategy combining export promotion with the protection of economic sectors run by close Marcos allies. Unlike South Korea, there were no performance-based incentive schemes for both the export-oriented and domestic-oriented firms. Cronies close to the Marcos regime were not subject to any sort of discipline and threat of punishment.

Table 1

Decade	Highlights
1950 – 1959	Reconstruction financing based on war reparations dries up; Import substituting industrialization strategy implemented to stave off BOP crisis; high growth in manufacturing and the economy; BOP crisis towards end of the decade
1960 – 1969	1962 devaluation; Abandonment of import-substituting industrialization strategy; Initial IMF help; Infrastructure spending spree in second half of decade; Foreign debt crisis towards end of the decade
1970 – 1979	1970 devaluation to solve BOP crisis; Centralized government under Martial Law; First oil shock; Foreign debt-driven growth with IMF assistance and support
1980 – 1989	Second oil shock; High interest rate policies by developed countries; Latin American foreign debt crisis begins in 1982; 1983 Aquino assassination and BOP crisis; Debt default and moratorium; Capital flight; Political instability; Economic collapse in 1984-85; End of Martial Law; Trade and financial liberalization in second half of decade; Recovery with IMF assistance; Series of coups against the Aquino government
1990 – 2000	Slowdown in 1990 and recession in 1991 due to another crisis brought about by debt overhang, monetarist policies and loss of confidence; Power crisis of 1992-93; Tariff reduction and capital account liberalization / locking into AFTA, WTO and APEC in the early and mid-nineties; Bullish growth in 1994 – 97; Asian currency crisis of 1997 – 99. Weak and uncertain recovery after.

Table 1 summarizes the important events that occurred in each decade. As a further guide, Figure 1 shows the graph of annual per capita GDP growth from 1960 onwards. This diagram gives a visual perspective of Philippine boom-bust cycles. From the historical account above, one will notice a pattern of moderate growth for several years, followed by deterioration. After a slowdown, inflow of foreign resources lifts the foreign exchange constraint and the economy is back on track to the normal growth path. One can see this pattern in the early growth years of the 1950s that were fueled by import substitution. This was followed by the bust period in 1960 when exchange market pressure came about because of a binding foreign exchange constraint. Another

cycle in the 60s began when recovery was made possible with IMF assistance. Growth continued until the BOP crisis in 1970 and the first oil shock in the mid-70s hit the economy.



## **2.2 1980 to 2000**

The period 1980 to 2000 is an interesting episode for several reasons. First, the increasing frequency and depth of bust-recovery cycles experienced by the Philippines point to the important issue of sustainability of growth (See Fabella, 1995). An examination of the GDP growth path in Figure 1 shows a more volatile movement and a seemingly shorter cycle length beginning 1980 as compared to the previous periods. Also, only in this episode did the Philippines experience negative growth. Secondly, this is the period where reforms in trade and the capital account were undertaken. To aid in the analysis, a decomposition of aggregate demand and employment along structuralist lines is utilized. The analysis using aggregate demand decomposition techniques is a stark contrast to traditional analysis of liberalization, which relies on supply side arguments. Traditional macro indicators as well as national income and balance of payment tables will also be referred to in the discussion.

### **2.2.1 Aggregate demand decomposition**

Following Berg and Taylor (2000), the aggregate supply and demand balance can be written as:

$$(1) \quad X = Y + T + M = C + I + G + E$$

where  $X$  is aggregate supply,  $Y$  is private income,  $T$  is net taxes, and  $M$  is imports. Aggregate



demand components are consumption ( $C$ ), investment ( $I$ ), government demand ( $G$ ) and exports ( $E$ ).

Define the private savings rate as  $s$ , the import propensity as  $m$ , and the tax rate as  $t$ . These leakage parameters can be used to rewrite equation (1) as:

$$(2) \quad X = \frac{s}{s+t+m} \left( \frac{I}{s} \right) + \frac{t}{s+t+m} \left( \frac{G}{t} \right) + \frac{m}{s+t+m} \left( \frac{E}{m} \right)$$

The ratios in parenthesis are the direct multiplier effects of investment, government and export demand on output, appropriately scaled by the respective leakage parameters. The simple decomposition above can be used in many ways.

From equation (2), it is easy to see sectoral account imbalances using the direct multipliers or “stances” of aggregate demand components against output. For example,  $G/t > X$  implies that the government is incurring a deficit. The re-worked identities are used in Philippine national accounts data and are shown in Table 2. In Figures, 2, 3 and 4, these direct multipliers are graphed along with output,  $X$ . These diagrams conveniently reveal at what periods an account is in deficit or in surplus or equivalently, which sectoral accounts are contributing to increases or decreases in demand. This study more or less follows the periodization in Lim and Montes’ (2000) discussion from which the study draws, and makes extensive use of data of different frequencies in graphical form whenever necessary.

### **2.2.2 1981 – 1983: Economic Slowdown; 1984 – 1985: Economic Collapse**

The deterioration of the Philippine economy from the late 1970s up to the early 1980s had its roots mainly in the inefficient allocation of foreign debt-financed public investment, the second oil price shock and world recession, the increasing dependence on commercial foreign debts whose interest rates skyrocketed due to the tight monetary policies of the developed countries.

Rising incremental capital-output ratios and deteriorating external terms of trade reflected these inefficiencies and difficulties. The previous decade's 'hybrid' industrialization strategy (export promotion under a fixed exchange rate regime and protection of key economic sectors) made the economy vulnerable to external shocks. A widening crisis in the financial sector, which began with the near-collapse of the commercial papers market in 1981<sup>4</sup> and a worsening external debt profile in which short-term debt amounted to 25 percent of total external debt were clear indications of further deterioration. This was especially alarming as world interest rates were rising rapidly due to the tight monetary policies in the US and Europe. Deficits on the fiscal side and the current account rose to critically dangerous levels. This can be seen in Figures 3 and 4 for the years 1980 to 1983 when government demand financed by foreign resources increased (See also Figure 10 for a view of public investment to GDP ratio.) Apparently the government was undertaking countercyclical policies to artificially stir up domestic demand to offset the adverse effects of the worsening international environment. Unfortunately this period of government intervention was effected with a growing participation of cronies of Marcos. The foreign debt crisis that started in Mexico and Brazil in 1982 took its toll in the Philippines as long and medium term debt access was virtually cut off and short-term debt instruments were obtained at exceedingly high interest rates. In July 1983, the peso was allowed to depreciate by 10% to ease the foreign exchange pressures.

These set the stage for the worst BOP and economic crisis that would hit the Philippines. This occurred in the third quarter of 1983, two years after the start of the world recession and about a year after the eruption of the Latin American foreign debt crisis in Mexico and Brazil. The assassination of an opposition leader led to capital flight, a large discrete devaluation and price level jump. In October 1983, a moratorium on external debt payments was declared, which

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<sup>4</sup> One of Marcos' business allies (Dewey Dee) escaped the country leaving millions of pesos worth of unpaid debts in the financial institutions, which had an adverse domino-like effect in the financial sector.

effectively meant that no new inflows from abroad would be forthcoming. The policy makers followed the typical monetarist response prescribed by IMF programs. Draconian tightening of liquidity and credit was effected to stem capital outflows and to control rising prices (see Table 3, M3/GDP, growth of M3/CPI and lending rates). The side effect of very tight money was a discrete rise in the interest rates that, because of portfolio substitution effects, eventually led to a halt in the upward trend of the nominal currency depreciation (See Figure 6). Working capital cost push effects led to closures of firms and work stoppages in key industries. The total collapse of the Philippine economy was manifested by negative annual growth rates of -7.6 percent for both 1984 and 1985. The effect of this depression was perhaps more than what Indonesia experienced in 1998. Gross domestic savings and gross capital formation fell precipitously, never to recover the rates achieved in the early eighties (see Table 3). Decapitalization occurred as investments fell short of the amount needed to meet depreciation needs. Table 3 shows that the GNP per capita contracted by almost 20% from 1983 to 1985. This brought the economy back one full decade and killed the country's chances of becoming an East Asian success.

Even with the sharp contractions in 1984-85, the inflation rates rose to enormous heights, fueled partly by the devaluation processes, partly due to the sharp cut in supply via the working capital cost push effect brought about by the extreme monetarist policy. It was only in 1986 when the economy hit rock bottom that inflation fell to zero and negative levels (but only briefly). External deficits also improved – expected during very harsh depressions -- as can be seen by the movements of the current account and trade balances in Table 3.

Deteriorating financial conditions, very similar to what happened to the hard-hit countries in the Asian crisis, brought non-performing assets into the lap of the Central Bank and state-owned banks. It would take a long while to finally dispose of these assets, to rehabilitate the financial sector and government financial institutions and finally to create a new Central Bank that was not seriously debt-strapped.

### 2.2.3 1986 – 1989: recovery period; 1990 – 1993: slowdown, recession and power shortages

It is important to note that the crisis prompted policy makers under the new government led by Corazon Aquino (1986-1992) to seriously institute structural adjustments as pushed by the IMF and World Bank. The disastrous Marcosian interventions were seen as proof that market liberalization, deregulation and privatization would be the appropriate economic policies. Among these were the lifting of import restrictions in May 1986, tax reforms and large-scale privatization of state-owned enterprises (Lim and Montes, 2000).<sup>5</sup> The economy slowly and partly recovered towards the end of the 1980-decade with IMF assistance, but not without a lot of difficulty, what with the debt overhang and political instabilities. This was reflected in an average growth rate of 5.6 percent from 1987 to 1989 under the new government.

In the 1986-89 recovery period, replacement investments and consumption were the primary sources of growth followed by significant increases in public investment financed by domestic borrowing (See Figure 10 and Table 3 – the movements of public investment and M3). Private investment also began to rise starting in 1986 until 1991 when another recession occurred.

In the later part of the 1980s, increases in investment rates and the government's pump-priming program allowed capacities and demand to grow. However, the growing fiscal and external deficits became unsustainable in 1989 and 1990 (see Table 3) especially since the debt overhang of the foreign debt crisis continued with the government assuming most of the private debts. The Baker Plan as well as other debt restructuring attempts, which only rescheduled payments and required continuing interest payments doomed the possibility of long-run recovery and growth. The debt overhang accompanied by import-intensive growth (caused partly by the lifting of import restrictions and an overvalued currency, see a rising  $m$  in Figure 5) led also to growing and

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<sup>5</sup> See also Beccaert and Harvey's (1998) Appendix for a listing of major political and economic events in several countries including the Philippines.

large trade and current account deficits (see Figure 2 and Table 3). To steer the economy away from the external and fiscal crisis (accompanied by rising double-digit inflation rates, see Table 3), the government adopted a tight monetary policy, cut spending and raised indirect taxes. Monetary cutbacks were undertaken and interest rates climbed back to more than 20% in 1990 to 1991 while fiscal spending was also cut to trim the budget deficit (see Table 3). Monetarist policies made sure again that domestic credit would fall amidst outgoing external debt flows due to the overhang. A recessionary situation was created.

The series of right-wing military coup attempts against the Aquino government, culminating in a nearly successful one in December 1989, further eroded business confidence. This and the uncertainties in the international environment due to the Gulf War aggravated the demand cutbacks and led to a slowdown beginning in 1990. In 1991, economic recession occurred with GDP declining 0.6% (see Figure 1 and Table 3). Recovery was not in the near horizon as power shortages, culminating in 1992, forced firms to cut production. The effects of the power crisis lasted until the first half of 1993. The fiscal and balance of payment crisis and the response by policy makers can be observed in Figures 2 and 3.

#### **2.2.4 1993 – 1996: Tariff Reduction and Capital Account Liberalization; 1997 onwards: the Asian Crisis and Aftermath**

A new administration under Fidel Ramos<sup>6</sup> (1992-1998), the second since the lifting of martial law, vigorously pursued trade liberalization, moving from lifting import restrictions (which was virtually completed in the early nineties) to genuine tariff reduction. This was facilitated by locking in the country to international agreements committed to opening up the economies to international trade and international trade regulation: the ASEAN Free Trade Area (AFTA), World Trade Organization (WTO) and the Asia-Pacific Economic Cooperation (APEC).

Full capital account liberalization was achieved in the last quarter of 1993 but was initiated in 1991. It is also important to point out that trade and capital account liberalization were initiated independently of each other, as trade liberalization started early on in 1986. The passage of the Foreign Investments Act in 1991 marked the beginning of the liberalization of the capital account. This law provided for the gradual removal of restrictions on foreign investment over a three-year period. The relaxation of rules on foreign exchange transactions by the Central Bank followed in the first quarter of 1992. In the third quarter of the same year, all the remaining restrictions on foreign exchange transactions that prevented foreign investors from freely repatriating their capital were removed (See Bekaert and Harvey, 1998). By the start of the second quarter of 1993, the government permitted the repatriation of cash dividends without Central Bank approval. In the middle of 1993, the stock price index climbed rapidly because of foreign demand and easier entry and exit of foreign capital. The stock market boom continued until the middle of 1994 when the market corrected itself and growth in the stock market indices slowed down (See Figure 7), but the ‘emerging market’ syndrome continued until the Asian crisis, with the stock market index peaking in early 1997, a few months before the outbreak of the crisis.

The liberalization moves of the Ramos government occurred with much economic confidence and bullishness, as indicated by the stock market. The high optimism seemed to be justified by what was perceived by better economic management. The power shortages were reasonably ended with the fast-tracking of hydroelectric plants<sup>7</sup>. The foreign debt overhang was being reasonably reduced by the Brady Plan, which converted the debt into long-term guaranteed bonds, and

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<sup>6</sup> The Ramos presidency was from 1992 to 1998. The previous six years was Corazon Aquino’s administration, immediately after the dismantling of the Marcos dictatorship.

<sup>7</sup> The fast-tracking, however, may have led to higher electricity costs for the Philippines compared to its neighbors.

included some interest reduction schemes. The debt-strapped Central Bank was revamped into a new institution with the national government effectively taking over its debts.

As the economy was coming out of a slowdown during this liberalization period, policy makers opted to loosen credit partly by reacting passively to private foreign inflows, i.e., they did not conduct extensive sterilization operations to offset the capital flows<sup>8</sup> (see Table 3). The impact on some macro prices is seen in Figures 8 and 9. During this period, interest rate spreads were on a declining trend. Real exchange rate appreciation is also observed until the second quarter of 1997. It is interesting to note that the government account was kept in balance by the Ramos administration before the outbreak of the Asian crisis (See Figure 4). The fiscal balance, falling inflation rates (see Table 3) and continuing foreign inflows fueled even more optimism for the Ramos growth strategy. But the last two years of Ramos during the Asian crisis brought fiscal deficits back. The Estrada and Arroyo governments that followed would even be more in trouble with high fiscal deficits. The cycle of periods of fiscal balance followed by those of fiscal deficits (see Figure 3) can also be noticed in the previous Aquino administration where fiscal aggressiveness (see discussion in the previous sub-section) appeared towards the end of Aquino's term. De Dios (2000) relates this to the pattern of business fluctuations and offers a "political business cycle" hypothesis to complement the "real structural" hypothesis of the bust-recovery cycle.

With the capital account liberalization, foreign capital inflows reached its highest level at approximately 5 percent of GDP in 1996. The economy's average GDP growth rate for the years 1994 to 1997 was 5 percent, while GNP growth rate averaged 5.7 percent.

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<sup>8</sup> This is a controversial point since some economists blame the Central Bank for some sterilization in order to keep a fixed exchange rate.

But all indicators were not bright<sup>9</sup>. First, the external sector continued to register current account deficits during this period (see Figure 2). More seriously, a widening investment-savings gap in the mid-1990s (the size of which was unprecedented) can be seen in Figure 4 and Table 3. The gap can be explained by growing private investments accompanied by declining private savings rates, as shown in Figure 5, and is consistent with the historically high trade balance deficits right before the crisis (reaching more than 13% of GDP – see Table 3). The continuing external deficits and rising investment-savings gap are offshoots of rising import intensity and falling private savings rates as shown in Figure 6. Again, the sharp rise of  $m$  and the sharp fall of  $s$  in the mid-1990s were unprecedented. The sharp rise in  $m$  was obviously a natural response to the quick pace of tariff reduction combined with a sharply appreciating currency (in real terms) that made imports and tradables particularly cheap. The sharp fall in  $s$  even during a time of growth reflects the increasing dependence on foreign funds and foreign savings to finance the external deficits and investments-savings gap.

As is well known by those acquainted with the Asian crisis, the foreign inflows that came in were largely in the form of short-term debts and portfolio investments that poured in after the capital account liberalization. These unhedged dollar borrowings (used to finance real estate, construction, speculative and manufacturing activities) as well as ‘hot money’ provided the classic key ingredients to the Philippine participation in the Asian crisis. This included the rise of speculative bubbles in the financial and real estate sectors and their bursting once the Thai devaluation and financial outflows infected the region.

The crisis, in addition to the El Niño weather phenomenon that had detrimental effects on agriculture, halted the growth episode and GDP growth stood at –0.54 percent in 1998.

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<sup>9</sup> These indicators may also explain why Philippine growth has rarely gone beyond 6 percent, in a sort of two-gap analysis.



The real government deficit grew from an almost balanced account in 1996. In the year 2000, the nominal consolidated public sector deficit to GDP ratio stood at more than 4 percent and was expected to grow further in 2001 and beyond.<sup>10</sup> In 1998, the Philippines experienced positive nominal current account surplus but was in deficit in real terms as can be seen in Figure 2.

Meanwhile, the savings rate did not really improve and the tax effort remained the same.

Economic confidence remains very weak as political corruption during the Estrada administration and political upheavals during the early days of the Arroyo government stifled and continue to stifle ‘animal spirits’.

### **2.3 A Synthesis and Analysis of the Philippine Macroeconomic History**

Ever since the bust-recovery cycles became quite systematic and regular from the 1980s onward, most of the growth during the years from 1980 to 2000 was due to either filling up excess capacity or using more imports for production rather than on more efficient and productive use of existing domestic resources. (We shall tackle this more at length in the employment section.)

Thus, at the start of growth periods, the economy is awash with dollars after coming from a recession, allowing it to raise import levels. Initial high confidence allows foreign funds to pour in to finance the increasing import needs. Bust periods on the other hand can be characterized by foreign exchange shortages that curtail imports of raw materials and capital goods (See also, De Dios, 1998). These shortages occur as rising import needs and/or foreign debt payments outpace foreign financial inflows, or as net foreign inflows drop due to losses of confidence caused by internal or external factors.

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<sup>10</sup> The data used in the decomposition is the national deficit in real terms. The CPSD is the nominal national deficit plus the deficits of government entities not under the national government. The CPSD/GDP ratio is the parameter often used by policy makers to gauge performance.

The economic decline paradoxically improves the external positions of the country during the recession period. Economic crises and recoveries in the Philippines therefore run along the lines of the traditional, old-fashioned two-gap analysis.

Growth interruption is a consequence of continuing and growing dependence on imports and unsustainable inflow of foreign capital (which ends up in capital flight during crisis periods). This was the case in the balance of payment crises in 1949, in the late fifties and early sixties, in 1970, in 1983-85, in 1991, and in 1998. It must be pointed out that recessions themselves are the temporary solution to this dependence on foreign capital and the periodic shortage of foreign funds (usually a combination of increased dollar needs during growth periods and capital flights after the ‘good days’ are over). Investments-savings gaps as well as current account and trade deficits are reduced as a result of the recession (see Figures 2 and 4 as well as Table 3). No doubt belt-tightening and output contraction (with a very distinct monetarist-IMF flavor) have been prescribed for the Philippines as periodic solutions to its ‘profligate’ use and need for foreign currency, but these increasingly frequent recessions are the main manifestations of the Philippines’ lack of economic development. As Table 3 shows, the level of GNP per capita in 2000 is just about the same as in 1981. In terms of this indicator then, the Philippines has on the whole remained stagnant for two decades.

One can see that, in modern Philippine economic history, the growth interruptions were caused by crisis events – external and fiscal crises aggravated by power crises or political crises and externally imported crises such as the Latin American foreign debt crisis and the Asian financial crisis. The change in the growth pattern, cycle length and depth of the bust phase after 1980 may arguably be attributed to structural adjustments and external liberalization made after the 1983 crisis. Ironically, the more frequent bust periods occurred during the heyday of the external liberalization years of 1980 to 2000. The structural adjustments and external liberalization, though extensive, at best seems to be insufficient to address structural problems like the

inevitably high and growing trade and current account deficits incurred during growth periods, low domestic savings rate and weak tax collection efforts (see Figure 5 for the trends in the private savings rate and tax rate), which proved to be the barriers to sustained growth (See De Dios, 1998).

The link between external liberalization and the frequent bust periods in the last two decades may be viewed in two lights. First, external liberalization exposes the country to more volatile financial risks. This is exactly what the Philippines experienced in the early 1980s when the big economic collapse started with the Philippines getting embroiled in the Latin American foreign debt crisis, and in 1997-98 when ‘contagion’ from Thailand, Indonesia and Korea wrecked havoc on the economy. Furthermore the growing import dependence of the country in the 1980s and 1990s no doubt had a lot to do with import liberalization and an appreciating currency (during the good times), the latter aggravated by capital account liberalization. The two-gap edge has become sharper and more dangerous.

Second, whatever merits external liberalization (plus domestic liberalization, privatization and deregulation) bestows in terms of efficiency and productivity gains are of course controversial and can be argued either way. But one thing the Philippines and many other liberalizing economies in the world (from Russia to Argentina to Turkey to South Africa) show for certain is that the liberalization, privatization and deregulation processes (which concentrate on liberating the markets and reducing state interventions) do not effect changes in the institutional and governance structures of the countries automatically. This brings us directly to the internal and domestic causes of the crisis-recovery cycles. One can see in the Philippine story the periodic political and governance crises that contribute to busts and collapse of business confidence in the 1980s, 1990s and the present. One also has to add that the lack of infrastructure, the lack of human capital development, the lack of technology improvements, and the lack of practical industrial policy – not to mention the lack of social cohesion – has inhibited the rise of

competitiveness and efficiency gains. Already the Philippines has lost a big share of the world garment export market as it is a victim of the reduction of quotas as well as the rise of cheap garment exports from South Asia, China and Eastern Europe. The ideology of reduction of state intervention and the use of markets without the state (as epitomized by IMF policies) has been detrimental to the rise of state responsibility towards dynamic and constructive interventions to effect a technologically sound and performance-based private and public sectors. It is not surprising that the Philippines has been the most obedient in East Asia on the IMF and World Bank sponsored market liberalization processes. But it is weakest (among the non-transition economies) when it comes to dynamic sectoral development, confidence building, and human and technological capital innovations. Indeed the ideology the Philippines still pursues is anachronistic in a world where even theoretical economics has admitted that externalities, market failures and asymmetric information are more the rule than a frictionless market. Indeed markets, on one hand, and institution and state structures, on the other, are no longer dichotomous and mutually exclusive but should be viewed as complementary and mutually reinforcing.

Finally we should not forget the perennial role of the IMF and monetarist ideology in instilling severe contractionary and recessionary measures throughout all the balance of payment crises. One sometimes wonders which is the disease and which is the cure in these stabilization prescriptions for the Philippines and similar countries. We pose that indeed one factor contributing to the difference in the Philippine path from that of its more successful East Asian neighbors is indeed its long internship with the IMF.

The enmeshing of the above factors explains the laggard condition of the Philippines. Figure 11 shows the GNP per capita picture for the Philippines, Thailand and South Korea translating their gross national products into 1960 US dollar prices in the period 1960 to 2000. One can see that the Philippine GNP per capita was above the two countries in 1960. South Korea overtook the Philippines in the mid-seventies because of its tremendously high growth in the 1950s and 1960s.

More importantly, Thailand was able to overtake the Philippines in the late 1980s and increased the gap in the 1990s because of the series of bust-recovery cycles in the 1980s and 1990s experienced by the Philippines. Thailand never experienced a serious bust before 1997-98, and Korea experienced it only once before 1998, and this was in 1980. One can see very clearly from the graph the Philippines' stagnation throughout the 1980s and 1990s, as the other two countries grew in a tremendously fast pace (except in the 1998-99 period).

Figure 2

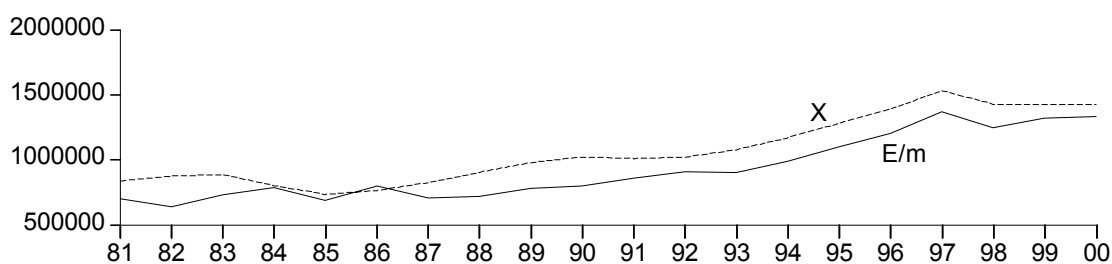


Figure 3

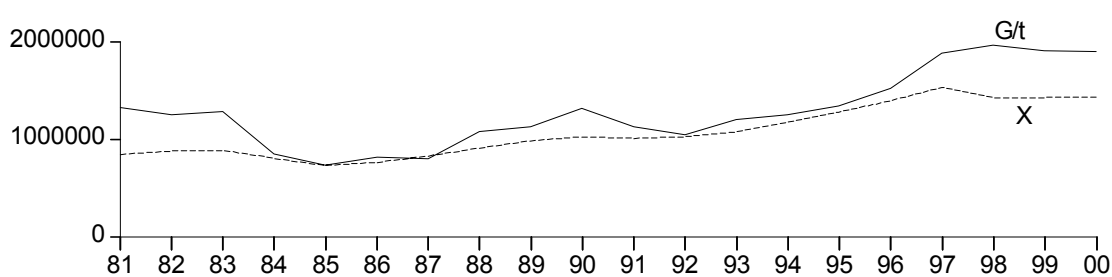


Figure 4

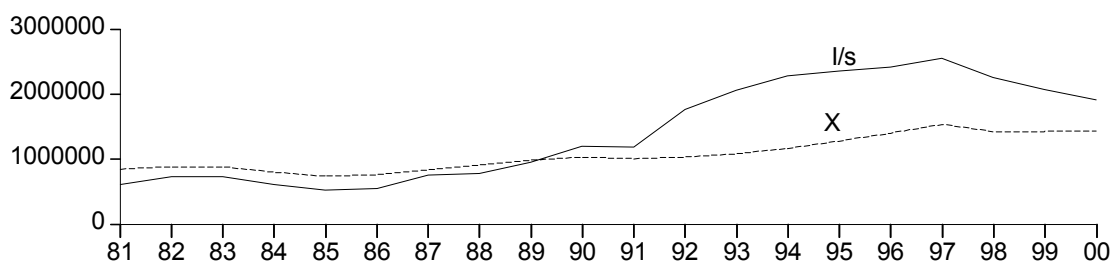


Figure 5

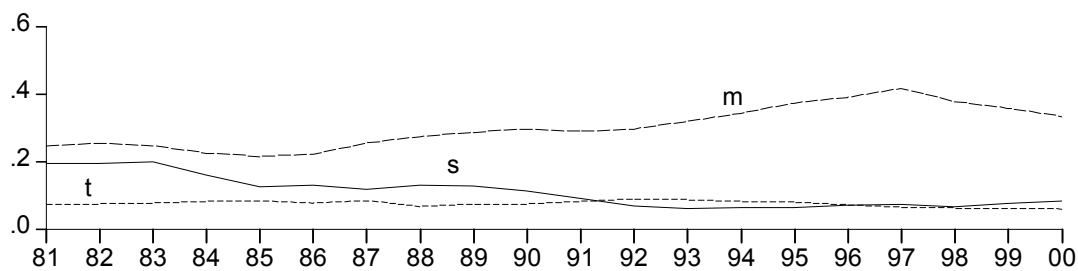


Figure 6

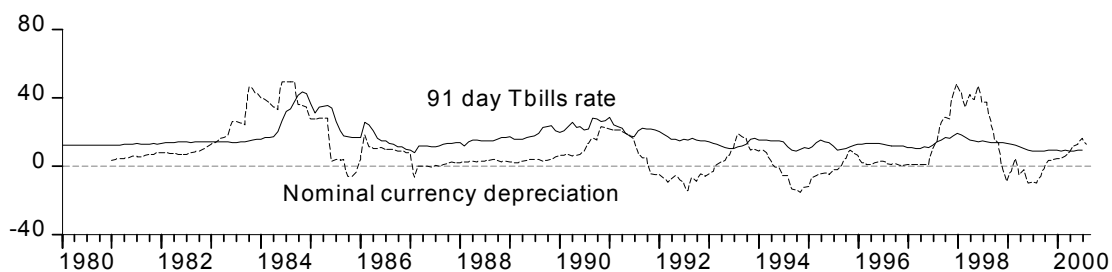


Figure 7

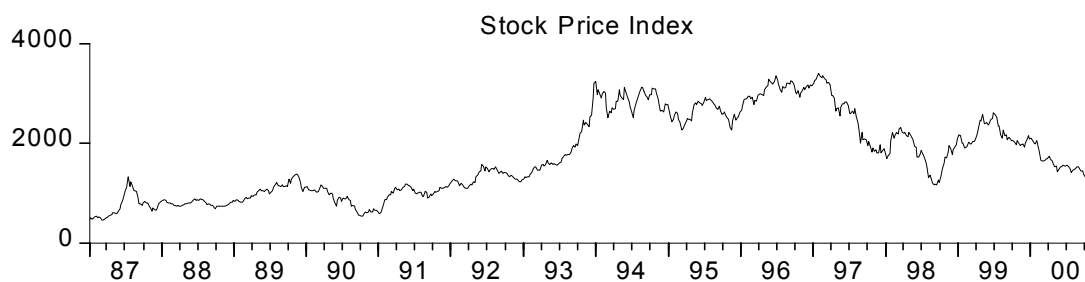


Figure 8

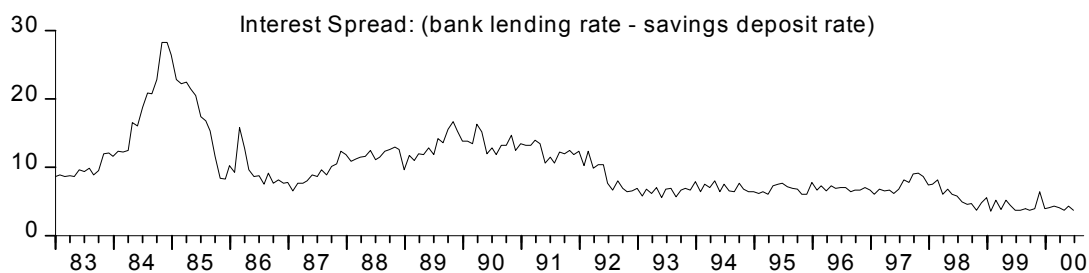


Figure 9

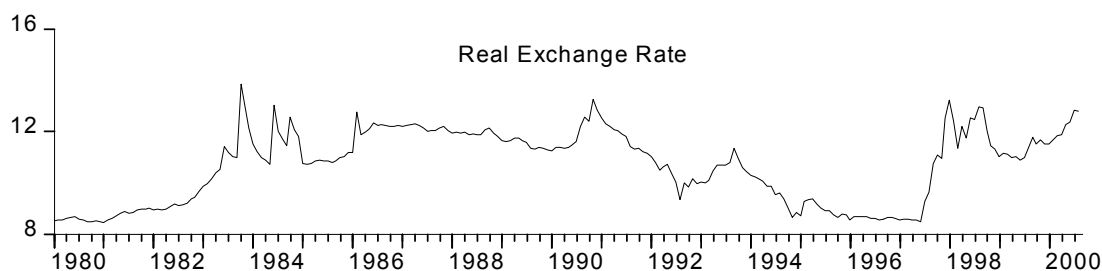


Figure 10

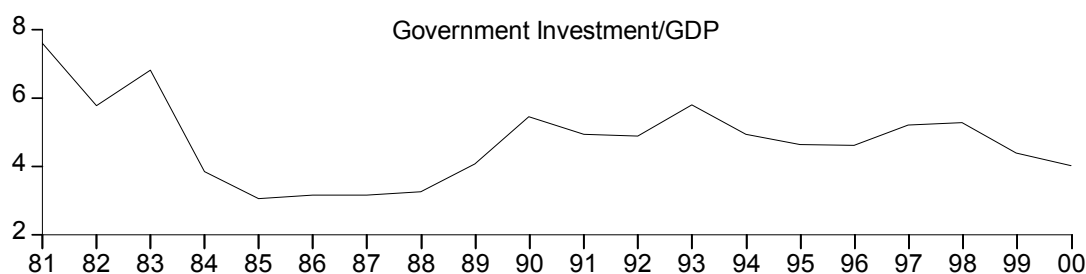
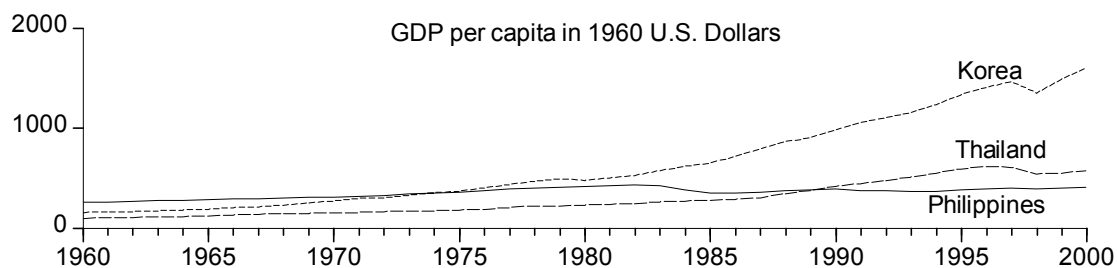


Figure 11



### 3 Employment and Labor Productivity Effects of External Liberalization

#### 3.1 Employment and productivity at the aggregate level

This subsection gives the general trend in employment, productivity and real wages. Figure 12 shows the composition of GDP by origin. It can be seen that during crisis periods, the share of industry is on a declining trend whenever a crisis hits the economy while the opposite is true of the service sector. It should also be pointed out that industry had the highest share until 1984 but was overtaken by the services sector and has never regained its position.

Figure 12

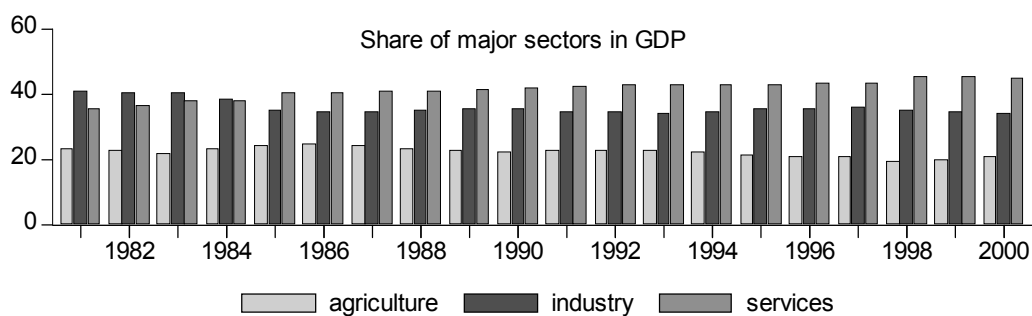


Figure 13

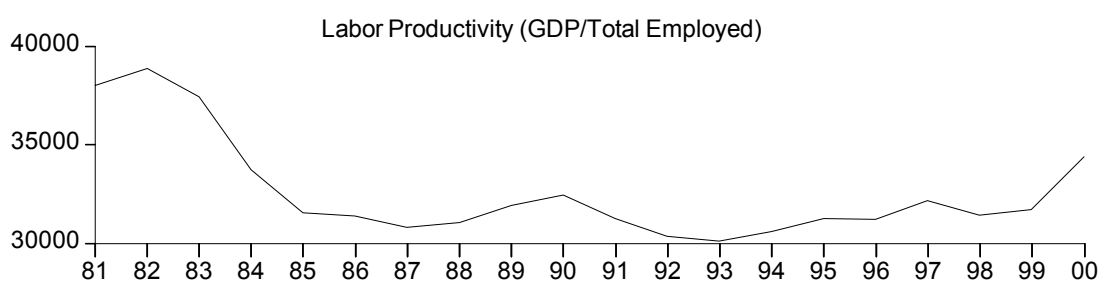


Figure 14

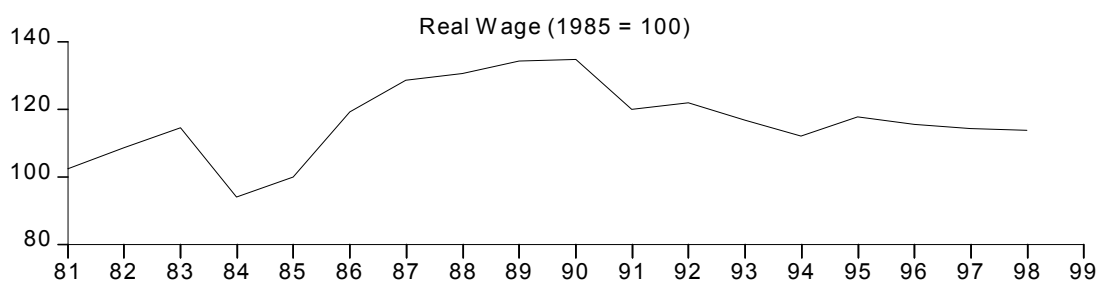


Figure 15





Labor productivity, defined as the ratio of GDP to total employment, suffered a deep plunge during the 1983-85 crisis years but increased slightly when the economy recovered. The trend in overall labor productivity seems to follow the changes in economic activity (Figure 13). It declines if the economy is in a crisis period. After the 1983-85 crisis, real wages were on an increasing trend up to 1990 but declined gradually as the economy entered the 1990s decade (Figure 14). The unemployment rate on the other hand was declining in the recovery years but started rising during economic slowdown, as can be observed in Figure 15. The next section presents a more detailed discussion of these variables at a disaggregated level.

### **3.2 Employment and Labor Productivity Decomposition: Methodology**

As in Berg and Taylor (2000), the economically active population is the sum of the employed and the unemployed:  $E = L + U$ . Let  $P$  be the population. Hence, the participation rate and the

unemployment rate is  $\varepsilon = \frac{E}{P}$  and  $u = \frac{U}{E}$  respectively. Define  $\lambda = \frac{L}{P}$  as the percent of employed in

the population. From this, one can derive an expression for the participation rate:  $\varepsilon = \lambda + \varepsilon u$ .

Log-differentiating this yields:

$$(3) \quad (1 - u)\hat{\lambda} - (1 - u)\hat{\varepsilon} = -u\hat{u}$$

where variables with “^” denote percent change (e.g.,  $\hat{q} = dq/q$ ).

The decomposition can also be done at the sectoral level. Let  $i$  be the index for the sectors. Let the labor-output ratio, sectoral output per (working) capita and the sectoral employment share of

the working population be, respectively,  $b_i = \frac{L_i}{X_i}$ ,  $x_i = \frac{X_i}{P}$ , and  $\lambda_i = \frac{L_i}{P}$ . These ratios can be used to

write aggregate employment share as  $\lambda = \sum_i \lambda_i = \sum_i \frac{L_i}{X_i} \frac{X_i}{P} = \sum_i b_i x_i$ . Log-differentiating this

yields:

$$(4) \quad \hat{\lambda} = \frac{1}{\lambda} \sum_i \lambda_i (\hat{x}_i + \hat{b}_i) = \frac{1}{\lambda} \sum_i \lambda_i (\hat{x}_i - \hat{\rho}_i)$$

where  $\hat{\rho}_i = -\hat{b}_i = \hat{X}_i - \hat{L}_i$  is sectoral productivity growth. Thus, the growth of total employment as percent of working population is the sum of sectoral per capita output growth less sectoral productivity growth weighted by the share of sectoral employment to total employment. Overall

labor productivity,  $\rho = \frac{X}{L} = \frac{\sum_i X_i}{\sum_i L_i}$ , is also decomposed in terms of percentage rates of change:

$$\hat{\rho} = \sum_i \frac{X_i}{X} \hat{\rho}_i + \sum_i \left( \frac{X_i}{X} - \frac{L_i}{L} \right) \hat{L}_i$$

### **3.3 Description of the Data and Categories**

We classified the economic sectors into non-tradables, exportables, and importables<sup>11</sup>. Using the 1994 Input-Output Table, we calculated the export and import shares of total output for each sector. Arbitrarily, we set 20% as the cut-off point. Sectors with more than 20% export and import shares are classified as exportables and importables, respectively. Those sectors whose export and import shares fall below 20% are considered non-tradables. Table 4 shows that with reasonable aggregation, the non-tradable sectors are, agriculture, fishery<sup>12</sup>, livestock and forestry (henceforth to be called simply agriculture), food, beverages and tobacco (henceforth to be called food), construction, electricity/gas/water (henceforth to be called EGW), transportation, storage and communications (henceforth to be called simply transportation), wholesale and retail trade (henceforth to be called trade), finance<sup>13</sup>, insurance, real estate and business services (henceforth

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<sup>11</sup> As will be explained later, some economic sectors will be both exportables and importables.

<sup>12</sup> The fishery sector actually should qualify to be an exportable sector, but the authors decided to keep it with the agricultural sector (since it is too small to separate out).

<sup>13</sup> Banking institutions would also qualify as an exportable sector, but we decided to keep the financial and FIRE sector intact rather than break it up.

to be called FIRE), and government and private services excluding recreational and cultural services and hotels and restaurants (henceforth to be called services [different from the service sector]).

Exportables, which are not importables, consist of mining and quarrying (henceforth to be called mining) and recreational and cultural services/hotels and restaurants (henceforth to be called tourist-related services). Importables, which are not exportables, are the manufacturing sectors of paper and paper products, chemicals and chemical products, non-metallic mineral products (including coal, petroleum and rubber). They are lumped into one sector called importable manufacturing. Sectors which are both exportables and importables consist of textiles (including garments), leather and wood products (henceforth to be called traditional exportables) and basic metal industries, fabricated metal products, electronics and other manufacturing industries (henceforth to be called non-traditional exportables). It must be pointed out that garments dominate the traditional exportables, while electronic products dominate the non-traditional exportables.

The table shows clearly that the manufacturing sector is the core of the tradable sectors. The 1994 IO underestimates the export role of electronics since by 1998 to 2000, this category comprised around 70% of the merchandise exports of the Philippines. It must also be pointed out that the biggest exportable sectors (electronics or non-traditional exportables and garments or traditional exportables) are also importables since their inputs (electronic parts and textile fabric) are also included in their respective sectors. This shows that the bulk of Philippine exports are import-intensive. Especially in the case of garments, these products also compete fiercely with foreign products even in the domestic market. Because of the high import intensity these two sectors combined have very low value-added and employment impact in the economy. In 2000, the import-intensive export sectors combined, only made up 6.9% of total gross-value added (Table 5b) and 5.7% of total employment (Table 6b).

Tables 5a and 5b give us a more detailed look at the gross value added of the various economic sectors from 1980 to 2000, based on our sectoral classification above. We would refer to these tables to facilitate the discussion of the decomposition exercises, especially in analyzing output movements.

The labor force and employment statistics employ data starting 1988 to 2000. Starting the third quarter of 1987, the Labor Force Statistics (LFS) of the Philippines changed the reference period for determining employment and labor force statistics from one month to one week. This effectively increased by definition the levels of unemployment rates and reduced levels of labor force participation rates. Thus data before 1988 would not be comparable with the data from 1988 onwards. Because of this limitation, we did the decomposition exercises only on 1988 and beyond. This jibes with the period of intense liberalization and deregulation in the Philippines as 1988 marked the almost complete lifting of all quantitative restrictions on imports. The labor force and employment data we used are averages of the January, July and October surveys of each year. The April data were not used because of their high volatility and uncharacteristically high seasonal unemployment because of lack of agricultural activities (it is between planting and harvesting seasons) and entry of new graduates to the labor market during this period (since March is graduation time).

Tables 6a and 6b show the employment data for the economic sectors in terms of growth rates and percentage share of the employment in each sector to the labor force (we term these percentages employment rates). We again refer to these tables to facilitate our discussion of the decomposition exercises, especially when we analyze employment and labor force movements.

### **3.4 The Decomposition Results**

Tables 7a to 7f give us the decomposition of the labor productivities of the various sectors while Tables 8a to 8f give us the decomposition of the employment of the economic sectors and the

aggregate movements. The notation  $p_i$  denotes the labor productivity of sector  $i$ ,  $X_i/L_i$ . 'v' refers to the unemployment rate, and  $e$  refers to the labor force participation rate. 'gr' denotes growth rate of the variable. We subdivide the 1988 to 2000 period (slightly different from the discussion above) by: 1) 1988 - 1990: growth period of the Aquino government, 2) 1990 - 1991: recession, 3) 1991 - 1993: stagnant period (power crisis) and transition from Aquino to Ramos governments; 4) 1993 – 1997: bullish growth period of the Ramos government; 5) 1997 - 1998: Asian financial crisis, 6) 1998 – 2000: slow growth and lack of confidence in the Estrada administration.

### 3.4.1 Jobless Growth: 1988 – 1990

Tables 7a and 8a show that, between 1988 and 1990, there was output per capita growth in all sectors except mining, food manufacturing and agriculture<sup>14</sup>. These output increases, however, were not translated into high absorption of labor. In fact, there was a slight decline in total employment per working population ( $L/P$ ) – which we call the employment ratio -- during this period. The main reasons were the increases in labor productivities in the majority of sectors<sup>15</sup>, especially agriculture and traditional exportables, (see Tables 7a and 8a), which simply reflected a jobless growth condition.

There was however positive growth in the employment ratio in services, which meant that output per capita increases were stronger than productivity increases in the service sector in general. This reinforces a general trend which will come out again and again – that is, the service sector is the one absorbing labor most, and this means, in a boom-bust context, that its labor productivity must be lagging or declining.

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<sup>14</sup> Furthermore, in EGW and tourist-related services, outputs per capita virtually remained unchanged.

<sup>15</sup> All sectors improved their productivities except tourist-related services, importable manufacturing, food manufacturing, and transportation.

There was also a significant contribution of intersectoral productivity improvement (column 7) comprising 1.24% compared to the total productivity improvement of 4.6%. This is accounted for by the movement from low productivity agriculture to the higher productivity service sector.

Part of the reason for the lack of labor-absorptive capacity during this period of growth may be partly attributed to the lack of confidence brought about by political and economic instabilities during this period (the series of coups, the debt overhang, and contractionary policies in 1989-90 as discussed earlier). Firms in times of bearish outlook would increase output through existing resources and will not hire new labor to expand output. This hypothesis will be partly confirmed in another period of confidence-less growth a decade later.

Table 8a shows that overall the unemployment rate still declined marginally since the labor force participation rate also fell slightly offsetting the fall in the employment ratio. Table 9 shows clearly that the employment elasticity (with respect to output or GDP, or the reciprocal of Okun's elasticity)<sup>16</sup> was practically nil for the period (-0.02, which means that a 1% growth in GDP in this period reduced unemployment rate by only 0.02 percentage points).

### **3.4.2 Recession and productivity declines in 1991**

Between 1990 and 1991, Table 7b shows that there was a virtual standstill in output in manufacturing and the service sector (with a slight fall in output in manufacturing and a slight increase in the service sector). Although there was some increase in agricultural output, this was completely offset by the sharp fall in construction (a fall of 17%), which made up the bulk of the contraction in industry and in the economy. The stagnant outputs converted into an overall decline in output per capita in all sectors except EGW, as shown in Table 8b.

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<sup>16</sup> Employment elasticity in Table 9 refers specifically to the ratio of the change in unemployment rate to the percentage change in GDP from the starting year to the ending year of that period.

The fall in output per capita however was offset by a general decline in labor productivity, especially in the industrial and manufacturing sector<sup>17</sup>. This cushioned the adverse impact on the employment ratios. The sharp fall in productivity in industry and manufacturing even allowed some small labor absorption in industry and manufacturing. The significant fall in employment ratios contributing to unemployment occurred mainly in the service sector and agriculture. Another small contribution to unemployment is the small increase in labor force participation rate.

Table 7b shows that the fall in labor productivity came mainly from construction (whose output fell drastically but was still able to absorb some labor), manufacturing and agriculture.

Table 9 shows that employment elasticity during this recession year was  $-1.54$ , which means that the 0.58% decline in GDP translated into a rise in unemployment rate by 0.9 percentage points. Note that the previous period's positive growth brought nil improvement in employment. On the other hand, the current recession brought about a significant fall in employment.

### **3.4.3 1991-1993: Stagnancy and continuing productivity declines during the power crisis:**

The stagnant period of 1991 to 1993 saw output per capita declining in all sectors except construction and mining. More so than in the previous period, labor productivity fell across the board in agriculture, manufacturing, industry and the service sector (see Table 8c). The falls in output per capita were offset by the labor productivity declines so that labor absorption in general improved and the unemployment rate fell. Labor absorption was mostly in agriculture as the industrial and the service sectors contributed negatively to the employment ratio.

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<sup>17</sup> The only sector whose labor productivity improved slightly was the traditional exportable sector.

The general decline in labor productivity affected all sectors unlike in 1991 when only construction and the manufacturing sector suffered heavy declines. The declines were strongest in agriculture, manufacturing and the service sector, respectively.

The labor absorbing capacity, despite the stagnancy, might have been an indication of increased optimism and confidence with the entry of the Ramos government – with the confidence increasing tremendously in 1993, when the power shortages ended and the stock market started to skyrocket.

Table 9 shows that the employment elasticity for this period is again almost nil ( $-0.04$ ). This is not surprising, since although GDP growth rates were positive during this period, they were smaller than the population growth rate. We cannot expect such low growth to have significant employment absorption.

#### **3.4.4 1993 – 1997: Bullish growth; the service sector as labor absorber**

Table 8d shows that the bullish Ramos period of 1993 to 1997 brought about sharp increases in output per capita in most sectors, except traditional exportables, agriculture and mining. The sharpest increase in output per capita came from the non-traditional exportable sector (the mid-nineties to late nineties saw a big boom in electronic exports and production unaffected by the Asian crisis), construction, EGW, transportation, FIRE, tourist-related services and trade.

Notable is the decline in garments (traditional exportable sector) as intense world trade liberalization in the nineties saw many countries (especially China and South Asian countries) trounce the Philippines in the world market and as the Philippines previously favored position was reversed when its garments quotas were cut following WTO rules.

The increase in output was accompanied by sharp increases in labor productivity in the agricultural, industrial and manufacturing sectors, thus offsetting the potential labor absorption



from the output increases. Table 8d shows that there was a fall in the employment ratio of agriculture. The only labor absorbers in industry were construction, non-traditional exportables and importable manufacturing,<sup>18</sup> but construction virtually dominated labor absorption in the industrial sector.

The interesting thing is that the biggest labor absorber of the economy during this period was the service sector whose output per capita increased and whose labor productivity declined (especially in FIRE, transportation and tourist-related services). Thus the improvement in the employment ratio and in the unemployment rate was primarily due to the increase in output and fall in labor productivity in the service sector, and secondarily to the sharp rise of output in construction and (to a lesser extent) electronics.

The increased productivity in industry and manufacturing may be explained by the rise of strong competition among tradables, given the strong tariff reduction and real appreciation of the currency. Thus manufacturing could not absorb much labor. The largely non-tradable service sector and construction became the main labor absorbers, but their labor productivity had to drop. Table 7d, however, shows that the rise in labor productivity in the economy was mainly caused by increases in productivity in the agricultural sector, and only secondarily in the industrial and manufacturing sectors. This indicates a movement away from low productivity agriculture to the more attractive and higher productivity sectors of service and industry. Table 7d shows that, unlike other periods, the productivity improvements caused by inter-sectoral movements (column 7) is stronger than the weighted average of the productivity changes of the various sectors (column 3). Because of the strong labor productivity in industry and strong movement out of agriculture during this period, the employment elasticity of this period is again practically nil (–

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<sup>18</sup> This last sector was virtually the only sector in industry to have a decline in labor productivity, except for mining, which is a very small sector.

0.05 – see Table 9). This should put to question the employment absorption capacity of the liberalizing growth periods in the Philippines. This will be tackled at length in the summary section.

### 3.4.5 1997 – 1998: The Asian Financial Crisis and El Nino Effects

Tables 7e and 8e show that the recession in 1998 due to the Asian financial crisis and El Nino led to sharp falls in the output of construction, agriculture, and importable manufacturing, and moderate falls in traditional and non-traditional exportables. All areas in the service sector, however, increased their output, except the trade sector.

The fall in agricultural, manufacturing and construction outputs were partly offset by declines in labor productivity in these areas (except traditional exportables) and declines in labor productivity in the service sectors (except FIRE) – See Table 8e. Thus there were decreases in the employment ratios in agriculture, manufacturing and industry partly offset by increases in the employment ratios of the service sector (except in FIRE). The service sector continues to be the labor absorber even in this period of crisis.

This is the main difference between the recession in 1998 and the recession in 1991. The recession in 1991 was met by large declines in labor productivity in industry and manufacturing, so that labor was not displaced from manufacturing and industry, but instead was displaced from agriculture and service (see Table 8b and section 3.3.2). In 1998 the labor productivity declines in manufacturing and industry were much smaller, so that there was some displacement in industry and manufacturing, especially in construction, traditional exportables, and importable manufacturing. The El Nino weather disturbance also made sure that the biggest displacement would be from agriculture. This time the partial cushion was provided for by the service sector, which meant that employment increases there outpaced the output increases (except in FIRE), leading to productivity declines in the service sectors.

Table 7e also shows that there was a 1.18% intersectoral productivity improvement offsetting the general decline in productivity in almost all sectors. This was again due to the shift from agriculture to the higher productivity service sector.

The smaller productivity declines in 1998 in industry and manufacturing compared to 1991 may be a result of the strong competition provided by foreign products as a result of intense trade liberalization and tariff reduction in the 1990s. This was in a way a continuation of the trend in the earlier period where labor was being absorbed in the service sectors much more so than in the industrial sector, as labor productivities in the industrial and manufacturing sector increase (or fall less) while those in the service sectors decrease (or decline more). An important implication is that the adjustment to the bust portion of the cycles was borne more in 1998 by industrial workers as many of them had to switch to lower productivity employments in the service sectors or be unemployed. With the displacement of workers from the manufacturing and industrial sectors and the strong outflow of employment from agriculture, one can see in comparing Table 8e with Table 8b that the rise in unemployment was stronger in 1998 than in 1991. Thus, even if GDP declined by an equal amount during both period, the 1998 crisis was much painful in terms of employment losses.

Table 9 shows that employment elasticity for this period hit a high  $-2.92$  as a 0.58% decline in GDP caused a 1.7% increase in unemployment. Again as previous growth periods failed to effect significant employment absorption, bust periods were effectively and increasingly churning people out towards unemployment.

The switch to the service sectors also implies a gender-related impact of liberalization and recessions as the service sectors have a higher female intensity than the industrial sector. Thus, the latest 1998 crisis saw a bigger displacement of male workers (especially young male workers) compared to female workers especially in the urban areas (see Lim 2000).

### 3.4.6 1998 - 2000: Continued Low Confidence – Jobless Growth Revisited

Tables 7f and 8f show some recovery between 1998 and 2000 as agriculture, the service sector and manufacturing registered reasonably adequate growth. The high growth in agriculture signaled the return of normal weather from the unusually bad year of 1998. Industry posted positive but lower growth as construction still remained in a depressed state, registering a strong output contraction.

This period was very similar to the situation a decade earlier in 1988 – 1990 when output growth was accompanied by large productivity increases in most sectors and led to a jobless growth condition. This time the effect was stronger and led to an increase in the unemployment rate between 1998 and 2000 (unlike in 1988 – 1990).

The biggest labor productivity increases were in agriculture, non-traditional exportables, importable manufacturing and food manufacturing<sup>19</sup>. Even the service sector posted gains in productivity (with the notable exception of FIRE), though the productivity gains were much lower than that in agriculture, industry and manufacturing (continuing the trend of lagging productivity in the service sector during the 1990s).

The net result was a large displacement of labor from agriculture (despite its high growth), a continued displacement from industry (mainly from construction) and stagnancy in employment per capita in manufacturing. The partial cushion again was provided by the service sector, which absorbed labor in trade, transportation, private services and tourist-related services, because of reasonable economic growth in these sectors.

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<sup>19</sup> Only traditional exportables registered a fall in productivity (and a very sharp one at that) in the manufacturing sector. Another sector in the industrial sector whose productivity registered a decline was construction.

But the labor absorption in the service sector was not enough to stem the strong rise in unemployment during this period, since labor productivity increased. The unemployment in 2000 was the highest registered since the new labor force data set was constructed in 1987 – 10.1%.

As mentioned before, the exceedingly bad confidence during this period may have contributed to the reluctance of firms to rehire labor, just as in the 1988 – 1990 period. This time the loss in confidence was caused by bad governance and a widespread perception of wanton corruption in the Estrada government.

Table 9 shows clearly that the sign of the employment elasticity went wrong as increases in output coincided with increases in unemployment in 2000.

### 3.4.7 A Short Summary

Table 9 shows alarmingly the employment problem of the Philippines. For the whole period 1988 to 2000, the employment elasticity (or Okun's elasticity) was perverse and became positive. This meant that for the entire period as a whole, output increased by 45% but unemployment increased by 1.8% as well. We had seen how this happened. The growth periods have very low – almost nil – employment elasticities. During busts, these elasticities are quite significant, as recessions worsen the unemployment problem. The result should not have been unexpected. Thus the problem of Philippine unemployment is not only the bust-recovery cycles that have left the economy stagnant. There is a distinct anti-employment bias to these cycles. Let us recall some of the reasons for the lack of employment absorption during growth periods. They are: 1) the lack of confidence in some of these periods, and 2) the required increases in labor productivity in the tradable sectors due to exposure to external liberalization. We can also add a third reason, which we already touched on in the macro section of the paper. The exceedingly high import dependence and structural cause of the BOP crises manifests a lack of integratedness and backward linkaging in the development process, and lack of domestic resource use and

innovation. The high dependence on foreign intermediate goods can only lead to a lack of domestic resource usage – including the most important resource, which is labor. Furthermore the bust cycles have become more vicious, displacing more labor than before.

In the nineties we also detect the stronger labor absorption capacities of the service sectors as well as construction (for the latter, only in boom times) as the manufacturing (which is the more tradable) sector requires stronger adjustments in terms of labor productivities because of its increasing exposure to competition. On the output side, inasmuch as manufacturing, construction and the industrial sector as a whole contracts strongly during recessions, and agriculture is experiencing a long downward trend due to its bad performance and more frequent bad weather, output is also becoming more and more weighted towards the service sector.

This increasing share of the service sector in terms of output and employment are shown in Tables 5b and 6b. One can also see a slight decrease in the share of manufacturing in terms of both output and employment after the Asian crisis (1998 to 2000).

## **4 Distribution Effects of External Liberalization**

### **4.1 Factor Income Shares**

Table 10 gives us the distribution of factor shares by institutions. Looking at household incomes, one can see that, starting in the late eighties, when external liberalization began to intensify, the share of net operating surplus of households and non-corporate entities started to decline and continued the long-run trend till 2000, though there was a tendency for this item to register temporary, small increases during times of recession (1984-85, 1991, 1998). The other side of the coin here is the rise in the share of corporate income during the same period. Corporate income's share grew fast in the late eighties and mid-nineties, while having temporary declines (an opposite tendency to household operating surplus) during recessions (1985, 1991, 1998). It must

be emphasized that corporate income's share increased significantly in every turn of recession to recovery – in 1987, in 1993 and in 1999. This is most likely due to the fact that recoveries allow firms to use excess capacity without much new labor absorption and therefore income shares shift to them.

On the whole, therefore, household income's share fell over time from 80% in 1982 to 66.9% in 1999, while corporate income's share increased from 12.3% in 1982 to 24.1% in 1999<sup>20</sup>.

Government income's share improved notably in the pre-Asian crisis period of 1990s as tax reforms were able to improve both indirect tax and import duties revenue collection. But the lowering of tariffs started to have negative revenue effects on import duties starting in 1996, and government revenues started to decline and fell drastically during and after the Asian crisis (1998-1999), giving rise to the growing fiscal deficit problems of the country in the post-crisis period.

The fall in the share of household operating surplus indicates the shrinking of income derived from the informal, self-employed sector – especially in agriculture – and in manufacturing and service sectors as well, in a time of external liberalization. The consistent and significant move out of agriculture and its decline in both the value-added and employment share accounts for a significant portion of the large drop in the share of household operating surplus over time (from 54.3% in 1982 to 39.7% in 2000). The lack of corresponding increase in compensation for employees as peasants move out of agriculture simply reflects the lack of labor absorption in the Philippine setting.

Compensation of employees had a rather steady share during the period, with a notable increase during the Asian crisis period and beyond (1997-1999). This reflects through time an increase in

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<sup>20</sup> These very sharp changes may be exaggerated by data and statistical errors, but the trends are not counter-intuitive.

the income shares of the formal sectors (corporate and formal labor income) and a decrease in the income share of the informal sectors – a reverse trend from the employment picture, which is from formal manufacturing and agriculture to more informal services. As service (and much of its informal sector) becomes the employment sink for a non-labor absorptive economy, the low productivity and declining real wages there offset the increasing persons entering the sector, making the total informal wage bill falling in relation to the formal economy. This can occur because of a labor surplus condition.

The improvement in government income throughout much of the nineties shows the emphasis on macro stability and the need to reduce fiscal deficits as a prerequisite to confidence-building liberalization (which the Aquino and Ramos governments strove for). But the fall in the share of government income right before, during and after the Asian crisis, shows how dependent the Philippines is on import duties, and how tax revenues are very elastic to incomes during recessions. Recessions, sharp devaluations of the currency and tariff reduction without compensating gains from other revenue sources will have adverse impact on the fiscal sector and macro stability, as is now happening in the Philippines.

#### **4.2 *Income Distribution Between Low-Skilled and Skilled Labor***

There are questions as to how incomes of skilled and unskilled labor are affected by external liberalization. The problem with Philippine labor statistics is that wage data are very scarce and generally not available regularly except from the establishment sources. The latest set of wages corresponding to labor force statistics is in 1995. Thus the succeeding discussion simply discusses the employment figures of various categories of labor, and implications are derived without giving any time-series wage data across different types of labor.

Appendix A gives us the mean quarterly earnings data of various occupations of labor in the third quarter of 1995 (the latest set of wage data available). We categorize the various occupations into



three classes: professionals and managers, skilled and middle-level workers, and low-skilled workers. Arbitrarily, those with mean quarterly earnings of P15,000 are considered professionals and managers, those with mean quarterly earnings of P10,000 to P15,000 are considered skilled and middle-level workers, and those with mean quarterly earnings of below P10,000 are considered low-skilled workers.

Table 11 gives us the employment in the economic sectors for the three levels of skills for selected years between 1988 and 2000<sup>21</sup>, in terms of percentages of the total employed in the sector. One can see that there were not very major changes in the skill composition of the economic sectors over time<sup>22</sup>. In the total, we see a noticeable decline in the percentage of low-skilled workers (from 84.2% in 1988 to 80.7% in 2000), simultaneous with increases in the percentages of both middle-level workers (from 12.0% in 1988 to 14.24% in 2000) and professionals and managers (from 3.8% in 1988 to 5.1% in 2000).

The moderate shift from low-skilled workers to higher skilled workers would most likely be a result of the shifts of employment across sectors rather than changes in the composition of skilled and unskilled workers within sectors. A cursory look at Tables 7a to 7f or 8a to 8f show that the shares in employment of sectors ( $L_i/L$ ) have changed significantly between 1988 to 2000.

Specifically the movement out of agriculture and the traditional exportable sector would reduce the composition weights of low-skilled workers since Table 10 shows that these two sectors are the most heavily dependent on low-skilled workers. Of course there are movements towards sectors that are also dependent on low-skilled workers (such as transportation, construction and

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<sup>21</sup> The years correspond to the period categorization we used in the decomposition exercises for employment and labor productivity.

<sup>22</sup> Perhaps the biggest changes are in EGW, FIRE and importable manufacturing, which over the years increased the share of low-skilled workers at the expense of the middle-level workers. But these sectors are very low employment generating capacity as shown by their  $L_i/L$ .

trade), but these are more than offset by movements to sectors that are more weighted towards middle-level, professional and managerial workers – areas such as government and private services, the non-traditional exportable sector and FIRE (see Table 10 to see their bigger dependence on higher skilled workers).

This small shift from low-skilled workers to middle-level workers, managers and professionals may imply a deteriorating trend in the income distribution within labor. This of course needs more verification since we need to know: 1) the trend of wage differentials between the categories of workers, and 2) whether labor skills have been upgraded from low-skilled to middle-level over time. The general fall in real wages in the 1990s (see Figure 14) may imply a fall in wages for the majority of low-skilled labor (which comprise more than 80% of the employed labor force), which reinforces our claim that, most likely, there would have been a deterioration of income within labor income.

## **5 Overall Summary**

This paper has dwelled on the following issues:

1. Because of the Philippines' import dependence and dependence on unsustainable foreign capital flows, the Philippines has been undergoing periods of growth and recessions, which is the main cause of its lack of macroeconomic development.
2. The strong external liberalization experienced since the second half of the eighties has been accompanied by increased volatility and frequency of the recession – recovery (or bust-boom) cycles.
3. The study from 1988 to 2000 shows that the bust periods displaced labor but the growth periods had very little employment absorption. This led to a long-run trend for the unemployment rate to rise. The lack of employment absorption in the growth periods have to do with: a) lack of business confidence in some of the periods, b) the need to

improve labor productivity in the tradable (manufacturing) sector due to the higher exposure to external competition, c) a high import dependence that biases against using domestic resources and inputs. Thus the employment problem of the Philippines has to do not only with more frequent and more intense bust-recovery cycles, but also the lack of employment generation during the growth periods, and the more intense displacement of labor during the bust periods.

4. Labor productivities in most economic sectors fall during recessions and increase during boom times. Thus, the series of growth and recessions, corresponding increases and decreases in labor productivities, as well as periods of confidence and non-confidence, have resulted, not only in the lack of long-run growth in output, but also in the lack of improvement in the labor productivities of the economic sectors as well as in the unemployment rate over time.
5. In the nineties we also detect the stronger labor absorption capacities of the service sector as the manufacturing (which is the more tradable) sector requires stronger adjustments in terms of labor productivities because of its increasing exposure to competition brought about by external liberalization. Agriculture is also declining in terms of output and employment. The increasing share of service and (since the late eighties) the relatively constant share of industry and manufacturing, and the falling share of agriculture in both output and employment can be explained partly by the labor productivities and employment movements during the recession - recovery cycles of the economy.
6. Another factor contributing to the attractiveness of the service sector would be its relative insulation from competitive forces unleashed in the external liberalization processes.

7. These tendencies also imply falling and/or lagging labor productivities in the service sector, which contributes to the lack of improvement in overall labor productivity as the service sector increases its share in output and employment.
8. The paper also presents evidence of the increasing share that goes to corporate income after every bust-recovery transition and as the informal household sector's operating surplus is squeezed during the period of external liberalization and as labor moves out of agriculture.
9. Government income inevitably improves during the growth periods and as a result of painful tax reforms. However during bad times of recessions and sharp currency devaluation, the contraction in imports and incomes reduces significantly tax revenues and results in the deterioration of the fiscal position. The general trend of tariff reductions aggravates this problem affecting the fiscal sector during these times of currency devaluation and recessions.
10. There are evidences of moderate but discernable shifts in labor employment from low-skilled workers to middle-level as well as managerial and professional workers. Together with the fall in real wages in the 1990s, this points to some deterioration in the income distribution within households and the labor sectors.
11. Overall, therefore, the combination of boom-bust or recession- recovery cycles with external liberalization has not improved labor productivities, employment generation and factor income distribution in the last two decades.

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Table 2  
Aggregate Demand Decomposition  
(all values in constant 1985 prices)

	$Y=GDP-T$	$X=GDP+M$	$S=Y-C$	$s=(Y-C)/X$	$t=T/X$	$m=M/X$	$I/s$	$G/t$	$E/m$
1981	569,674	836,342	161,716	0.193	0.073	0.246	608,741	1,325,153	700,100
1982	590,704	874,022	168,637	0.193	0.072	0.252	735,315	1,253,742	639,197
1983	600,138	882,591	175,504	0.199	0.074	0.246	733,196	1,280,263	733,192
1984	553,253	795,487	127,486	0.160	0.080	0.224	602,991	845,729	784,668
1985	511,310	727,933	90,478	0.124	0.083	0.214	520,112	732,103	686,440
1986	533,476	759,793	98,661	0.130	0.076	0.222	551,793	817,109	799,770
1987	549,457	824,902	97,071	0.118	0.082	0.252	753,408	797,429	705,470
1988	598,747	905,137	118,185	0.131	0.066	0.272	785,275	1,079,623	716,324
1989	628,326	979,204	123,707	0.126	0.073	0.286	956,320	1,127,982	778,905
1990	646,066	1,020,654	114,294	0.112	0.073	0.294	1,193,772	1,317,301	796,345
1991	634,785	1,006,994	90,997	0.090	0.081	0.288	1,191,619	1,123,484	862,136
1992	630,517	1,020,674	69,008	0.068	0.087	0.296	1,763,800	1,042,769	906,440
1993	643,349	1,073,765	64,760	0.060	0.085	0.316	2,054,759	1,196,874	903,833
1994	673,185	1,164,396	73,079	0.063	0.080	0.342	2,280,589	1,249,667	988,567
1995	704,085	1,275,846	81,100	0.064	0.077	0.371	2,359,208	1,338,731	1,099,792
1996	750,613	1,389,678	98,823	0.071	0.071	0.389	2,410,039	1,517,711	1,204,327
1997	797,145	1,528,931	112,829	0.074	0.063	0.416	2,555,265	1,882,168	1,369,973
1998	802,835	1,424,420	94,931	0.067	0.060	0.377	2,251,448	1,959,904	1,245,532
1999	832,117	1,423,919	105,539	0.074	0.060	0.356	2,067,124	1,908,325	1,319,040
2000	869,006	1,428,095	117,080	0.082	0.059	0.332	1,910,255	1,899,025	1,334,731

Source of basic data: National Statistical Coordinating Board; NEDA planning and policy staff

Table 3: Some Macro Indicators of the Philippines: 1981 - 2000

Year	GDP growth rate	GNP growth rate	GNP per capita (1985 prices)	Unempl rate (%)	Labor prod ('000 pesos; 1985 prices)	Inflation rate	Exchange rate (avg)	Growth of Exchange rate	Fiscal balance (% of GDP)	Gross Dom Savings (% of GDP)	Gross Cap Form (% of GDP)	I-S Gap (% of GDP)	Lending rate (%)	M3/GDP	Growth of M3/CPI (%)	Curr Acct Bal (% of GDP)	Trade Bal (% of GDP)
1981	3.4	3.2	12,643	8.7	36.1	17.3	7.9	5.2	-4.3	26.8	27.7	1.0	15.3	0.293	13.3	-5.9	-6.2
1982	3.6	2.8	12,633	9.4	37.6	8.6	8.5	8.1	-4.5	25.3	27.5	2.2	18.1	0.303	7.2	-8.6	-7.1
1983	1.9	0.9	12,526	7.9	34.7	5.3	11.1	30.1	-2.0	27.4	29.9	2.5	19.2	0.309	12.8	-8.3	-7.5
1984	-7.3	-9.1	11,110	10.6	31.4	47.1	16.7	50.3	-1.9	22.9	23.1	0.1	28.2	0.233	-27.1	-4.1	-2.2
1985	-7.3	-7.0	10,086	11.1	28.9	23.4	18.6	11.4	-2.0	18.8	16.5	-2.3	28.6	0.235	-11.2	-0.1	-1.6
1986	3.4	3.6	10,205	11.1	28.7	-0.4	20.4	9.6	-5.0	19.1	16.0	-3.0	17.5	0.237	8.1	3.2	-0.7
1987	4.3	5.1	10,476	9.1	29.7	3.0	20.6	0.9	-2.4	21.0	16.5	-4.5	13.3	0.237	8.8	-1.3	-3.1
1988	6.8	7.2	10,971	8.3	30.6	8.9	21.1	2.6	-2.9	21.0	17.8	-3.3	15.9	0.248	12.6	-1.0	-2.9
1989	6.2	6.2	11,385	8.4	32.0	12.2	21.7	3.0	-2.1	20.3	20.8	0.5	19.3	0.274	14.1	-3.4	-6.1
1990	3.0	4.8	11,661	8.1	32.0	13.2	24.3	11.8	-3.5	18.7	23.1	4.4	24.1	0.279	3.7	-6.1	-9.1
1991	-0.6	0.5	11,456	9.0	31.2	18.5	27.5	13.0	-2.1	16.6	20.0	3.4	23.1	0.278	-2.7	-2.3	-7.1
1992	0.3	1.6	11,382	8.6	30.1	8.6	25.5	-7.2	-1.2	14.9	20.9	6.0	19.5	0.285	1.9	-1.9	-8.9
1993	2.1	2.1	11,151	8.9	30.0	7.0	27.1	6.3	-1.5	13.8	23.8	10.0	14.7	0.326	15.8	-5.5	-11.4
1994	4.4	5.2	11,456	8.4	30.5	8.3	26.4	-2.6	1.1	14.8	23.6	8.8	15.1	0.359	16.0	-4.6	-12.2
1995	4.7	4.9	11,743	8.4	31.2	8.0	25.7	-2.7	0.6	14.5	22.2	7.7	14.7	0.400	15.9	-2.7	-12.1
1996	5.8	7.2	12,298	7.4	30.9	9.1	26.2	2.0	0.3	14.6	23.4	8.8	14.8	0.406	6.8	-4.8	-13.7
1997	5.2	5.3	12,657	7.9	32.0	5.9	29.5	12.4	0.1	14.2	24.4	10.2	16.3	0.440	15.1	-5.3	-13.5
1998	-0.6	0.4	12,432	9.6	31.4	9.8	40.9	38.8	-1.9	12.8	21.0	8.2	16.8	0.429	-2.4	2.4	0.0
1999	3.4	3.7	12,615	9.4	31.7	6.6	39.1	-4.4	-3.7	14.9	19.0	4.0	11.8	0.457	12.7	10.0	6.5
2000	4.0	4.5	12,871	10.1	34.4	4.4	44.2	13.1	-4.1	17.0	17.8	0.8	10.9	0.430	0.2	12.4	9.2

Sources: National Statistics Coordination Board (NSCB), Bangko Sentral ng Pilipinas (BSP), various years  
International Financial Statistics, ADB Key Indicators of Asia-Pacific Countries, various years

Table 4  
Categorization of Nontradables, Exportables and Importables Using IO Table 1994

Major Categories	economic sector	% of total output	% of total exports	% of total imports	total exports/ total output (export share)	total imports/ total output (import share)
Agriculture	Agriculture, Livestock Fishery and Forestry	14.16	6.46	3.83	7.33	3.36non-tradable
	Agricultural products & agricultural services	7.39	3.08	2.48	6.69	4.16
	livestock, poultry and other animals	3.92	0.03	1.11	0.11	3.51
	Fishery	2.65	3.36	0.23	20.32	1.06
	Forestry & Hunting, trapping and game propagation	0.19	0.00	0.02	0.00	1.04
Industry		46.61	59.71	78.88	20.56	21.00
Mining	Mining & Quarrying	0.94	2.45	0.80	41.85	10.49exportable
	Metallic ore mining	0.63	2.39	0.62	60.76	12.20
	Non-metallic mining and quarrying	0.31	0.07	0.18	3.42	7.02
Mftg		37.70	56.80	69.72	24.18	22.95
Mftg 1	Food, beverages and tobacco	14.87	8.59	5.22	9.27	4.35nontradable
Mftg 2	Importable Manufacturing	9.04	6.35	26.47	11.27	36.34importable
	Paper and paper products	0.95	0.80	2.09	13.51	27.44
	Chemicals and chemical products	7.04	4.87	22.91	11.09	40.37
	Non-metallic mineral products	1.05	0.68	1.47	10.44	17.35
Mftg 3	Traditional Exportable (Wearing Apparel, Footwear, Wood pr.)	5.19	14.62	9.91	45.23	23.71exportable/importable
	Textiles and leather	4.03	11.86	9.19	47.31	28.32
	Wood and wood products	1.16	2.76	0.73	38.04	7.74
Mftg 4	Non-traditional Exportable	8.60	27.24	28.11	50.85	40.57exportable/importable
	Basic metal industries	1.54	4.90	1.79	51.04	14.42
	Fabricated metal products	0.66	0.93	1.74	22.61	32.55
	Electronics and other manufacturing industries	6.40	21.41	24.59	53.73	47.70



Table 4 (continued)  
 Categorization of Nontradables, Exportables and Importables Using IO Table 1994

Major Categories	economic sector	% of total output	% of total exports	% of total imports	total exports/ total output (export share)	total imports/ total output (import share)
Const.	Construction	5.28	0.27	4.31	0.81	10.13nontradable
EGW	Electricity, gas and water	2.69	0.19	4.06	1.16	18.73nontradable
	Electricity & gas	2.49	0.17	3.97	1.10	19.77
	Water works and supply	0.19	0.02	0.08	1.91	5.24
Services		39.23	33.83	17.29	13.84	5.47
	Transportation, Storage and Communication	5.71	5.32	4.75	14.97	10.32nontradable
	Transportation services and storage/warehousing	4.65	4.44	4.27	15.34	11.40
	Communication	1.06	0.89	0.48	13.37	5.59
	Wholesale trade and retail trade (TRADE)	11.52	14.31	4.33	19.94	4.66nontradable
	FIRE	9.69	6.56	2.52	10.87	3.22nontradable
	Banking institution	2.00	4.43	0.97	35.48	5.98
	Non-bank financial intermediaries	0.99	0.85	0.52	13.81	6.53
	Insurance	1.01	0.45	0.32	7.23	3.95
	Real estate	4.38	0.29	0.28	1.07	0.79
	Business services	1.31	0.54	0.43	6.54	4.09
	Gov't & Private Services (except rec.,cult., rest., hotels)	9.05	0.69	4.30	1.22	5.90nontradable
	Public administration, defense, public education and health services	5.50	0.00	1.58	0.00	3.56
	Personal and household services	1.84	0.55	1.65	4.79	11.13
	Other private services	1.71	0.14	1.07	1.32	7.80
	Recr., cultural services & hotels & restaurants	3.26	6.94	1.39	34.21	5.30exportable
	Recreational and cultural services	0.91	2.33	0.38	41.04	5.13
	Restaurant and hotels	2.35	4.61	1.01	31.55	5.36
	Total	100.00	100.00	100.00	16.05	12.41

source: 1994 I-O tables

Table 5a  
Growth Rates of GVA by Industry of Origin, 1980 - 2000

Growth Rates	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. Agriculture, Fishery, Forestry	4.04	3.62	0.78	-3.38	-0.93	-1.88	3.68	3.22	3.24	3.01	0.48	1.37	0.39	2.13	2.60	0.85	3.82	3.09	-6.43	5.95	3.42
2. Industry	4.96	4.65	2.48	1.52	-11.51	-15.75	2.30	4.01	8.75	7.38	2.56	-2.67	-0.54	1.65	5.77	6.97	6.19	6.14	-2.12	0.88	3.63
a. Mining & Quarrying	10.67	2.43	-1.98	0.86	-3.08	32.75	3.53	-8.78	4.20	-2.69	-2.62	-2.89	6.73	0.66	-6.98	-0.76	-4.82	1.69	2.77	-8.36	8.67
b. Manufacturing	4.18	1.95	1.60	-0.32	-10.11	-7.90	1.81	5.57	9.52	5.81	2.66	-0.44	-1.73	0.75	5.01	6.77	5.58	4.22	-1.13	1.59	5.59
Food, Beverage & Tob. (nt)	6.43	4.58	3.38	-0.89	-9.93	-6.66	3.79	0.07	1.92	2.03	0.29	-1.33	-2.55	-2.16	5.41	2.85	6.78	1.79	2.45	4.65	2.07
Importable mftg	0.76	-6.37	7.02	1.07	-9.86	-1.35	-4.30	11.78	21.69	5.95	8.28	0.02	3.00	-0.17	4.18	8.90	6.63	3.17	-5.75	-2.05	4.31
Traditional exportable/importable	2.37	5.23	-5.60	-6.89	-15.60	-17.25	2.75	16.83	10.55	13.12	0.68	0.98	-7.19	3.86	-1.39	7.35	-5.39	2.82	-0.10	-11.29	4.95
Non-traditional exportable/importable	4.20	3.60	-7.04	7.75	-5.39	-16.40	5.23	7.71	15.37	12.64	1.03	0.13	-4.14	9.86	11.37	13.25	8.71	13.40	-1.87	8.19	16.00
c. Construction	5.62	10.78	1.09	9.51	-20.19	-48.17	-1.69	11.19	4.70	19.99	4.97	-15.70	2.77	5.74	8.95	6.51	10.89	16.18	-9.65	-1.55	-5.96
d. Elect, Gas and Water	8.73	14.66	22.26	-9.12	6.80	-6.47	13.22	-11.43	12.56	5.39	-0.44	4.70	0.66	2.92	13.85	13.00	7.48	4.82	3.26	3.11	3.65
3. SERVICE SECTOR	6.11	1.92	6.82	5.56	-6.53	-2.08	4.23	5.23	7.16	7.03	4.86	0.15	1.02	2.49	4.23	5.02	6.37	5.42	3.47	4.09	4.42
a. Transport., Comm., Stor.	4.26	4.98	2.57	3.84	-1.72	-1.23	4.45	6.08	8.01	6.19	2.15	0.45	1.40	2.56	4.25	5.81	7.41	8.23	6.49	5.26	9.94
b. Trade	6.07	0.22	8.59	3.94	-6.80	-0.96	4.93	3.59	5.71	7.93	4.57	0.53	1.65	2.46	3.95	5.57	5.52	3.90	2.45	4.88	5.61
c. FIRE (incl. Bus. Services)	7.84	-4.59	7.58	6.78	-13.02	-7.05	4.66	7.32	7.28	8.86	5.54	-0.83	0.44	1.87	4.14	4.92	8.12	7.87	3.09	1.59	1.06
d. Services (exc. Rec., hot, rest.)	5.12	11.02	4.24	4.16	-0.23	1.17	2.62	4.00	7.92	4.82	7.26	0.67	0.57	2.76	4.44	3.75	5.36	3.39	3.60	4.49	2.79
f. Recreational, hotels&rest.	5.32	10.98	13.64	23.07	-6.84	-1.01	3.44	9.99	11.06	3.85	1.30	-0.66	0.40	4.32	5.74	4.87	5.40	4.73	3.49	6.11	3.01
Gross Domestic Product	5.15	3.42	3.62	1.87	-7.32	-7.31	3.42	4.31	6.75	6.21	3.04	-0.58	0.34	2.12	4.39	4.76	5.76	5.19	-0.59	3.32	3.95
Net factor income fr. Abroad	1,125.53	5.88	176.7 2	13.91	78.18	-15.71	-2.56	-19.64	-10.39	6.03	-75.28	-198.27	236.99	2.49	54.86	12.80	57.44	6.84	23.93	10.10	8.98
Gross National Product	4.51	3.41	2.43	1.65	-9.11	-6.96	3.64	5.15	7.21	6.21	4.78	0.46	1.55	2.12	5.25	4.96	7.16	5.25	0.40	3.66	4.21

Source: National Statistics Coordination Board

Table 5b  
GVA by Industry of Origin, as Percentage of GDP, 1980 - 2000

GVA by Industry Origin as % of GDP	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. Agriculture, Fishery, Forestry	23.75	23.50	23.54	22.90	21.72	23.22	24.58	24.64	24.38	23.58	22.87	22.30	22.74	22.75	22.75	22.36	21.53	21.13	20.71	19.50	19.99
2. Industry	40.59	40.52	41.00	40.55	40.41	38.58	35.07	34.69	34.59	35.24	35.62	35.46	34.71	34.41	34.25	34.71	35.44	35.58	35.91	35.35	34.52
a. Mining & Quarrying	1.42	1.50	1.48	1.40	1.39	1.45	2.08	2.08	1.82	1.78	1.63	1.54	1.50	1.60	1.58	1.40	1.33	1.20	1.16	1.20	1.06
b. Manufacturing	27.86	27.60	27.21	26.68	26.10	25.32	25.15	24.76	25.06	25.71	25.61	25.52	25.56	25.03	24.69	24.84	25.32	25.27	25.04	24.91	24.49
Food, Beverage & Tob. (nt)	13.64	13.80	13.96	13.92	13.55	13.17	13.26	13.31	12.77	12.19	11.71	11.40	11.31	10.99	10.53	10.63	10.44	10.54	10.20	10.51	10.64
Importable mftg	6.87	6.58	5.96	6.16	6.11	5.94	6.32	5.85	6.27	7.15	7.13	7.49	7.54	7.74	7.56	7.55	7.85	7.91	7.76	7.36	6.98
Traditional exportable/importable	4.08	3.97	4.04	3.68	3.36	3.06	2.73	2.72	3.04	3.15	3.36	3.28	3.33	3.08	3.13	2.96	3.03	2.71	2.65	2.66	2.29
Non-traditional exportable/importable	3.27	3.24	3.25	2.92	3.08	3.15	2.84	2.89	2.98	3.22	3.42	3.35	3.38	3.23	3.47	3.70	4.00	4.11	4.44	4.38	4.59
c. Construction	9.35	9.39	10.06	9.81	10.55	9.08	5.08	4.83	5.15	5.05	5.70	5.81	4.92	5.04	5.22	5.45	5.54	5.81	6.42	5.83	5.56
d. Elect,Gas and Water	1.96	2.03	2.25	2.66	2.37	2.73	2.76	3.02	2.56	2.70	2.68	2.59	2.73	2.74	2.76	3.01	3.25	3.30	3.29	3.41	3.41
3. SERVICE SECTOR	35.66	35.98	35.46	36.55	37.88	38.20	40.35	40.67	41.03	41.19	41.51	42.24	42.55	42.84	42.99	42.93	43.04	43.29	43.38	45.15	45.49
a. Transport., Comm., Stor.	4.83	4.78	4.86	4.81	4.90	5.20	5.54	5.59	5.69	5.75	5.75	5.70	5.76	5.82	5.85	5.84	5.90	5.99	6.17	6.60	6.73
b. Trade	12.90	13.01	12.61	13.21	13.48	13.56	14.48	14.70	14.59	14.45	14.69	14.91	15.07	15.27	15.32	15.26	15.37	15.34	15.15	15.61	15.85
c. FIRE (incl. Bus. Services)	9.88	10.13	9.35	9.70	10.17	9.54	9.57	9.69	9.96	10.01	10.26	10.51	10.49	10.50	10.47	10.45	10.46	10.70	10.97	11.38	11.19
d. Services (exc. Rec.,hot,rest.)	6.71	6.70	7.20	7.24	7.40	7.97	8.70	8.63	8.60	8.70	8.58	8.94	9.05	9.07	9.13	9.13	9.04	9.01	8.86	9.23	9.33
f. Rrecreational, hotels&rest.	1.35	1.35	1.45	1.59	1.92	1.93	2.07	2.07	2.18	2.27	2.22	2.18	2.18	2.18	2.23	2.25	2.26	2.25	2.24	2.33	2.39
Gross Domestic Product	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Net factor income fr. Abroad	-0.06	-0.67	-0.69	-1.83	-2.05	-3.93	-3.58	-3.37	-2.60	-2.18	-2.18	-0.52	0.52	1.73	1.74	2.58	2.78	4.13	4.20	5.23	5.58
Gross National Product	99.94	99.33	99.31	98.17	97.95	96.07	96.42	96.63	97.40	97.82	97.82	99.48	100.52	101.73	101.74	102.58	102.78	104.13	104.20	105.23	105.58

Source: National Statistics Coordination Board

Table 6a  
Growth Rates in Employed persons by industry

Growth Rates	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. Agriculture, Fishery, Forestry		-1.45	2.00	2.27	1.54	7.20	0.06	0.58	3.16	-2.75	-1.06	3.32	-5.87
2.INDUSTRY		6.64	-1.63	5.31	4.73	0.25	3.61	4.22	9.53	2.68	-1.82	-0.25	-1.37
a. Mining & Quarrying		5.12	-20.85	6.35	-2.34	0.25	-18.17	-3.88	3.31	17.26	-9.73	-16.20	11.20
b. manufacturing		5.22	-3.02	5.28	6.14	-2.28	3.46	2.73	4.78	-0.26	-1.19	2.02	-0.01
Food, Beverage & Tob. (nt)		4.62	-0.60	4.83	6.41	-2.34	0.13	7.59	2.38	0.12	1.04	1.69	-3.28
Importable mftg		19.05	-0.80	10.92	6.60	-4.44	8.50	6.56	14.35	-2.86	-3.19	-2.82	-4.84
Traditional exportable/importable		2.08	-6.07	-0.28	6.50	-3.53	2.29	-1.17	-0.16	-6.29	-3.53	5.45	-0.37
Non-traditional exportable/importable		9.11	3.01	21.30	4.39	3.08	7.78	4.38	13.63	14.35	1.94	-0.77	6.65
c. construction		11.52	4.71	4.70	3.74	4.90	6.29	8.67	19.59	6.64	-3.12	-2.85	-3.29
d. electricity, gas and water		-1.49	4.14	11.26	-8.87	16.17	7.03	-0.57	11.00	5.43	9.29	-1.21	-15.64
3. SERVICE SECTOR		5.57	3.73	0.99	1.80	4.05	4.30	5.87	6.99	5.86	4.70	4.18	1.62
a. transport		7.04	1.35	3.93	4.17	9.50	6.56	7.12	10.08	6.12	6.49	5.96	3.12
b. trade		5.28	3.39	-0.02	2.36	4.34	4.35	6.69	6.22	3.71	3.30	5.04	1.99
c. FIRE (incl. Bus. Services)		2.62	10.23	6.69	-3.05	11.75	-2.25	10.29	14.01	10.81	-1.06	7.25	-2.62
d. Services (exc. Rec.,hot.,rest.)		5.21	4.36	0.19	0.64	0.98	4.08	3.75	6.45	6.25	4.89	1.80	1.63
f. Recreational, hotels&rest.		9.52	1.30	1.72	5.81	4.72	6.09	8.27	1.64	11.26	12.81	7.05	-0.15
total employed		2.45	2.09	2.23	2.15	4.84	2.25	3.24	5.72	1.68	1.27	3.13	-1.83
Unemployment Rate	8.78	8.35	8.42	9.21	8.85	8.60	8.93	8.64	7.74	8.10	9.01	8.91	10.16
Labor Force Participation Rate	65.51	64.90	64.42	64.74	63.78	64.75	64.58	65.15	65.86	65.51	65.31	66.56	65.21

Table 6b  
Employed persons as % of labor force, by industry

As % of Labor Force	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1. Agriculture, Fishery, Forestry	42.67	41.24	41.17	40.83	40.75	41.78	40.73	39.81	39.23	37.37	36.15	36.26	34.29
2.INDUSTRY	14.01	14.66	14.11	14.41	14.83	14.22	14.36	14.54	15.21	15.30	14.69	14.22	14.09
a. Mining & Quarrying	0.67	0.69	0.53	0.55	0.53	0.51	0.40	0.38	0.37	0.43	0.38	0.31	0.34
b. manufacturing	9.42	9.72	9.22	9.41	9.82	9.18	9.25	9.24	9.24	9.03	8.73	8.64	8.68
Food, Beverage & Tob. (nt)	2.14	2.20	2.14	2.17	2.27	2.12	2.07	2.16	2.12	2.08	2.05	2.02	1.97
Importable mftg	0.91	1.06	1.03	1.11	1.16	1.06	1.12	1.16	1.27	1.21	1.14	1.08	1.03
Traditional exportable/importable	5.13	5.14	4.72	4.57	4.78	4.41	4.40	4.22	4.03	3.70	3.49	3.57	3.57
Non-traditional exportable/importable	1.24	1.32	1.33	1.57	1.61	1.59	1.67	1.69	1.83	2.06	2.05	1.97	2.11
c. construction	3.56	3.89	3.99	4.05	4.13	4.15	4.29	4.53	5.18	5.41	5.12	4.83	4.69
d. electricity, gas and water	0.37	0.36	0.36	0.39	0.35	0.39	0.41	0.39	0.42	0.43	0.46	0.44	0.38
3. SERVICE SECTOR	34.54	35.76	36.30	35.55	35.57	35.40	35.97	37.01	37.82	39.22	40.15	40.60	41.45
a. transport	4.34	4.56	4.52	4.56	4.67	4.89	5.07	5.28	5.55	5.77	6.01	6.18	6.41
b. trade	12.46	12.86	13.02	12.62	12.70	12.67	12.88	13.36	13.55	13.77	13.90	14.18	14.53
c. FIRE (incl. Bus. Services)	1.65	1.66	1.79	1.86	1.77	1.89	1.80	1.93	2.10	2.28	2.21	2.30	2.25
d. Services (exc. Rec.,hot.,rest.)	14.20	14.65	14.96	14.54	14.38	13.89	14.09	14.20	14.44	15.03	15.41	15.23	15.55
f. Recreational, hotels&rest.	1.88	2.02	2.00	1.98	2.06	2.06	2.13	2.24	2.17	2.37	2.61	2.72	2.72
total employed	91.22	91.65	91.58	90.79	91.15	91.40	91.07	91.36	92.26	91.90	90.99	91.09	89.84
Unemployed	8.78	8.35	8.42	9.21	8.85	8.60	8.93	8.64	7.74	8.10	9.01	8.91	10.16
total labor force	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 7a  
Decomposition of Labor Productivity, 1988 - 1990

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.2327	0.4584	0.0292	0.0134	-0.2257	0.0344	-0.0078	0.0056
2. Industry	0.3590	0.1539	0.0486		0.2052	0.0964		
a. Mining & Quarrying	0.0168	0.0066	0.1298	0.0009	0.0102	-0.0538	-0.0006	0.0003
b. Manufacturing	0.2601	0.1019	0.0625		0.1582	0.0827		
Food, Beverage & Tob. (nt)	0.1196	0.0234	-0.0161	-0.0004	0.0962	0.0230	0.0022	0.0018
Importable mftg	0.0744	0.0106	-0.0290	-0.0003	0.0638	0.1371	0.0088	0.0084
Traditional exportable/importable	0.0327	0.0538	0.1716	0.0092	-0.0212	0.1299	-0.0027	0.0065
Non-traditional exportable/importable	0.0334	0.0141	0.0124	0.0002	0.0194	0.1291	0.0025	0.0027
c. Construction	0.0553	0.0414	0.0755	0.0031	0.0139	0.2297	0.0032	0.0063
d. Elect,Gas and Water	0.0269	0.0040	0.0226	0.0001	0.0228	0.0481	0.0011	0.0012
3. SERVICE SECTOR	0.4239	0.3877	0.0245		0.0362	0.1152		
a. Transport., Comm., Stor.	0.0582	0.0485	-0.0001	0.0000	0.0097	0.0813	0.0008	0.0008
b. Trade	0.1492	0.1394	0.0362	0.0051	0.0098	0.1209	0.0012	0.0062
c. FIRE (incl. Bus. Services)	0.1044	0.0189	0.0155	0.0003	0.0855	0.1385	0.0118	0.0121
d. Services (exc. Rec.,hot.,&rest)	0.0896	0.1596	0.0238	0.0038	-0.0700	0.1170	-0.0082	-0.0044
f. Rrecreational, hotels&rest.	0.0226	0.0213	-0.0532	-0.0011	0.0013	0.0506	0.0001	-0.0011
All Sectors			0.0451	0.0342			0.0124	0.0466

Table 7b  
Decomposition of Labor Productivity, 1990 - 1991

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.1858	0.4496	-0.0088	-0.0040	-0.2639	0.0136	-0.0036	-0.0076
2. Industry	0.2894	0.1564	-0.0788		0.1330	-0.0271		
a. Mining & Quarrying	0.0125	0.0059	-0.0908	-0.0005	0.0066	-0.0294	-0.0002	-0.0007
b. Manufacturing	0.2107	0.1022	-0.0558		0.1085	-0.0044		
Food, Beverage & Tob. (nt)	0.0937	0.0236	-0.0605	-0.0014	0.0700	-0.0133	-0.0009	-0.0024
Importable mftg	0.0620	0.0117	-0.1034	-0.0012	0.0503	0.0002	0.0000	-0.0012
Traditional exportable/importable	0.0273	0.0509	0.0125	0.0006	-0.0237	0.0098	-0.0002	0.0004
Non-traditional exportable/importable	0.0278	0.0159	-0.1912	-0.0030	0.0118	0.0013	0.0000	-0.0030
c. Construction	0.0443	0.0441	-0.2159	-0.0095	0.0002	-0.1704	0.0000	-0.0096
d. Elect,Gas and Water	0.0219	0.0042	-0.0607	-0.0003	0.0178	0.0459	0.0008	0.0006
3. SERVICE SECTOR	0.3497	0.3939	-0.0083		-0.0442	0.0015		
a. Transport., Comm., Stor.	0.0473	0.0498	-0.0341	-0.0017	-0.0025	0.0044	0.0000	-0.0017
b. Trade	0.1236	0.1406	0.0056	0.0008	-0.0169	0.0053	-0.0001	0.0007
c. FIRE (incl. Bus. Services)	0.0866	0.0200	-0.0730	-0.0015	0.0666	-0.0083	-0.0006	-0.0020
d. Services (exc. Rec.,hot.,&rest)	0.0742	0.1618	0.0047	0.0008	-0.0876	0.0067	-0.0006	0.0002
f. Rrecreational, hotels&rest.	0.0180	0.0218	-0.0236	-0.0005	-0.0039	-0.0066	0.0000	-0.0005
All Sectors			-0.0278	-0.0215			-0.0054	-0.0268

Table 7c  
Decomposition of Labor Productivity, 1991 - 1993

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.2275	0.4535	-0.0599	-0.0271	-0.2261	0.0249	-0.0056	-0.0328
2. Industry	0.3448	0.1571	-0.0378		0.1877	0.0110		
a. Mining & Quarrying	0.0154	0.0058	0.0929	0.0005	0.0096	0.0717	0.0007	0.0012
b. Manufacturing	0.2512	0.1020	-0.0465		0.1492	-0.0100		
Food, Beverage & Tob. (nt)	0.1091	0.0236	-0.0860	-0.0020	0.0856	-0.0476	-0.0041	-0.0061
Importable mftg	0.0755	0.0119	0.0093	0.0001	0.0636	0.0278	0.0018	0.0019
Traditional exportable/importable	0.0323	0.0492	-0.0638	-0.0031	-0.0169	-0.0368	0.0006	-0.0025
Non-traditional exportable/importable	0.0342	0.0173	-0.0215	-0.0004	0.0169	0.0518	0.0009	0.0005
c. Construction	0.0508	0.0450	-0.0014	-0.0001	0.0058	0.0831	0.0005	0.0004
d. Elect,Gas and Water	0.0274	0.0043	-0.0217	-0.0001	0.0231	0.0353	0.0008	0.0007
3. SERVICE SECTOR	0.4277	0.3893	-0.0227		0.0384	0.0347		
a. Transport., Comm., Stor.	0.0581	0.0519	-0.0924	-0.0048	0.0062	0.0392	0.0002	-0.0046
b. Trade	0.1520	0.1388	-0.0252	-0.0035	0.0132	0.0406	0.0005	-0.0030
c. FIRE (incl. Bus. Services)	0.1048	0.0206	-0.0572	-0.0012	0.0842	0.0230	0.0019	0.0008
d. Services (exc. Rec.,hot.,&rest)	0.0909	0.1559	0.0167	0.0026	-0.0650	0.0328	-0.0021	0.0005
f. Rrecreational, hotels&rest.	0.0220	0.0222	-0.0562	-0.0012	-0.0001	0.0463	0.0000	-0.0013
All Sectors			-0.0442	-0.0403			-0.0039	-0.0442

Table 7d  
Decomposition of Labor Productivity, 1993 - 1997

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.2163	0.4303	0.0924	0.0398	-0.2140	0.1020	-0.0218	0.0179
2. Industry	0.3516	0.1614	0.0489		0.1902	0.2420		
a. Mining & Quarrying	0.0135	0.0051	-0.0643	-0.0003	0.0084	-0.1126	-0.0009	-0.0013
b. Manufacturing	0.2489	0.0993	0.1050		0.1496	0.2093		
Food, Beverage & Tob. (nt)	0.1034	0.0229	0.0650	0.0015	0.0806	0.1637	0.0132	0.0147
Importable mftg	0.0767	0.0124	-0.0286	-0.0004	0.0643	0.2208	0.0142	0.0138
Traditional exportable/importable	0.0287	0.0440	0.0849	0.0037	-0.0153	0.0293	-0.0004	0.0033
Non-traditional exportable/importable	0.0400	0.0200	0.0617	0.0012	0.0200	0.4344	0.0087	0.0099
c. Construction	0.0588	0.0525	0.0148	0.0008	0.0063	0.3968	0.0025	0.0033
d. Elect,Gas and Water	0.0305	0.0045	0.1514	0.0007	0.0260	0.3669	0.0095	0.0102
3. SERVICE SECTOR	0.4321	0.4083	-0.0187		0.0238	0.2043		
a. Transport., Comm., Stor.	0.0602	0.0584	-0.0391	-0.0023	0.0018	0.2474	0.0004	-0.0018
b. Trade	0.1523	0.1446	-0.0192	-0.0028	0.0077	0.1844	0.0014	-0.0014
c. FIRE (incl. Bus. Services)	0.1075	0.0229	-0.0665	-0.0015	0.0846	0.2412	0.0204	0.0189
d. Services (exc. Rec.,hot.,&rest)	0.0898	0.1581	-0.0341	-0.0054	-0.0684	0.1655	-0.0113	-0.0167
f. Rreational, hotels&rest.	0.0223	0.0243	-0.0593	-0.0014	-0.0019	0.2016	-0.0004	-0.0018
All Sectors			0.0695	0.0336			0.0354	0.0690

Table 7e  
Decomposition of Labor Productivity, 1997 - 1998

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.2011	0.4020	-0.0558	-0.0224	-0.2009	-0.0664	0.0134	-0.0091
2. Industry	0.3563	0.1640	-0.0031		0.1923	-0.0215		
a. Mining & Quarrying	0.0118	0.0044	0.1295	0.0006	0.0074	0.0273	0.0002	0.0008
b. Manufacturing	0.2498	0.0971	0.0007		0.1527	-0.0113		
Food, Beverage & Tob. (nt)	0.1035	0.0226	0.0138	0.0003	0.0809	0.0242	0.0020	0.0023
Importable mftg	0.0756	0.0128	-0.0267	-0.0003	0.0628	-0.0592	-0.0037	-0.0041
Traditional exportable/importable	0.0266	0.0393	0.0350	0.0014	-0.0127	-0.0010	0.0000	0.0014
Non-traditional exportable/importable	0.0441	0.0224	-0.0381	-0.0009	0.0216	-0.0189	-0.0004	-0.0013
c. Construction	0.0613	0.0576	-0.0697	-0.0040	0.0037	-0.1014	-0.0004	-0.0044
d. Elect,Gas and Water	0.0335	0.0049	-0.0568	-0.0003	0.0286	0.0321	0.0009	0.0006
3. SERVICE SECTOR	0.4426	0.4341	-0.0118		0.0086	0.0341		
a. Transport., Comm., Stor.	0.0638	0.0645	0.0000	0.0000	-0.0006	0.0628	0.0000	0.0000
b. Trade	0.1538	0.1513	-0.0083	-0.0013	0.0025	0.0242	0.0001	-0.0012
c. FIRE (incl. Bus. Services)	0.1117	0.0245	0.0410	0.0010	0.0872	0.0304	0.0027	0.0037
d. Services (exc. Rec.,hot.,&rest)	0.0904	0.1665	-0.0124	-0.0021	-0.0761	0.0354	-0.0027	-0.0048
f. Rreational, hotels&rest.	0.0228	0.0273	-0.0862	-0.0023	-0.0044	0.0343	-0.0002	-0.0025
All Sectors			-0.0185	-0.0303			0.0118	-0.0186

Table 7f  
Decomposition of Labor Productivity, 1998 - 2000

	1	2	3	4	5	6	7	sum(4) + sum(7)
	Xi/X	Li/L	gr(pi)	Li/L * gr(pi)	Xi/X - Li/L	gr (Xi)	(Xi/X - Li/L) * gr (Xi)	
1. Agriculture, Fishery, Forestry	0.1970	0.3895	0.1191	0.0464	-0.1924	0.0914	-0.0176	0.0288
2. Industry	0.3486	0.1592	0.0607		0.1895	0.0445		
a. Mining & Quarrying	0.0115	0.0040	0.0664	0.0003	0.0075	-0.0042	0.0000	0.0002
b. Manufacturing	0.2489	0.0963	0.0502		0.1526	0.0701		
Food, Beverage & Tob. (nt)	0.1048	0.0222	0.0825	0.0018	0.0826	0.0660	0.0054	0.0073
Importable mftg	0.0717	0.0120	0.0998	0.0012	0.0597	0.0216	0.0013	0.0025
Traditional exportable/importable	0.0248	0.0390	-0.1207	-0.0047	-0.0142	-0.0715	0.0010	-0.0037
Non-traditional exportable/importable	0.0476	0.0230	0.1701	0.0039	0.0246	0.2262	0.0056	0.0095
c. Construction	0.0542	0.0543	-0.0147	-0.0008	-0.0001	-0.0771	0.0000	-0.0008
d. Elect,Gas and Water	0.0341	0.0046	0.2476	0.0011	0.0294	0.0665	0.0020	0.0031
3. SERVICE SECTOR	0.4543	0.4514	0.0262		0.0029	0.0833		
a. Transport., Comm., Stor.	0.0687	0.0687	0.0574	0.0039	0.0000	0.1458	0.0000	0.0039
b. Trade	0.1587	0.1573	0.0334	0.0052	0.0014	0.1021	0.0001	0.0054
c. FIRE (incl. Bus. Services)	0.1112	0.0246	-0.0170	-0.0004	0.0865	0.0264	0.0023	0.0019
d. Services (exc. Rec.,hot.,&rest)	0.0923	0.1713	0.0375	0.0064	-0.0790	0.0715	-0.0056	0.0008
f. Rreational, hotels&rest.	0.0235	0.0295	0.0222	0.0007	-0.0060	0.0888	-0.0005	0.0001
All Sectors			0.0590	0.0651			-0.0061	0.0590

**Table 8a**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1988-1990**

	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	0.0292	-0.0234	-0.0526	0.4584	-0.0241	
2. Industry	0.0486	0.0386	-0.0100	0.1539	-0.0015	
a. Mining & Quarrying	0.1298	-0.1115	-0.2414	0.0066	-0.0016	
b. Manufacturing	0.0625	0.0249	-0.0376	0.1019	-0.0038	
Food, Beverage & Tob. (nt)	-0.0161	-0.0348	-0.0187	0.0234	-0.0004	
Importable mftg	-0.0290	0.0795	0.1085	0.0106	0.0012	
Traditional exportable/importable	0.1716	0.0722	-0.0994	0.0538	-0.0054	
Non-traditional exportable/importable	0.0124	0.0714	0.0591	0.0141	0.0008	
c. Construction	0.0755	0.1724	0.0969	0.0414	0.0040	
d. Elect, Gas and Water	0.0226	-0.0097	-0.0323	0.0040	-0.0001	
3. SERVICE SECTOR	0.0245	0.0575	0.0330	0.3877	0.0128	
a. Transport., Comm., Stor.	-0.0001	0.0235	0.0236	0.0485	0.0011	
b. Trade	0.0362	0.0632	0.0270	0.1394	0.0038	
c. FIRE (incl. Bus. Services)	0.0155	0.0809	0.0654	0.0189	0.0012	
d. Services (exc. Rec., hot., & rest)	0.0238	0.0593	0.0355	0.1596	0.0057	
f. Recreational, hotels & rest.	-0.0532	-0.0072	0.0460	0.0213	0.0010	
All Sectors					-0.0128	-0.0129
	1988	1990	average	growth rate		
Unemployment Rate (v)	0.0878	0.0842	0.0860	-0.0417		
LFPR (e)	0.6551	0.6442	0.6496	-0.0168		
(1-v)	0.9140					
(1-v) gr(L/P)	-0.0117					
(1-v) gr(e)	-0.0153					
v gr(v)	-0.0036					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0000					

**Table 8b**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1990-1991**

	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	-0.0088	-0.0121	-0.0032	0.4496	-0.0015	
2. Industry	-0.0788	-0.0527	0.0260	0.1564	0.0041	
a. Mining & Quarrying	-0.0908	-0.0550	0.0358	0.0059	0.0002	
b. Manufacturing	-0.0558	-0.0301	0.0257	0.1022	0.0026	
Food, Beverage & Tob. (nt)	-0.0605	-0.0390	0.0215	0.0236	0.0005	
Importable mftg	-0.1034	-0.0254	0.0779	0.0117	0.0009	
Traditional exportable/importable	0.0125	-0.0159	-0.0284	0.0509	-0.0014	
Non-traditional exportable/importable	-0.1912	-0.0244	0.1668	0.0159	0.0027	
c. Construction	-0.2159	-0.1959	0.0200	0.0441	0.0009	
d. Elect, Gas and Water	-0.0607	0.0203	0.0810	0.0042	0.0003	
3. SERVICE SECTOR	-0.0083	-0.0242	-0.0159	0.3939	-0.0062	
a. Transport., Comm., Stor.	-0.0341	-0.0212	0.0129	0.0498	0.0006	
b. Trade	0.0056	-0.0203	-0.0259	0.1406	-0.0036	
c. FIRE (incl. Bus. Services)	-0.0730	-0.0340	0.0391	0.0200	0.0008	
d. Services (exc. Rec., hot., & rest)	0.0047	-0.0190	-0.0237	0.1618	-0.0038	
f. Recreational, hotels & rest.	-0.0236	-0.0323	-0.0087	0.0218	-0.0002	
All Sectors					-0.0036	-0.0036
	1990	1991	average	growth rate		
Unemployment Rate (v)	0.0842	0.0921	0.0882	0.0898		
LFPR (e)	0.6442	0.6474	0.6458	0.0050		
(1-v)	0.9118					
(1-v) gr(L/P)	-0.0033					
(1-v) gr(e)	0.0046					
v gr(v)	0.0079					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0000					



**Table 8c**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1991-1993**

Table 8c 1991-1993	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	-0.0599	-0.0366	0.0232	0.4535	0.0105	
2. Industry	-0.0378	-0.0506	-0.0129	0.1571	-0.0020	
a. Mining & Quarrying	0.0929	0.0101	-0.0827	0.0058	-0.0005	
b. Manufacturing	-0.0465	-0.0716	-0.0250	0.1020	-0.0026	
Food, Beverage & Tob. (nt)	-0.0860	-0.1091	-0.0231	0.0236	-0.0005	
Importable mftg	0.0093	-0.0338	-0.0431	0.0119	-0.0005	
Traditional exportable/importable	-0.0638	-0.0983	-0.0345	0.0492	-0.0017	
Non-traditional exportable/importable	-0.0215	-0.0098	0.0117	0.0173	0.0002	
c. Construction	-0.0014	0.0215	0.0230	0.0450	0.0010	
d. Elect, Gas and Water	-0.0217	-0.0263	-0.0046	0.0043	0.0000	
3. SERVICE SECTOR	-0.0227	-0.0269	-0.0041	0.3893	-0.0016	
a. Transport., Comm., Stor.	-0.0924	-0.0224	0.0700	0.0519	0.0036	
b. Trade	-0.0252	-0.0210	0.0042	0.1388	0.0006	
c. FIRE (incl. Bus. Services)	-0.0572	-0.0386	0.0185	0.0206	0.0004	
d. Services (exc. Rec., hot., & rest)	0.0167	-0.0287	-0.0455	0.1559	-0.0071	
f. Recreational, hotels & rest.	-0.0562	-0.0152	0.0410	0.0222	0.0009	
All Sectors					0.0069	0.0069
	1991	1993	average	growth rate		
Unemployment Rate (v)	0.0921	0.0860	0.0890	-0.0692		
LFPR (e)	0.6474	0.6475	0.6475	0.0001		
(1-v)	0.9110					
(1-v) gr(L/P)	0.0063					
(1-v) gr(e)	0.0001					
v gr(v)	-0.0062					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0000					

**Table 8d**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1993-1997**

Table 8d 1993-1997	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	0.0924	-0.0074	-0.0998	0.4303	-0.0429	
2. Industry	0.0489	0.1335	0.0846	0.1614	0.0137	
a. Mining & Quarrying	-0.0643	-0.2212	-0.1569	0.0051	-0.0008	
b. Manufacturing	0.1050	0.1005	-0.0044	0.0993	-0.0004	
Food, Beverage & Tob. (nt)	0.0650	0.0546	-0.0104	0.0229	-0.0002	
Importable mftg	-0.0286	0.1121	0.1406	0.0124	0.0017	
Traditional exportable/importable	0.0849	-0.0801	-0.1650	0.0440	-0.0073	
Non-traditional exportable/importable	0.0617	0.3289	0.2673	0.0200	0.0054	
c. Construction	0.0148	0.2905	0.2758	0.0525	0.0145	
d. Elect, Gas and Water	0.1514	0.2602	0.1088	0.0045	0.0005	
3. SERVICE SECTOR	-0.0187	0.0954	0.1141	0.4083	0.0466	
a. Transport., Comm., Stor.	-0.0391	0.1390	0.1781	0.0584	0.0104	
b. Trade	-0.0192	0.0754	0.0946	0.1446	0.0137	
c. FIRE (incl. Bus. Services)	-0.0665	0.1327	0.1993	0.0229	0.0046	
d. Services (exc. Rec., hot., & rest)	-0.0341	0.0564	0.0904	0.1581	0.0143	
f. Recreational, hotels & rest.	-0.0593	0.0927	0.1520	0.0243	0.0037	
All Sectors					0.0175	0.0170
	1993	1997	average	growth rate		
Unemployment Rate (v)	0.0860	0.0810	0.0835	-0.0591		
LFPR (e)	0.6475	0.6551	0.6513	0.0117		
(1-v)	0.9165					
(1-v) gr(L/P)	0.0160					
(1-v) gr(e)	0.0107					
v gr(v)	-0.0049					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0004					

**Table 8e**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1997-1998**

	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	-0.0558	-0.0921	-0.0363	0.4020		-0.0146
2. Industry	-0.0031	-0.0472	-0.0441	0.1640		-0.0072
a. Mining & Quarrying	0.1295	0.0016	-0.1280	0.0044		-0.0006
b. Manufacturing	0.0007	-0.0371	-0.0377	0.0971		-0.0037
Food, Beverage & Tob. (nt)	0.0138	-0.0016	-0.0154	0.0226		-0.0003
Importable mftg	-0.0267	-0.0849	-0.0581	0.0128		-0.0007
Traditional exportable/importable	0.0350	-0.0267	-0.0617	0.0393		-0.0024
Non-traditional exportable/importable	-0.0381	-0.0446	-0.0065	0.0224		-0.0001
c. Construction	-0.0697	-0.1270	-0.0573	0.0576		-0.0033
d. Elect,Gas and Water	-0.0568	0.0064	0.0631	0.0049		0.0003
3. SERVICE SECTOR	-0.0118	0.0084	0.0202	0.4341		0.0088
a. Transport., Comm., Stor.	0.0000	0.0371	0.0371	0.0645		0.0024
b. Trade	-0.0083	-0.0015	0.0067	0.1513		0.0010
c. FIRE (incl. Bus. Services)	0.0410	0.0047	-0.0363	0.0245		-0.0009
d. Services (exc. Rec.,hot.,&rest)	-0.0124	0.0096	0.0220	0.1665		0.0037
f. Rreational, hotels&rest.	-0.0862	0.0086	0.0948	0.0273		0.0026
All Sectors						-0.0130 -0.0131
	1997	1998	average	growth rate		
Unemployment Rate (v)	0.0810	0.0901	0.0856	0.1066		
LFPR (e)	0.6551	0.6531	0.6541	-0.0031		
(1-v)	0.9144					
(1-v) gr(L/P)	-0.0119					
(1-v) gr(e)	-0.0028					
v gr(v)	0.0091					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0000					

**Table 8f**  
**DECOMPOSITION OF EMPLOYMENT BY SECTORS, 1998-2000**

	dpi/pi	dxi/xi	dxi/xi - dpi/pi	Li/L	Li/L(dxi/xi - dpi/pi)	gr(L/P)
1. Agriculture, Fishery, Forestry	0.1191	0.0649	-0.0542	0.3895		-0.0211
2. Industry	0.0607	0.0180	-0.0427	0.1592		-0.0068
a. Mining & Quarrying	0.0664	-0.0306	-0.0970	0.0040		-0.0004
b. Manufacturing	0.0502	0.0437	-0.0065	0.0963		-0.0006
Food, Beverage & Tob. (nt)	0.0825	0.0395	-0.0430	0.0222		-0.0010
Importable mftg	0.0998	-0.0049	-0.1047	0.0120		-0.0013
Traditional exportable/importable	-0.1207	-0.0979	0.0227	0.0390		0.0009
Non-traditional exportable/importable	0.1701	0.2000	0.0299	0.0230		0.0007
c. Construction	-0.0147	-0.1035	-0.0888	0.0543		-0.0048
d. Elect,Gas and Water	0.2476	0.0400	-0.2075	0.0046		-0.0010
3. SERVICE SECTOR	0.0262	0.0568	0.0306	0.4514		0.0138
a. Transport., Comm., Stor.	0.0574	0.1194	0.0621	0.0687		0.0043
b. Trade	0.0334	0.0757	0.0423	0.1573		0.0067
c. FIRE (incl. Bus. Services)	-0.0170	-0.0001	0.0169	0.0246		0.0004
d. Services (exc. Rec.,hot.,&rest)	0.0375	0.0450	0.0075	0.1713		0.0013
f. Rreational, hotels&rest.	0.0222	0.0624	0.0401	0.0295		0.0012
All Sectors						-0.0141 -0.0142
	1998	2000	average	growth rate		
Unemployment Rate (v)	0.0901	0.1016	0.0959	0.1196		
LFPR (e)	0.6531	0.6521	0.6526	-0.0015		
(1-v)	0.9041					
(1-v) gr(L/P)	-0.0128					
(1-v) gr(e)	-0.0013					
v gr(v)	0.0115					
(1-v)gr(L/P)-(1-v)gr(e)+vgr(v)	0.0000					

Table 9  
Employment Elasticity and Okun's Elasticity for the Relevant Periods

Period	(1) Change in Unemployment rate	(2) % change in GDP	(1)/(2) Employment elasticity	(2)/(1) Okun's Elasticity
1988-90	-0.20	9.43	-0.02	-47.15
1990-91	0.90	-0.58	-1.54	-0.65
1991-93	-0.10	2.47	-0.04	-24.70
1993-97	-1.00	21.66	-0.05	-21.66
1997-98	1.70	-0.58	-2.92	-0.34
1998-2000	0.50	7.55	0.07	15.09
1988-2000	1.80	45.00	0.04	25.00

TABLE 10  
FACTOR SHARES BY INSTITUTION, 1980 to 1999 (% of GDP)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total Household Income	77.27	79.19	80.28	78.39	76.40	79.48	78.27	73.81	74.30	73.67	73.36	73.02	71.34	68.75	67.49
Compensation of Employees Household & Non-Corp. Net Operating Surplus	25.68	25.89	25.98	24.49	22.32	22.85	23.62	24.25	23.50	26.67	26.02	25.23	24.93	25.19	25.28
Total Corporate Income	15.49	14.07	12.31	13.77	16.15	14.27	14.95	18.20	19.69	19.24	19.27	18.71	19.54	21.48	21.84
Depreciation Corporate Net Operating Surplus*	7.02	7.10	7.17	7.88	9.22	9.91	9.86	9.37	8.40	7.82	7.65	7.88	8.07	8.92	8.95
8.47	6.97	5.14	5.89	6.92	4.36	5.09	8.83	11.29	11.42	11.61	10.83	11.47	12.56	12.88	
Government Income	7.24	6.73	7.41	7.85	7.45	6.26	6.78	7.99	6.01	7.09	7.37	8.27	9.11	9.77	10.68
Indirect Taxes excl. Import Duties & Taxes	5.44	5.31	4.09	3.73	4.07	4.41	4.73	5.26	4.29	4.76	5.17	4.58	4.94	5.11	6.07
Import Duties & Taxes	3.07	2.56	3.83	4.43	3.30	2.90	2.79	3.81	3.15	4.17	4.22	5.23	5.28	5.48	5.06
Less: Subsidies	0.25	0.19	0.18	0.16	0.06	0.16	0.38	0.34	0.34	0.67	1.23	0.66	0.35	0.39	0.43
Government Net Operating Surplus	-1.02	-0.95	-0.34	-0.15	0.14	-0.89	-0.36	-0.74	-1.09	-1.18	-0.79	-0.88	-0.77	-0.43	-0.02
GROSS DOMESTIC PRODUCT	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

\*includes government corporations

Source: National Statistics Coordination Board

Table 11  
Employment in each Economic Sector by Skill (in %)

	1988			1990			1991			1993			1997			1998			2000		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	
Agriculture, Fishery and Forestry	0.11	0.89	99.00	0.30	1.02	98.69	0.25	1.12	98.64	0.18	0.89	98.93	0.17	0.91	98.92	0.20	0.85	98.96	0.23	0.93	98.84
Mining and quarrying	5.87	14.77	79.37	4.07	16.66	79.27	4.59	9.10	86.32	6.11	12.52	81.38	8.30	16.93	74.77	8.81	14.47	76.73	8.57	19.46	71.97
Beverage and tobacco	6.00	11.95	82.05	6.63	14.91	78.46	6.93	14.11	78.96	7.29	14.48	78.23	6.75	14.08	79.17	6.67	12.71	80.62	7.43	11.71	80.86
Textile manufacturing	14.73	38.95	46.31	15.64	38.38	45.98	13.87	36.90	49.23	15.25	36.56	48.20	13.82	33.69	52.49	12.86	34.27	52.86	15.32	34.23	50.45
Non-durable exportable/importable	3.44	5.61	90.96	4.33	5.79	89.88	3.76	5.51	90.73	4.13	6.52	89.35	3.72	5.69	90.58	4.67	5.42	89.91	3.98	5.47	90.55
Durable exportable/importable	8.66	50.73	40.62	10.36	45.48	44.15	10.46	45.80	43.74	9.81	50.76	39.42	9.50	56.42	34.09	9.27	54.01	36.72	8.43	52.74	38.83
Construction	6.97	7.30	85.73	6.97	6.58	86.45	6.85	6.05	87.09	5.76	6.56	87.68	6.14	8.19	85.66	6.31	7.24	86.45	5.85	7.04	87.11
Electricity, gas and water	20.90	65.74	13.36	20.47	56.49	23.04	18.47	56.80	24.73	17.04	59.40	23.56	19.58	60.88	19.54	21.24	59.10	19.65	18.66	59.87	21.47
Transport, storage and communications	5.09	10.68	84.23	5.40	9.66	84.94	5.78	9.47	84.75	5.65	9.18	85.16	7.69	8.94	83.37	7.43	8.35	84.21	7.30	7.94	84.76
Finance	1.16	3.43	95.42	1.76	4.70	93.54	1.69	4.42	93.89	1.77	4.95	93.28	2.29	6.37	91.35	2.33	6.10	91.57	2.22	6.28	91.50
Government services	31.35	60.56	8.09	31.25	58.97	9.79	31.25	57.40	11.35	29.58	58.81	11.61	32.59	54.34	13.07	33.37	54.25	12.39	32.02	55.01	12.97
Other government services	9.92	42.56	47.52	10.66	43.57	45.76	10.97	42.04	46.99	10.93	44.17	44.90	11.24	42.45	46.32	10.75	41.91	47.35	10.77	42.69	46.54
Restaurants, hotels	8.79	27.32	63.89	9.95	30.65	59.40	9.23	28.02	62.74	9.74	29.63	60.63	9.59	26.89	63.52	8.74	25.94	65.33	10.30	24.46	65.24
Other	3.75	12.01	84.24	4.33	12.88	82.79	4.35	12.54	83.11	4.20	12.76	83.04	4.98	13.97	81.06	5.00	13.89	81.11	5.06	14.24	80.70

A – Professionals and Managers  
B – Skilled and Mid-level Managers  
C – Low-skilled Workers

Appendix A  
 Categorization of Labor Occupations into Three Classes,  
 Using Mean Quarterly Earnings July - Sept. 1995

Occupation	mean(quarterly earnings) july to september 1995		
	both	male	female
<b>professionals and managers</b>			
managers-wholesale and retail trade	42314	60530	23927
justices, judges and lawyers	32899	33051	31643
managers	30790	33321	25057
aircraft and ship's officers	30326	31987	10875
managers-catering and lodging services	22030	19676	23456
Architects, engineers and related technicians	20647	20966	17394
accountants and auditors	20413	20376	20442
social scientists and related workers	20012	23379	17263
composers and performing artists	19375	21253	14906
clerical supervisors	19174	17890	22115
physical scientist and related technicians	19148	21559	18592
production supervisors and general foremen	18668	18442	19615
insurance, real estate, securities and business service salesmen and auctioneers	17709	16967	18506
mathematicians, statisticians, system and related workers	17512	21920	15120
professional, technical and related workers	16581	20785	13928
transport and communications supervisors	16379	16431	15665
medical dental , veterinary and related workers	15743	23239	13480
authors, journalists and related workers	15625	17950	13651
tanners and pelt dressers	15000	15000	
<b>skilled &amp; middle-level workers</b>			
teachers, including supervisors and principals	14693	16110	14330
computing machine operators	14190	14876	13604
life scientists and related technicians	13677	12239	18158
working proprietors-catering and lodging	13441	16741	12014
technical salesmen, traveling salesmen manufacturer's agents	12858	15184	8959
stationary engine and related equipment operators	12818	13196	10744
housekeeping and related services	12650	13898	11245
printers and related workers	12637	13167	10132
legislative officials, government administrators and government executives	12423	13261	10981
telephone and telegraph operators	12332	10989	13400
bookkeepers, cashiers and related workers	12311	14274	11462
athletes, sportsmen and related workers	12301	13986	7075
protective service workers	12211	12262	10078
chemical processors and related workers	12144	12491	10745
machinery fitters, machine assemblers and precision-instrument makers	12066	12129	8112
clerical and related workers not elsewhere classified secretaries, stenographers, typists and card and tape-punching machine operators	11601	11931	11356
electrical fitters and related electrical and electronics workers	11539	13044	11264
metal processors	11467	11383	11755
	11271	12236	5682

Occupation	mean(quarterly earnings) july to september 1995		
mail distribution clerks and messengers	11129	10968	12716
farm managers and overseers	11087	11947	5005
blacksmiths, toolmakers and machine-tool operators	10818	10614	11873
sculptors, painters, photographers and related workers	10367	9765	13596
plumbers, welders, sheet metal and structural metal preparers and erectors	10169	10142	13594
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<b>low-skilled workers</b>			
sales supervisors and buyers	9942	12631	7468
working proprietors-wholesale and retail trade	9895	15412	7974
transport equipment operators	9365	9383	6923
painters	9342	9371	8505
jewelry and precious workers	9041	9958	5902
tobacco preparers and tobacco product makers	8971	13247	6944
building caretakers, cleaners and related workers	8794	9135	7364
service workers not elsewhere classified	8151	8810	6563
bricklayers, carpenters and other construction workers	8004	7980	12394
glass formers, potters and related workers	7926	9256	5507
miners, quarrymen, well drillers and related workers	7763	8145	3199
rubber and plastics products makers	7581	7870	6623
wood preparation workers and paper makers	7554	7705	6106
broadcasting station and sound-equipment operators and cinema projectionists	7551	6779	12191
material handling and related equipment operators	7478	7528	6701
cooks, waiters, bartenders and related workers	7392	8676	5971
furniture makers and related workers	7180	7594	4676
footwear and leather goods makers	7040	7521	6296
tailors, dressmakers, sewers, upholsterers	7040	9816	6445
food and beverages processors	6858	7676	5288
hairdressers, barbers, beauticians and related workers	6438	7163	6117
farmers	6370	6989	3225
transport conductors	6283	6322	5005
workers in religion	6270	7299	4112
production and related workers not elsewhere classified	6099	8022	4668
paper and paperboard products makers	6082	7742	5074
laborers not elsewhere classified	5913	6089	3342
stone cutters and carvers	5847	5533	7890
spinners, weavers, knitters, dryers and related workers	4915	7962	4106
salesmen, shop assistants and related workers	4859	6157	4261
fishermen, hunters and related workers	4852	5043	1551
forestry workers	4614	5080	2152
sales workers not elsewhere classified	4453	5439	3714
helpers and related housekeeping service	3956	4042	3942
launderers, dry cleaners and pressers	3137	5359	3096
agricultural and animal husbandry worker	1356	1867	679

