

External Liberalization in Asia, Post-Socialist Europe, and Brazil

December 2002

Lance Taylor

This paper reviews the experience of 14 countries with external liberalization and related policies, based on papers written by national authors following a common methodology.¹ Their thick descriptions à la Geertz (1973) of how diverse economies responded to a similar “reform” packages offer lessons about ongoing institutional change and how it might be guided by sensible policy to help support economic performance better in the future than it has been in the past. Somewhat arbitrarily, the countries can be classified into five groups:

Steady growth economies: China, India, Singapore, and Vietnam.

Asian crisis economies: Indonesia, Korea, Malaysia, and Thailand.

Cyclical stagnation: Philippines and Turkey

Inflation stabilization paramount: Brazil and Russia.

Post-socialist transitions; Hungary and Poland.

Liberalization of trade and external capital flows in developing and post-socialist countries has been in full swing at least since the late 1980s and in some cases long before. Some of the Asian economies listed above were “early reformers.” Prior to the 1997-98 crisis, growth and distribution in most of them appeared to be outstanding (the Philippines and Turkey being notable exceptions). Several other Asian economies also performed well and in addition managed to avoid the crisis, in part because they had *not* liberalized their capital accounts. From vastly different initial conditions, formerly socialist economies also opened dramatically in the 1990s. Their history makes an interesting contrast to the Asians’, as does that of Brazil, a “late reformer”

¹ See Appendix I for a list of authors and papers.

with a substantial industrial base. Another dimension to the story is provided by the fact that Brazil, Turkey, and Russia engaged in drastic “exchange rate-based” attempts to stabilize high inflations with open capital markets. Their subsequent financial crises make an interesting contrast to the ones a few years earlier in East Asia.

Crises aside, the liberalization packages also had important implications for the generation of effective demand within economies, their patterns of productivity and employment growth (or in some cases, the lack of same), and income distribution. The country case studies shed light on these questions as well.

Methodology

The studies are all “before and after” in the sense that they attempt to trace through the effects of liberalization over time in a specific national context. Depending on data availability, the authors carried out decompositions of shifts in effective demand and movements across sectors and time in labor productivity growth and employment. The algebraic details appear in Appendix II, but in brief the methodology of the decompositions goes as follows:

Effective demand

In any national economy, the level of activity is determined by effective demand. It is the outcome of the balance between demand “injections” - private investment in fixed capital and inventories, public spending, and exports - and “leakages” - private saving, taxes, and imports. In terms of the standard national income and product accounts (the NIPA system), the supply of goods and services that results is equal to the total value of goods and services produced (the gross domestic product or GDP) plus imports.

One can ask hypothetically “what would have been” the level of supply had it been determined exclusively by an injection and leakage from just one of the three main sectors - private, government, and the rest of the world. For example, the government’s injection of government spending is G and the corresponding leakage into taxation is tX , where t is the tax rate and X the total value of supply. If injections and leakages came only from the public sector, then since total injections equal total leakages, we would have $G = tX$, or $X = G/t$. Similar

calculations may be made for the private and foreign sectors. For the private sector alone, investment would have to equal savings, $I_p = s_p X$ or $X = I_p / s_p$, where s_p is the savings rate. For the foreign sector alone, exports would have to equal imports, $X = mX$ or $X = E / m$, where m is the propensity to import.

In practice, X will be a weighted average of these terms, with the weights depending on the “leakage” rates s , t , and m . Since a financial deficit in one sector has to be balanced by a surplus elsewhere, macro financial balances have to satisfy the identity

$$(I - sX) + (G - tX) + (E - mX) = 0 \quad .$$

Sectoral Productivity Growth

A fairly consistent pattern has been an acceleration of productivity growth in traded goods following liberalization, but low or negative employment growth in the sector which can be traced to real appreciation and a shift in demand toward non-traded goods. Employment in non-traded went up or down according to the relative strengths of higher demand and (typically) slow or negative productivity growth.

To see the details, we can begin with a productivity decomposition. Suppose that one has data on employment and output for several sectors over time. Let $\theta_i = X_i / X$ be the share of sector i in real output, with $\sum_i X_i = X$. Similarly for employment: $\lambda_i = L_i / L$ with $\sum_i L_i = L$.

The level of labor productivity in sector i is X_i / L_i with a growth rate $\varepsilon_i = \hat{X}_i - \hat{L}_i$ (with a “hat” over a variable signifying its growth rate).

After a bit of manipulation, an expression for the growth rate ε_L of economy-wide labor productivity emerges as

$$\varepsilon_L = \sum_i [\theta_i \varepsilon_i + (\theta_i - \lambda_i) \hat{L}_i] \quad .$$

Overall productivity growth decomposes into two parts. One is a weighted average $\sum_i \theta_i \varepsilon_i$ of sectoral rates of productivity growth. The weights are the output shares θ_i . The other

term, $\sum_i (\theta_i - \lambda_i) \hat{L}_i$, captures "reallocation effects" (Syrquin, 1986). A sector with relatively high labor productivity will have a higher share of output than of the labor force, $\theta_i > \lambda_i$, so that if its employment growth is positive, $\hat{L}_i > 0$, reallocation of labor toward the sector generates a positive contribution to productivity growth economy-wide.

Two generalizations emerge when the productivity decomposition is applied to liberalizing economies:

If one disaggregates into traded and non-traded goods the productivity growth rate in the former is higher, and tended to speed up after many countries liberalized. Insofar as non-traded sectors acted as labor sinks, their productivity growth rates declined.

With some exceptions, reallocation effects on productivity tended to be small, upsetting at least some traditional development economics dogmas.

Given these findings on productivity, it is tempting to look at growth rates of employment, which after all are driven by changes in productivity and demand. Very broadly following Pasinetti (1981), one can put together a two-step employment decomposition over time in terms of these two forces.

Let P stand for the population, E the economically active population, L the total of people employed, and U the total unemployed or $U = E - L$. The participation rate is $\eta = E / P$ and the unemployment rate is $\nu = U / E$. The overall employment rate is $L / E = 1 - \nu = \phi / \eta$ with $\phi = L / P$ as the employed share of the population. Evidently, we have $E = L + U$. Dividing by P lets this expression be rewritten as $\eta = \phi + \eta\nu$. Taking growth rates and a bit of algebra show that

$$0 = (1 - \nu)(\hat{\phi} - \hat{\eta}) + \nu\hat{\nu} = -(1 - \nu)\hat{\eta} + \nu\hat{\nu} + (1 - \nu)\hat{\phi} \quad .$$

The terms after the first equals sign state that changes in the rates of employment and unemployment must sum to zero. The formula furthest to the right decomposes this condition in terms of the participation rate η , the unemployment rate ν , and the employed share of the population ϕ .

In a second step, ϕ provides a useful tool to analyze job growth across sectors. Along with the ratios defined above, let $x_i = X_i / P$ or sectoral output per capita. The labor/output ratio in sector i can be written as $b_i = L_i / X_i$, and let $\phi_i = L_i / P$. Then we have

$$\phi = \sum (L_i / X_i)(X_i / P) = \sum b_i x_i$$

Transforming to growth rates gives

$$\hat{\phi} = \sum \phi_i (\hat{x}_i + \hat{b}_i) = \sum \phi_i (\hat{x}_i - \varepsilon_i)$$

so that the growth rate of the overall employment ratio is determined as a weighted sum across sectors of differences between growth rates of output levels per capita and labor productivity (the weights ϕ_i don't add up to one because they are ratios of each sector's employment to total population).

The last equation provides a framework in which sources of job creation can usefully be explored. In expanding sectors (relative to population growth), productivity increases do not necessarily translate into reduced employment; in slow-growing or shrinking sectors, higher productivity means that employment declines. Under liberalization, the interaction of non-traded and traded sectors can be traced in this fashion, along with the behavior of sectors acting as "sources" or "sinks" for labor (agriculture has played both roles recently, in different countries). The most common outcome is that productivity growth has exceeded output growth in traded goods sectors, to the detriment of creation of high-end jobs.

Stylized Scenarios

Based on experiences of the preceding decade, generalizations about the effects of external liberalization began to appear around the year 2000.² The main points go as follows:

Capital Account Liberalization

With regard to the capital account of the balance of payments, countries liberalized for several reasons - to accommodate to external political pressures (Korea and other Asians), to find sources of finance for growing fiscal deficits (Turkey, Russia), or to bring in foreign exchange

² References

to finance the imports needed to hold down prices of traded goods in exchange rate-based inflation stabilization programs (Brazil and other countries in Latin America).

When they removed restrictions on capital movements, most countries received a surge of inflows from abroad. They came in subject to the accounting restriction that an economy's *net* foreign asset position (total holdings of external assets minus total external liabilities) can only change gradually over time through a deficit or surplus on the current account. Hence, when external liabilities increased as foreigners acquired securities issued by national governments or firms, external assets had to jump up as well. The new assets typically showed up on the balance sheets of financial institutions, including larger international reserves of the central bank. Unless the bank made a concerted effort to "sterilize" the inflows (selling government bonds from its portfolio to "mop up liquidity," for example), they set off a domestic credit boom. In poorly regulated financial systems, there was a high risk of a classic mania-panic-crash sequence along Kindleberger (2000) lines - the famous crises in Latin America's Southern Cone around 1980 were only the first of many such disasters.

When the credit expansion was allowed to work itself through, interest rates could be low. At times, however, other factors entered to push both levels of and the spread between borrowing and lending rates upward. One source of widening spreads is related to asset price booms in housing and stock markets, which forced rates to rise on interest-bearing securities such as government debt. Another source playing a role at times originated from central banks trying to sterilize capital inflows, and so pushing up rates as well. Finally, in non-competitive financial markets, local institutions often found it easy to raise spreads. High local returns pulled more capital inflows, worsening the overall disequilibrium.

Unsurprisingly, exchange rate movements complicated the story. In countries with high inflation, the exchange rate was used as a "nominal anchor" in anti-inflation programs. Its nominal level was devalued at a rate less than the rate of inflation, leading to real appreciation. In several cases, the effect was rapid, with traded goods variable costs in dollar terms jumping upward immediately after the rate was frozen.

The same outcome also showed up via another channel. As countries removed capital controls and adopted "floating" rates, they lost a degree of freedom in policy formulation. From standard macroeconomic theory we know that in a closed economy the market for bonds will be in equilibrium if the money market clears as well. When proper accounting restrictions (including a fixed level of net foreign assets in the short run) are imposed on portfolio choice in an open economy, this theorem continues to apply (Taylor, 2003). That is, an open economy has just one independent "asset market" relationship, say an excess supply function for bonds of the form

$$B - B^d [i, i^*, (\varepsilon / e)] = 0$$

In this equation, B and B^d are bond supply and demand respectively. The latter depends positively on the domestic interest rate i , and negatively on the foreign rate i^* and on expected depreciation ε as normalized by the current spot rate e .³ Total bond supply B will change slowly over time as new paper is issued to cover corporate and (especially) fiscal deficits.

Similar considerations apply to the well-known uncovered interest rate parity (UIP) formula,

$$i = i^* + (\varepsilon / e) + \rho$$

tying the domestic interest rate to the foreign rate, the expected growth rate of the nominal exchange rate, and a "risk premium" ρ which at times can amount to thousands for basis points. For given i^* , ε , and ρ , this arbitrage equation predicts an inverse relationship between e and i . For given i^* , e , ε , and ρ , in an open capital market, it strongly suggests that the domestic interest rate i is unlikely to fall below the sum of the terms on the right-hand side, which can amount to tens of percentage points.

The inverse relationship from both equations means that if i tended to rise, then e would appreciate or fall. Or, the other way 'round, if the exchange rate strengthened over time, then

³ Scaling the expected change in the exchange rate by its current level puts the quantity ε / e - the expected rate of return from capital gains on foreign securities - on a comparable footing with the two interest rates.

interest rates would be pushed upward. This tendency would be amplified if real appreciation stimulated aggregate demand in the short run - the other side of the coin of the well-known possibility that devaluation can be contractionary in developing economies (Krugman and Taylor, 1978). Abandoning capital controls made the exchange rate/interest rate trade-off far more difficult to manage. Some countries – notably in Asia - did succeed in keeping their exchange rates stable and relatively weak, though as discussed below that benefit ultimately fed into external crisis.

Current Account Liberalization

Current account deregulation basically took the form of transformation of import quota restrictions (where they were important) to tariffs, and then consolidation of tariff rates into a fairly narrow band, e.g. between zero and 20%. With a few exceptions, export subsidies were also removed. There were visible effects on the level and composition of effective demand, and on patterns of employment and labor productivity.

Demand composition typically shifted in the direction of imports, especially when there was real exchange appreciation. In many cases, national savings rates also declined. This shift can partly be attributed to an increased supply of imports at low prices (increasing household spending, aided by credit expansion following financial liberalization), and partly to a profit squeeze (falling retained earnings) in industries producing traded goods. The fall in private savings sometimes was partially offset by rising government savings where fiscal policy became more restrictive. Many countries showed 'stop-go' cycles in government tax and spending behavior.

Especially when it went together with real appreciation, current account liberalization pushed traded goods producers toward workplace reorganization (including greater reliance on foreign outsourcing) and down-sizing. If, as assumed above, unskilled labor is an important component of variable cost, then such workers would bear the brunt of such adjustments via job losses. In other words, traded goods enterprises that stayed in operation had to cut costs by

generating labor productivity growth. As discussed above, unless demand for traded goods grew rapidly, higher productivity growth meant that their total employment levels could easily fall.

The upshot of these effects often took the form of increased inequality between groups of workers, in particular between the skilled and unskilled.⁴ With liberalization stimulating productivity increases leading to a reduction of labor demand from modern, traded-goods production, primary income differentials widened between workers in such sectors and those employed in non-traded, informal activities (e.g. informal services) and the unemployed.

Crises

More than half the economies considered herein went through external crisis. The basic pattern is familiar. A high internal return on financial assets is needed to bring capital from abroad. But then inflows surge and debt-financed public (Turkey, Russia) or private (Mexico pre-1994, the Asian economies pre-1997) spending follows in turn. The exchange rate appreciates. The central bank builds up reserves and attempts to sterilize them by cutting back on the domestic component of the money supply, with further upward pressure on interest rates. Eventually the bubble bursts, hot money flees the country, and onerous macro adjustment follows based upon very high real interest rates, big devaluations, and severe retrenchment of aggregate demand.

Although “basic,” this scenario is a theme subject to notable national variations. Some countries did not have significant real appreciation prior to their crises; others kept interest rates under control. A relatively stable nominal exchange rate did appear to be a common element, as did mismatches in domestic financial institutions’ balance sheets – especially between relatively short-term liabilities denominated in foreign currencies and long-term assets in national money. When, as was often the case, the short-term liabilities exceeded the central bank’s foreign reserves, the situation was ripe for capital withdrawals and massive devaluation.

⁴ As discussed endlessly in the literature, this outcome runs counter to predictions from the Stolper-Samuleson (1941) theorem. But since that theorem presupposes Walras’ Law and ignores the real exchange rate and the distinction between traded and non-traded goods, there is no reason to expect it to apply.

Additional Observations

The country studies add interesting (and at times conflicting) details to the scenarios just discussed. They include the following:

Non-liberal policies

The first point worth making is that liberalization was incomplete. Of the four steadily growing economies, three (China, India, and Vietnam) retained strong controls on capital movements. Malaysia, Hungary, and Poland in its more rapid growth period prior to 1995 also had policies in place to regulate capital flows. All four steady growers as well as Malaysia, Thailand, Korea, and Poland in the early 1990s also utilized industrial and export promotion policy interventions.

Demand decomposition

Results from the demand decompositions varied across countries. One interesting question is whether there was a “typical” demand story about the Asian and other crises. As a prelude, it makes sense to look at shifts in real exchange rate as a major influence on demand. Among the nine sample countries hit by crises, there was prior real appreciation in six: Thailand, Philippines, Turkey (2000-01), Russia (1998), Brazil (1999), and Hungary (1995). But Indonesia, Korea, and Malaysia all had real depreciation going into 1997-98.

For the Asians, one can compare total supply (X) with private (I_P / S_P), government (G / t), and foreign (E / m) contributions to demand, bearing in mind that X fell sharply after the crisis, then recovered. The leading sources of demand (contributing factor $> X$) were as follows:

Country	Pre-crisis	Post-crisis
Indonesia	I_P / S_P	E / m , G / t drops
Korea	I_P / S_P	E / m , G / t
Malaysia	G / t	E / m , I_P / S_P drops
Philippines	I_P / S_P and G / t	I_P / S_P and G / t
Thailand	I_P / S_P and G / t	G / t , E / m and I_P / S_P drop

Prior to the crisis in each country, demand was led internally by the private sector and/or the government. After the crisis in most cases, the external accounts swung into strong surplus while leading domestic sources of demand fell off. Malaysia, Philippines, and Thailand were partial exceptions. Indonesia was the clearest case of adverse demand effects of post-crisis fiscal contraction while Philippines had no foreign response.

Among the other countries that had crises, in Hungary there were booms in I_P / s_P and G / t before 1995. Thereafter, these contributing factors dropped below X while E / m rose in line with strong real depreciation. Turkey has had a consistent external deficit after an export surge expired in the late 1980s. I_P / s_P tracks X fairly closely so demand is led by G / t with strong tendencies toward financial instability. Finally, demand in Brazil was led by E / m during 1980-95, then private demand I_P / s_P became the major contributor leading into the 1999 crisis.

There can also be crisis when the current account situation is apparently favorable. In Russia E / m consistently leads demand and I_P / s_P drags it down (with a low I_P and high s_P). G / t was expansionary until 1998, then contractionary after the crash.

Among other post-socialist economies, demand in Vietnam is strongly private sector led, with a very low level (negative in earlier years) of s_P . Poland had low I_P / s_P early in the 1990s and a higher level later, while E / m followed an opposite track along with real appreciation late in the decade. Consistently the Polish government demand position G / t exceeds X . China was led by E / m in the 1990s, with I_P / s_P lying consistently below X . As in Russia, an internal private sector financial surplus was linked with an external surplus. China's real exchange rate has been relatively stable.

Elsewhere, India's demand has been led by G / t for decades. E / m has recently declined relative to X , with real appreciation late in the 1990s. Finally, Singapore over the long term presents an interesting transformation. Until the mid-1980s demand was led by I_P / s_P and G / t with an external deficit. Thereafter $E \gg mX$ with a strong private financial surplus.

Labor productivity growth

As described above, the basic approach is to compare productivity growth patterns in “traded” and “non-traded” sectors. The general expectation is that productivity will rise more rapidly in the former. However, there are complicating factors. In Asia in particular, should agriculture be treated as traded or non-traded? The general presumption is the latter. Also, patterns of productivity growth were strongly affected by movements into labor sinks such as agriculture and non-traded services in the crisis.

China has had double digit reported productivity growth in the (traded) industrial sector. Other sectors including agriculture reported generally positive results. Hungary’s and Poland’s productivity growth has also been led by the traded sector.

India has had almost equal rates of productivity growth (more than 5% per year) in industry and non-agricultural non-traded, somewhat less in agriculture. Indonesia likewise had productivity growth exceeding 5% in both sectors through 1996. Thereafter, both rates declined but much more sharply in the non-traded sector which served as a labor sink in the crisis. Thailand had relatively high productivity growth in agriculture in the 1990s, with other non-traded as the lagging sector. As in Indonesia, non-traded served as a labor sink in the crisis, with negative productivity growth.

Philippines has grown slowly in comparison to its neighbors, lurching in and out of macro booms and ever more serious busts. The traded sector generally leads, but there are large movements of labor in and out of agriculture, leading to big “reallocation” effects. Vietnam’s agricultural and service sectors have had relatively low (at times negative) productivity growth in the 1990s with more rapid growth in industry.

Finally, Singapore is an interesting contrast – since the mid-1980s, productivity growth in the non-traded sector has run at about 3% per year in the non-traded sector vs. 1.5% in traded.

Labor reallocation across sectors

The results can be anticipated on the basis of productivity growth patterns. As noted above, labor will move into a sector when its growth rate of output per capita exceeds its rate of labor productivity growth. A few country results:

Hungary's story is complicated by a shrinking population. In general, however, the non-traded sector acted to stabilize employment, especially in the first part of the 1990s when productivity in the traded sector grew rapidly.

In Indonesia in the early 1990s, the growth rate of output per capita in non-traded exceeded that in traded – that pattern reversed sharply with the crisis. Productivity growth was high in both sectors before 1997 (somewhat faster in traded goods) The upshot is that for most of the 1990s there was positive employment growth in the non-traded sector, and negative in the traded. The overall employment/population ratio did not fall in the wake of the crisis, signaling a degree of labor market flexibility.

In Philippines during 1988-2000, output rose by 45% and the overall unemployment rate by 1.8%. This jobless growth largely reflected rapid productivity increases in the traded sector during upswings. With a fluctuating tendency for people to move out of agriculture, services acted as the main labor sink.

In Vietnam during the same period, most employment growth occurred in agriculture and the services, consistent with the productivity trends mentioned above.

Foreign direct investment

Foreign direct investment (FDI) has been the focus of liberalization in countries seeking to raise such inflows. Singapore is the classic case, pursuing FDI aggressively since the 1960s. Total flows into China since 1980 range around \$300-400 billion, or a third of current GDP. Shares of cumulated FDI shares in GDP are of similar size (or larger) in Vietnam, the Asian economies, and Hungary. Elsewhere, as in Brazil and India, the ratio is substantially less.

Several questions arise with regard to FDI, not adequately addressed by most countries' data. The FDI numbers are financial, typically recording equity positions exceeding a certain percentage (often 10% of shares outstanding) of the companies concerned which are held for a

certain period of time (at least a year). The linkage between such financial flows and annual gross fixed capital formation within an economy can be obscure. Econometric attempts to establish a relationship (as in the paper for Brazil) frequently fail. The same observation applies to attempts to link FDI to productivity growth.

Another question is how much value-added within an economy is generated by FDI? Detailed studies do not seem to be readily available, but if the foreign investment is largely directed toward assembly operations with a high import content, then its contribution to domestic value-added (or GDP) is likely to be a small percentage (in the single digits?) of the volume of exports it generates. Especially when profit remittances are taken into account, the contribution of FDI to the current account may be low or negative. Chinese, Vietnamese, and Thai data presented in the country papers substantiate this point.

Capital flight

In a few of the countries, capital flight has been of major concern. China and Russia have private saving flows that substantially exceed private investment. Capital flight under such circumstances can be an attractive financial option, and indeed estimates of its level in both countries range upward to 10% of GDP. “Hot money” exacerbates the problem – the reversal of total capital flows in Turkey in 2000-01 was almost 20% of GDP!

Employment and distributive outcomes

Finally, a few observations about employment and distributive correlates of liberalization:

Comparing traded and non-traded sectors, the overall employment structure shifted toward the latter in seven cases, and toward the former in four (China, Korea late in the period, Thailand, and Vietnam). No overall data in three countries.

In seven of eight countries with data, the employment structure shifted toward higher skilled workers (Turkey is the exception).

In three countries with data, there was increased “informality” in employment.

Skilled/unskilled, urban/ rural, and formal/informal pay differentials tended to rise, with increases in some or all such measures in Brazil, China, India, Indonesia (prior to the crisis, with a reversal thereafter), Poland, Thailand, Turkey, and Vietnam.

Consistent with trends worldwide (Atkinson and Cornia, refs.), increases in the Gini coefficient and/or shifts in the functional income distribution signaled rising income inequality in China, India, Singapore, Malaysia, Philippines, Russia, Poland, and Hungary. The Gini decreased in Thailand in the decade prior to the 1997 crisis. Poverty headcount ratios fell in countries that had sustained growth, but rose rapidly in the wake of crises.

Country Experiences

To savor fully the impacts of liberalization, one has to delve into the country studies. Brief summaries follow, which can be supplemented with data presented in Appendix III, periodized according to the country authors' delineation of phases of the liberalization experience.

Steady growth economies

China, India, Singapore, and Vietnam maintained steady, moderate to high growth rates through the 1990s, in sharp contrast to most of the rest of the non-industrialized world. These economies are all relatively *dirigiste* in their style of national management. In their own ways, all regulate international capital flows. On the whole they avoided the real exchange rate appreciation observed elsewhere and maintained productivity growth in both traded and non-traded sectors.

China, in fact, reports economy-wide productivity growth of more than 10% per year in the mid-1990s (with 15% in industry). Insofar as they are credible, such numbers can be attributed to several factors acting upon a large and diverse economy with a total GDP of around \$1.1 trillion at current exchange rates and a population of 1.3 billion.

One was opening to international trade, with import and export shares of GDP rising from around 5% to more than 20% between 1978 and 2000 (average tariffs fell from around 40% to 15% during the 1990s). Roughly half of this foreign trade takes the form of "re-export" or export-oriented processing and assembly activities.

There was also a controlled liberalization of capital inflows. During the period 1985-2000, foreign debt increased almost nine-fold, from \$16 billion to \$146 billion. By the year 2000, the total of accumulated FDI was \$346 billion or 32% of GDP (with perhaps a quarter of the total representing “round-tripping” of funds by mainland enterprises, another large portion coming from Hong Kong, Macao, and Taiwan, and the balance “from abroad”). After 1997, “foreign funded enterprises” (mostly re-export operations) began to run a trade surplus of around \$2 billion per year, or 10% of the total.

Despite these developments, external opening was selective. Capital controls remain in place, and this firewall insulated China from the 1997 financial crisis in East Asia. China devalued by about 20% in 1994 when a managed float replaced a dual exchange rate system. Although there was subsequent appreciation, the relatively weak real exchange rate (along with export subsidies in the form of tax rebates) helped maintain a positive current account balance on the order of \$20 billion per year at the end of the 1990s.

Unsurprisingly, massive capital inflows and a current account surplus fed into both reserve accumulation (despite attempts at sterilization) and capital flight. On the latter count, net negative errors and omissions in the balance of payments fluctuated in the \$10-20 billion range during the 1990s. One estimate put total flight in 1999 at \$60 billion! Meanwhile, foreign reserves increased from 11% to 38% of the supply of base money between 1992 and 1998. Growth in the money supply correlated with a jump in the inflation rate to 24% in 1994 and 17% in 1995. To curtail monetary expansion, the central bank raised interest rates and reduced loans to domestic financial institutions which in turn slashed credits to SOEs. The results included lay-offs of 8% of the SOE labor force, a source of substantial political unrest.

Except for 1993 when its net borrowing ($I_p - s_p X$) was positive, the private sector was a net lender to the rest of the economy – exactly reversing its role in the 1980s. As already observed, there was a strong external surplus throughout the 1990s (again reversing the situation in the 1980s) while the public sector ran a steady deficit. The government financed its moderately

expansionary fiscal policy by issuing debt to domestic borrowers – by 1999 the total of its outstanding obligations was around 5% of GDP.

These shifts in demand composition were directly related to liberalization. Before the drive to open the economy, the government was the major saver and investor, mandating the investment programs of the SOEs. After opening, resources were redistributed toward the private sector. Government revenue fell from over 30% of GDP around 1980 to 11% in 1996 and 15% in 2000. The personal income share rose from 50.5% in 1978 to 80.9% in 1997. Personal real income has grown in the 7-8% annual range, with consumption increasing at about 6%

The slower growth of consumption than income shows that in the presence of SOE layoffs and the absence of adequate pension and health insurance schemes, households have maintained high savings rates. Private investment, meanwhile, has been low as banks (largely controlled by the state) held back on new credit because of past accumulation of non-performing loans to SOEs. The upshot was a large private financial surplus which financed the current account surplus and the government deficit throughout the 1990s.

Broadly speaking, employment shares have been reduced in agriculture (from 70% to 50% of the labor force between 1980 and 2000) and in urban SOEs. Overall employment growth was around 1% per year in the 1990s, with job destruction in traded sectors and job creation in non-traded.

There is still positive employment growth in the low productivity agricultural sector, so it contributes a negative “reallocation” effect to productivity growth economy-wide. The main engine for productivity increases has been the industrial sector (reported growth on the order of 15% during the 1990s), contributing to the labor-shedding in traded goods just mentioned. The other sectors had positive productivity growth rates as well.

Rising income inequality accompanied liberalization. Non-wage income accounts for 55% of the total in urban areas, largely flowing toward high-income households (though there are also small transfer flows to former SOE workers). The urban Gini coefficient as estimated by the World Bank rose from 0.23 in 1990 to 0.30 in 1999; the rural values were 0.30 and 0.34 respectively.

The ratio of urban to rural household incomes declined from 2.57 in 1978 to 1.82 in 1983 (as the initial phases of deregulation favored agriculture) but then rose again to 2.79 in 2000. Income differentials across provinces also widened.

These changes were caused by several factors: an increasing share of non-wage incomes (as already noted), widening wage differentials by skill groups, lay-offs in traditional industries and SOEs, differential effects of liberalization across regions, a shift in the terms-of-trade against grain-producing agriculture, relatively slow urbanization, and a likely increase in illegally obtained income flows.

India is comparable to China in terms of population (a bit more than a billion people) but its GDP of about \$500 billion is considerably less. The average GDP growth rate was around 6% in the 1980s and 1990s, tailing off toward the end.

Sporadic steps toward reducing state control and raising external openness date to the late 1970s, but much more decisive steps were taken after a balance of payments crisis in mid-1991. There was an immediate effort at stabilization, followed by implementation of a package of "reforms."

Devaluation weakened the real exchange rate by about 10% after the crisis, with modest real appreciation subsequently. Most non-tariff restrictions on capital and intermediate goods imports were removed. Import duties as a share of imports fell from 45% to 25% by the end of the decade, and export incentives were broadened and simplified. "Negative lists" of restricted imports (including defense- and health care-related imports, and some consumer and capital goods) were drawn up and subsequently shortened. The byzantine industrial "license raj" was dismantled and the financial sector deregulated. Portfolio and FDI flows were liberalized, though strong controls remain in place on commercial borrowing and capital outflows. As in China, exchange controls helped insulate India from the Asian crises.

Using 1991 as the reference year, before-and-after comparisons suggest that the effects of the reforms have been decidedly mixed. The economy did open to foreign trade, with export and import shares rising several points to about 11% and 14% of GDP respectively (numbers

broadly comparable to China's if its re-export trade and overall trade surplus are not taken into account). The compositions of the import and export baskets have not changed, and the trade deficit rose in the 1990s.

Cumulated FDI in the 1990s was \$15 billion, a pittance compared to China's inflows. At the end of the decade about 40% of FDI took the form of mergers and acquisitions of existing firms, without apparent technological spillovers. Annual portfolio investment was in the \$1-3 billion range in the 1990s. There were stock market and real estate price excursions early in the decade, but they later subsided. Real appreciation appears to be associated with inflows as in the mid-1990s, but the trend later reversed. The central bank has attempted to lean against the capital inflow wind, but with indifferent success because of the limited ability of local bond and stock markets to absorb government securities. Purchases of dollars by the bank have led to substantial increases in international reserves.

In 1990-91, the combined central and state government budget deficit was over 11% of GDP. As a consequence of the stabilization program, this number fell to 7.5% in 1996-97, but then grew again to over 10% at the end of the decade. Contributing factors were interest payments on government debt (up from 3.8% to 4.7% of GDP) and a fall in indirect tax revenues of about 1.6% of GDP. Lower tariffs were a major factor behind this loss, which was partly offset by an increase of 0.7% in the GDP share of direct taxes.

Compared to the 1980s, gross fixed investment rose as a share of GDP in the 1990s. Since growth did not accelerate, the implication is that capital productivity has fallen. As a consequence of the fiscal squeeze, capital formation by the central government fell from 5.6% of GDP in 1990-91 to 2.6% in 1999-2000. Much of such investment is in infrastructure and it may well "crowd in" private investment. Lack of infrastructure is looming increasingly large as a constraint on economic growth.

Price inflation was somewhat lower in the 1990s than the 1980s, though it was rising toward double digit annual rates during 1998 and 1999 before falling again to around 5%. The

terms of trade shifted toward agriculture, consistent with its lagging performance discussed below. The real interest rate fluctuated in the 5-10% range.

Effective demand, unsurprisingly, was led by government spending, with $G > tX$ since the 1980s. The private demand contribution has closely tracked output, and foreign transactions have been contractionary. There was positive labor productivity growth 1993-2000 in all one-digit sectors, with job losses in the primary sectors of agriculture and mining, utilities, and social services.

Specific problem areas include agriculture and employment. Despite an unusual run of favorable monsoons, the trend growth rate of the index of agricultural production fell from 3.4% in the 1980s to 2.2% in the 1990s. Part of the problem can be traced to the shortfall of public infrastructure investment. Also, no attempt has been made to modify the institutions that generate landlessness and poverty in the countryside, where labor force participation rates have declined.

Elsewhere, there has been increasing informalization of labor markets and expansion of low wage female employment. Potentially tradable sectors such as parts of agriculture and manufacturing have not generated significant employment growth; rather, non-tradables have seen the biggest employment and output gains.

Inequality has risen in both the personal and functional distributions of urban and rural incomes. Because of changes in methodology in the National Sample Surveys, there has been substantial debate about whether the incidence of poverty was affected by the reforms. The poor in India are concentrated among the rural landless, scheduled castes and tribes, and households in which all members are illiterate. Poverty tends to be reduced by labor-intensive non-agricultural output and employment growth in rural areas; all the poor are hit by higher food prices. The benefit from public food distribution and employment generation schemes, but spending on such programs as a share of GDP did not increase in the 1990s.

Singapore, in one sense, is a successful long-term capital liberalization experiment, relying on FDI to deliver real resources and technological upgrading. On the other hand, its success has little to do with *laissez-faire*. The government has intervened continually in the

foreign investment process, providing incentives and infrastructure for foreign firms and aggressively pursuing export promotion. The outcome has been annual GDP growth in the 7-9% range beginning in 1960 and continuing until 2000 (growth slowed thereafter), supported by a social contract under which the government devotes great effort to stimulating production while providing a package of social services to keep the labor force in line.

Singapore became a sovereign state in 1965 (seceding from the Malaysian federation), accompanied by substantial social unrest. Import substitution was practiced under an Economic Development Board (EDB) that had been set up in 1961. With independence, the EDB's emphasis switched to export-led industrialization spearheaded by foreign investment attracted by an absence of restrictions on ownership or borrowing, enforced labor discipline, and public participation in setting up operations. Between 1961 and 1978, GDP increased by more than four times, and the manufacturing share rose from 15% to 27% of GDP. Growth continued through 1985, when the city-state was hit by severe recession. More incentives for transnational corporations were put into place and labor costs were reduced, setting off a new round of growth.

Leaving out re-export and entrepot activity, there was a consistent trade deficit until 1985, with the government and private sector alternating in providing stimulus to demand (the private sector's excess of investment over saving was especially important in the 1970s). The configuration switched markedly thereafter, with a trade surplus rising to nearly 20% of GDP. The balancing "twin surplus" within the system was the private sector's excess of saving over investment. Capital inflows continued, and some were transformed into Singapore's own foreign holdings abroad.

The "participation rate" in Singapore was 59% in 1995, reflecting the fact that an estimated 30% of the labor force is made up of foreign workers. In the 1970s and 1980s, the manufacturing sector was the major source of employment generation, with output growth exceeding labor productivity growth of around 4% per year. In the 1990s the service sectors generated the bulk of new jobs. Historically, manufacturing has been the major source of

productivity growth economy-wide, with financial services becoming important in the 1980s and 1990s.

The Gini coefficient as estimated on the basis of labor force surveys fell from 0.48 to 0.44 between 1973 and 1982, but since then has trended upward to 0.5. One cause are increasing wage differentials for skilled workers. The estimates do not take into account housing subsidies and wealth distribution schemes for citizens that the government has put into place.

Vietnam went through a prolonged economic crisis in the 1980s, which catalyzed a 1989 *Doi Moi* package of external and domestic reforms. They placed the economy on the road to a market system, albeit subject to strong state control. The program started with austerity aimed at curbing inflation, 90% devaluation, and liberalization. In rather non-standard fashion, devaluation and high interest rates may have been anti-inflationary because they encouraged portfolio shifts away from gold toward dong-denominated assets and created incentives for dishoarding of commodities including rice.

External liberalization covered the current but not the capital account, saving the country from the volatility that swamped its neighbors. Even current account liberalization was incomplete, e.g. in 2001 the IMF ranked Vietnam at 9 on a scale of 10 for trade restrictiveness. FDI was encouraged by Singapore-style legislation, and cumulated to \$32 billion between 1988 and 1999 (GDP in 2001 was at about the same level). Over half the inflow came from Asian countries, and was directed toward oil and gas production, import-substituting industries, and export sectors such as garments and footwear. Despite its export dynamism, however, the “FDI sector” in 1998 still had a \$685 million trade deficit (the deficit was \$2.14 billion overall). Exports of petroleum products and of textiles, garments, and footwear each make up 20% of the total of about \$10 billion.

In comparison to post-socialist Eastern Europe and the former USSR, Vietnam went through a rapid transformation to steady growth at 7% per year in the 1990s, expansion of the external sector, and improvements in living conditions for many people. Total trade (including re-

export) rose from 25% of GDP in 1988 to 111% in 2000. From 1993 to 1998, the proportion of people living below the poverty line fell from 58 percent to 37 percent.

“Externalization” intertwined with greater market orientation deserves partial but not full credit for Vietnam’s strong macroeconomic performance during the *Doi Moi* years. The development of offshore oil resources, and exogenous shocks in the geopolitical environment including domestic institutional changes in East Asian economies also played critical roles. The initial package was especially potent because the economy was operating well below its potential during the pre-1989 period. Existing resource underutilization and misallocation were so great that the reforms produced substantial increases in output without requiring much by way of additional inputs. In the 1980s, output growth was constrained by a scarcity of imported inputs due to the international economic boycott (“before”), while the *Doi Moi* era was marked by changes in the post-Cold War international balance of power and Vietnam’s more conciliatory foreign policy stance (“after”). The decision by non-CMEA countries to end the trade embargo probably contributed as much to the rapid expansion of exports and imports as Vietnam’s actual lowering of trade barriers.

Aggregate demand was led by the private sector, especially before 1990 when estimated private saving was negative. By 2000, saving and tax leakage parameters were around 0.2 each, and the import coefficient was 0.6.

As in other countries that liberalized trade and shut down state enterprises, not many jobs were created in the higher value-added sectors of the economy because output growth could not compensate for the productivity increases that Vietnamese firms needed to survive the more competitive environment of the 1990s. The low productivity primary sector accounted for 60-80% of Vietnam’s employment growth, with significant contribution from the services sector during the 1992-97 period.

At the same time, geopolitical sea change and significant resource underemployment help to explain why the US dollar value of Vietnam’s exports grew at an annual average rate of over 26% from 1989 to 2000, even though after the initial devaluation through 1995 there was a

trend rise in the relative price of non-traded to traded goods. There was enough slack, despite widely reported shortages of skilled labor, to accommodate both greater export demand and greater growth of the non-traded goods and services sectors.

Overall income inequality increased marginally, with the Gini coefficient rising from 0.33 in 1992-93 to 0.35 in 1997-98. Theil T decompositions suggest that inequality rose in urban areas and fell in rural. Simulations with computable general equilibrium models suggest that upper income urban households have reaped a major share of the gains generated from sustained economic growth.

Asian crisis economies

The economies that fell into crisis shared common features – notably liberalized capital markets – but their histories are by no means uniform with regard to exchange rate movements, demand and productivity growth patterns, and other factors. The contrasts are as interesting as the similarities.

Indonesia had largely decontrolled its capital account as early as 1970. Other liberalizing moves came in the 1980s in response to the oil price reduction in 1983. There were devaluations in the 30% range in 1983 and 1986, and in the latter year moves were made to liberalize trade and investment, with the goal of boosting non-oil exports. Tariffs were reduced, and legal restrictions on ownership and foreign investment relaxed or removed. Bank deregulation came in 1988, though a few large banks linked to industrial groups continued to dominate the sector.

GDP growth at an average rate of 8% per year between 1987 and 1996 followed the policy changes. Capital inflows were a major driving factor, combined with a relaxed monetary policy at the end of the 1980s. Expansion of base money was supported by net foreign asset accumulation, and year-on-year growth rates of domestic credit exceeded the inflation rate by double digit margins. Using a variety of tools, the central bank attempted to sterilize the inflows and restrict credit expansion in the first part of the 1990s. It basically failed, because off-budget borrowing by the government was monetized, and emission of export credits in foreign currency fed into growth of the money supply.

While all this was happening, there was slow depreciation of the real exchange rate, measured in terms of the differential between domestic and foreign inflation rates and the nominal depreciation rate. Domestic interest rates were driven along UIP lines by foreign rates and the Indonesian risk premium.

From the early 1980s until 1994, effective demand was led by foreign and government deficits (with the latter partly financed by foreign borrowing). The private sector provided net lending to the others. This situation reversed dramatically during 1994-97, with the private sector pumping demand into the system. The private sector's saving rate fell from around 16% in 1996 to 9% in 1999, as its debt level soared. After the crisis in 1998-99, plummeting demand was supported by the external and private sectors in the face of strong fiscal contraction.

Consistent with overall depreciation, prices and wages in tradable sectors rose relative to those of non-tradables until 1997, reflecting the fact that tradables had been heavily subsidized prior to liberalization. The employment share of tradables declined from the late 1980s through 1997, when the trend reversed. The employment share of agriculture was still 55% in 1985 but had dropped to 44% in 1995. As a consequence, services were the main sources of employment growth during the post-liberalization boom.

In more detail, prior to 1997 output per capita grew faster in the non-tradable than tradable sector. This pattern drastically shifted when the crisis hit, with non-tradable output falling by more than 20% in 1998. Productivity growth was higher in tradables, and fell by "only" 10% in 1998 while non-tradable productivity growth was -20% that year. The non-tradable sector was therefore the major job generator before the crisis, with the pattern reversing thereafter.

The overall income distribution was fairly stable during the liberalization boom, although the data under-represent the high income population, suppress regional differentials, and ignore cleavages between small business owners and conglomerates and the ethnic Chinese minority. Prior to the crisis the poverty headcount ratio fell from 22% in 1984 to 11% in 1996, with roughly equal reductions in both urban and rural areas. Directed government policies (pricing policy for

basic consumption goods, education, health, infrastructure investment) helped support these trends.

For Indonesia, the major causes of the 1997 crisis were financial, especially the mismatch between short-term foreign debt and the availability of international reserves. Despite apparently solid “fundamentals” (rapid growth, low fiscal deficit, slow inflation) leading into the crisis, its effects were devastating. GDP growth was -14% in 1998, and the exchange rate collapsed in the face of very high interest rates. Inflation surged by almost 80 points.

The poverty headcount ratio nearly doubled in 1998, offsetting the gains of a decade. Real wages fell sharply, but employment stayed stable (largely supported by job creation via reverse migration back to agriculture). Real consumption levels declined across the income distribution, with the biggest real reduction of 24% suffered by the top income quintile. In other words, the urban middle class was especially hard hit by the crisis.

Korea

Malaysia has run an open economy since colonial times, a policy stance that continued after the peninsula became independent in 1957, an expanded federation was formed in 1963, and Singapore seceded in 1965. Selective tariff protection was utilized for two rounds of ISI – for consumer goods in the 1960s and for heavier industries such as automotive in the 1980s. The capital account has also been relatively open, although the regulatory authorities did not allow easy access by nationals to foreign bank borrowing. In the crisis period, short-term loans were less of the problem in Malaysia than in Indonesia, Korea, and Thailand. The authorities also resorted to capital controls in two periods – to regulate destabilizing inflows in 1994 and outflows in 1998.

There is a long-standing policy to attract FDI in manufacturing, with 84.5% of exports coming from that sector in 1999. As usual, there are questions as to how much value-added is generated by manufactured exports, owing to their high import content, but no recent empirical

investigations seem to be available. Profit remittances are substantial, amounting to 3-4% of GDP in the mid-1990s (more than offset by new FDI capital inflows). Prior to the 1997 crisis, the merchandise trade account was usually in surplus to the tune of 1-2% of GDP, while the current account ran a somewhat larger deficit. With broad balance between flows in both directions, the ringgit dropped against the dollar with the Plaza Accord in 1985, and then tended to weaken gradually until the crisis when it depreciated strongly.

The propensity to import has risen steadily since the 1970s while tax revenues are less than 10% of total supply and the ratio tends to drift downward. Private saving fluctuates in the 20+% range. The government deficit, largely financed by domestic borrowing, has stimulated demand since the 1970s. Before 1997, there tended to be a private sector surplus and an external deficit. Post-crisis, private and external stances changed signs, and after a brief period of fiscal contraction the government became a bigger net borrower.

Since the mid-1980s, manufacturing and services have generated employment growth with agriculture as the major supplier. Productivity growth has been balanced across traded and non-traded sectors.

Overall inequality declined in the 1980s and rose in the 1990s, with the Gini coefficient fluctuating between 0.45 and 0.5. With sustained growth, poverty incidence fell from 40% in 1976 to 6.8% in 1997, and then rose a point or two thereafter. Social policy has traditionally been biased in favor of the predominantly Muslim Malay Bumiputera – or indigenous – community, but liberalization has diluted its force. Agricultural support programs continue to exist.

As noted above, Malaysia's 1997 crisis was softened by pre-existing restrictions on foreign borrowing (external liabilities did not exceed available reserves, as in other countries) as well as mechanisms for prudential regulation put into place after a banking collapse in the late 1980s. On the other hand, high levels of portfolio investment going into the crisis forced the Kuala Lumpur stock exchange to plummet when it started to flee. In effect, Malaysia was less beholden to its banking system than were its neighbors, and the system was in less trouble anyway.

Recovery was not as spectacular or sustained as Korea's but was stronger than in Thailand and Indonesia.

Thailand switched its development strategy from ISI in the 1960s to export promotion through subsidies and investment strategy thereafter. Imports were liberalized, with the ratio of tariff revenues to total imports falling from 18% in 1970 to less than 4% in 2000. The ratio of total trade to GDP rose from 27% in 1970 to 120% in 2000. FDI was encouraged, with an annual inflow of \$2 billion in 1990 rising to \$7 billion in 1998 (around 7% of GDP) when foreign investors acquired ailing Thai banks at fire sale prices. Before that, a representative destination was the electronics industry, which accounted for about 35% of exports and 1.5% of total employment in 2000. The value of exports from the sector was 22% of GDP, but its value-added was probably closer to 3% or 4%. In effect, a great deal of FDI was directed toward assembly operations without high skill content.

Capital controls were relaxed in 1991 when Thailand accepted IMF Article VIII. In 1993, financial institutions were permitted to offer offshore banking facilities to domestic borrowers, in an attempt to establish Bangkok as a regional financial center. The ratio of capital inflows to GDP was 2% in 1970, 10% in 1990, and peaked at 12% in 1995, before collapsing at -13% in 1998. Maturity and currency mismatches in borrowing were severe by the mid-1990s.

Despite a current account deficit, capital inflows were large enough to raise international reserves to almost \$40 billion prior to the crisis. Thin local bond markets precluded sterilization, so reserve increases fed into credit creation at annual rates in the 20-30% range. Asset prices rose sharply in 1994-95 and the exchange rate appreciated.

Thailand's import propensity rose from 0.2 in 1985 to nearly 0.4 ten years later. Saving and tax propensities stayed fairly flat at about 0.2 and 0.13 respectively. Prior to the crisis, both private sector and government contributions to effective demand were slightly above the level of total supply; the external sector ran a deficit. These sectoral roles switched after the crisis, with the external sector propping up demand and the private sector strongly reducing it.

In a bit more detail, between 1991 and 1996 the real effective exchange rate appreciated by about 0.7% per year. It then depreciated by 10.6% on average in 1997 and 1998. Relative prices of traded and non-traded goods followed a similar pattern. The productivity differential between the two sectors moved in line with the real exchange rate. Between 1991 and 1998, labor productivity in the traded sector rose faster than in the non-traded. This pattern reversed (with substantial labor-shedding in the non-traded sector), along with real depreciation post-crisis. Reverse migration also led to negative agricultural productivity growth in the late 1990s.

There was a substantial reduction in overall inequality between 1988 and 1998, with the Gini coefficient dropping from 0.48 to 0.41. The poverty headcount ratio was 32.6% in 1988, 11.4% in 1996, and then 15.9% in 1999. Poverty alleviation was aided by a steady increase in the agricultural terms of trade in the 1990s and modest extension of social service programs.

Cyclical stagnation

In different ways, the Philippines and Turkey have stagnated as a consequence of repeated business cycles tied to external liberalization. The malaise has affected the Philippines for decades and Turkey since the late 1980s.

Philippines, among the populous Southeast Asian economies, is the one that has hewed most faithfully to traditional, conservative economic policy as advocated by the Bretton Woods institutions. It also has by far the worst record for economic growth. In 1960, Philippine per capita GDP was almost twice as high as Korea's and Thailand's. On the basis of its growth spurt in the 1950s and 1960s, Korea overtook the Philippines in the mid-1970s. Thailand pulled ahead in the late 1980s, and widened the gap with rapid growth prior to the Asian crisis while the Philippines went through a series of bust-recovery cycles.

The story traces to the 1950s, a prosperous decade based upon ISI following a balance of payments crisis in 1949 which was offset by import and exchange controls. However, the rigidities of the ISI regime, corrupt politics, an agricultural sector still recovering from the war, and overvaluation led to another crisis in 1960. Trade and exchange liberalization got underway in 1962, with the IMF playing an increasingly important role in designing economic policy. There

were 18 stand-by agreements with the Fund between the mid-1960s and the mid-1980s, perhaps a world record for the time (the willingness of the IMF to deal with the Philippines was of course related to the ascendance of the Washington-friendly Ferdinand Marcos regime in 1965).

Nevertheless, crisis-recovery cycles continued to recur, becoming steadily more frequent and with weaker recoveries. The economy deteriorated in the late 1970s and early 1980s due to corrupt, inefficient allocation of public investment financed by foreign debt, the second oil price shock, and the Volcker interest rate shock. GDP growth was negative in the mid-1980s (-7.6% growth in 1984 and 1985), 1991-93, and 1997 with the Asian crisis. The 1984-85 collapse led to intensified trade and capital market liberalization, which evidently did not succeed in boosting growth.

The Philippine 1997 crisis scenario followed the general pattern of countries in the region, in somewhat subdued fashion. The capital market was fully liberalized by 1993, and a familiar pattern of capital inflows associated with exchange appreciation and booming asset prices followed in train. GDP growth in the mid-1990s was in the 5% annual range; after the crisis, output contraction was less than in the other countries.

Throughout the 1980-2000 period, effective demand was led by the government and (especially in the 1990s) the private sector. There was a consistent external deficit, aggravated by a steady upward trend in the import coefficient that accelerated in the 1990s. The saving rate trended downward during the same period.

From 1988 through 2000, bust periods displaced labor but recovery brought very little employment absorption. This led to a long-run trend for the unemployment rate to rise. Lack of employment absorption in the growth phases had to do with: a) low business confidence in some periods, b) the need to improve labor productivity in the tradable (manufacturing) sector due to the higher exposure to external competition, c) high import dependence that created biases against using domestic resources and inputs. Labor productivity in most sectors falls during recessions and increases during boom times, with negligible trend growth over time.

In the 1990s the service sector absorbed more labor than manufacturing which had to boost productivity because of its increasing exposure to competition brought about by real appreciation and external liberalization. Agriculture is declining in terms of output and employment. Increasing output and employment shares of services, relatively constant shares of industry and manufacturing (since the late 1980s), and falling shares of agriculture can be explained by labor productivity and employment movements during the recession-recovery cycles of the economy. Because of the rising importance of services, low productivity growth in that sector increasingly drags down the growth rate overall.

In terms of distribution, an increasing share of income goes to the corporate sector after every bust-recovery transition. The informal household sector's operating surplus has fallen with external liberalization and as labor moves out of agriculture. 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.

There is evidence 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 the household and labor sectors.

Turkey was the site of an exchange rate-based anti-inflation package like those applied in Brazil and Russia, in this case designed, engineered, and monitored by the IMF. Unlike Brazil's Real plan and others around the world in 1990s, it dramatically failed. The causes lay with a financial cycle driven via a liberalized capital account – Turkey went through four such oscillations in the 1990s. The basic pattern is resembles the one sketched above, featuring real appreciation and high domestic interest rates leading into the bust.

The unsuccessful stabilization package followed this pattern. With inflation running between 60% and 70% in 1999 (with the WPI rate below the CPI), the program targeted rates in the 20-25% range at the end of 2000. Various limitations on central bank activities effectively forced it to act as a mild currency board. A nominal devaluation rate of 20% was pre-announced as in the infamous Argentine *tablita* of the late 1970s.

Non-resident capital inflows totaled \$15.5 billion in the first 10 months (in a \$150 billion economy). Risk premia narrowed and on UIP grounds, internal interest rates fell. The current account deficit was \$9.5 billion at yearend, driven by deterioration in the trade balance. The bigger deficit was associated with real appreciation because prices rose between 30% and 40% over the year (in contrast to the pre-announced 20% nominal devaluation). The ratio of short-term debt to central bank reserves rose from 101% at the beginning of the year to 152% in December.

The IMF began to worry aloud about the macro situation in November, and non-resident investors responded by withdrawing assets rapidly. The central bank's reserves fell by \$7 billion in two mid-November weeks. The bank broke its agreement to act as a currency board and provided Turkish lira liquidity to the banks. Emergency IMF funds were mobilized but failed to stabilize the economy. A political skirmish between the president and prime minister led to another attack on the lira in February 2001. In the final analysis, there was a capital flow reversal of almost \$28 billion between the first 10 months of 2000 and the eight months that followed – almost 20% of GDP!

Turkey got into its present situation after widely trumpeted initial success as an "early reformer," with a liberalization push coming on the heels of an external crisis in the late 1970s. Developments in the 1980s and 1990s make an interesting contrast, as initial current account and labor market deregulation set up a jerky transition toward liberalized external and internal capital markets. The early 1980s witnessed a major export push, facilitated by rapid demand growth in Turkey's major trading partners and pushed on the domestic front by devaluation, aggressive export subsidies, and policies aimed at cutting real wages and the agricultural terms of trade (in contrast to India, higher agricultural prices appear to benefit - not harm - low-income peasant

proprietors in the countryside). Despite rapid export growth, investment in traded goods sectors did not increase, so that capacity limits helped choke off the boom later in the decade. Moreover, higher exports were matched by imports so that demand was not externally led.

More fundamentally, the model broke down as repression of wages and the terms of trade could no longer be sustained - there was a wage explosion in 1988 accompanied by a marked political shift toward "populism" à la Turk. However, the government was unwilling or unable to raise taxes to fund its higher expenditures. Liberalizing the capital account was the expedient adopted to permit higher public borrowing. The pattern was for the banking system to borrow in external markets, and then re-lend the money to the government with a handsome interest rate spread. Along the lines discussed above, the rapid financial boom-bust cycles of the 1990s took over.

Throughout the 1990s, effective demand was led by the government, with private and external contractionary effects alternating in importance in tune with the cycle. Productivity growth has been slow, and fairly evenly balanced between traded and non-traded goods. Labor force participation has risen, accompanied by informalization and widening of wage spreads between skilled and unskilled labor. Although data are scarce, it is likely that poverty has increased. Shifts toward and away from populism on the political front were dramatic and the sequence of deregulation efforts was non-standard, but otherwise Turkey exemplified most adverse effects of external liberalization.

Inflation stabilization

Reducing "high" inflation (annual rates in the two to four digit range) under a liberalized capital account was a principal goal in the 1990s in many countries. Besides Turkey, the ones considered here are Brazil and Russia – each a large economy with a significant industrial base. Both succeeded in reducing high inflations, but then fell into financial crisis.

Brazil enjoyed GDP growth of about 7.5% per year for more than three decades prior to the international debt crisis triggered by the Mexican default in 1982. Foreign finance dried up immediately, and to meet debt service obligations Brazil had to transform a trade deficit of 2.2%

of GDP in 1980 to a surplus of 5.9% by 1984. This massive macroeconomic shift required currency devaluation (itself inflationary in an “indexed” economy where most current prices were tied to lagged overall price indexes), demand contraction, and (arguably) steadily rising prices as a means for cutting back on real spending via “forced saving.”

In the 1980s – a “lost decade” – growth averaged 3.3% with an annual inflation rate (GDP deflator) of about 340%. Growth was 0.8% during 1990-94 and inflation reached 1645%. The successful Real Plan stabilization in 1994 drastically cut inflation to 9% for the rest of the decade, with growth at 2.6%. However, the Real also ushered in an international financial crisis in 1999, from which the economy is still recovering.

The success of the anti-inflation package was directly tied to capital market liberalization. It shared many elements with half-a-dozen “heterodox” programs that had been attempted beginning in 1986. De-indexation was achieved by introducing a new nominal non-inflationary unit of account tied to three price indexes; the unit was ultimately transformed into the Real which was pegged to the dollar. Residual inflation persisted so there was some real appreciation, but the major impetus for spiraling prices had been removed. The operation worked precisely because there was no pressure on the balance of payments. Capital inflows turned positive in 1990, and by 1995 they had reached a level of \$30 billion per year (in a \$500 billion economy).

The Real exercise had been preceded by several years of relatively tight fiscal policy, with primary surpluses of around 2-3% of GDP and operational surpluses (including interest payments) of -1 or -2%. But anti-inflationary success was *not* accompanied by concurrent fiscal austerity. Primary surpluses were near zero in 1995-97 and rose to about 3% in 1999-2000. Operational surpluses, however, were consistently negative as public debt rose from \$30 billion in 1995 to \$50 billion in 2000 (and much higher thereafter). High internal interest rates, largely driven by external rates and risk premia along UIP lines, were the principal cause of the fiscal deterioration. The liberalized capital market that was essential for inflation stabilization carried its own seeds of fiscal destruction.

On the side of trade, from the 1960s onwards policies such as a crawling peg devaluation regime and export subsidies had been utilized to promote external competitiveness. Reduction of import barriers intensified in the late 1980s while there was still high inflation. During the 1980s demand was strongly export led, with E/m running three times as large as X . This situation rapidly reversed as imports grew at 14% per year in the 1990s while exports grew at 6%. It is difficult to separate public and private saving and investment accounts in Brazil, but after 1994 demand was clearly domestically led, probably with private investment and government consumption as the main contributing factors.

Brazilian proponents of liberalization argued that FDI and importation of “modern” (that is, foreign-made) intermediate and capital goods would lead to a jump in productivity, leading to export expansion. As already noted, the export surge did not happen. The productivity growth rate did rise from 1% before the Real plan to 2.6% in the second half of the 1990s. Both developments are consistent with real appreciation under a liberalized trade regime. FDI increased to about \$5 billion per year by the end of the decade, but econometric tests suggest that it had negligible effects on productivity growth and domestic capital formation.

The 1999 crisis was followed by real depreciation and (still) higher interest rates, in the usual fashion. The output contraction was less sharp than in East Asia and Russia, and prior bank restructuring kept financial disruption to a minimum. However, the recovery that began in 2000 remains weak.

Liberalization-*cum*-appreciation were associated with de-industrialization. In metropolitan São Paulo, the industrial heart of the country, in 1990 48.7% of private sector workers were employed in industry, with the figure falling to 32% in 1999. The employment share of services correspondingly increased. Relative service sector as well as skilled wages also rose.

In six major metropolitan regions, total unemployment (“open” and “hidden”) went from 10.3% in 1990 to 17.7% in 2000. As in other countries, demand growth was insufficient to offset faster productivity growth so there was negative net job creation. Informality in the labor market also increased.

Russia The Russian transition doubtless has more acts to play, perhaps as dramatic as the ones that have already been staged. The first one featured orthodox liberalization shock therapy in 1992. The outcomes were a huge drop in output, rapid inflation as a vehicle for limiting demand by slashing real incomes, chaos in the public finances, distortion of the financial system, and an explosion of enterprise arrears. There were massive and often corrupt redistributions of property rights, resources, and political commitments.

The second act was “depressive stabilization.” The inflation rate declined from almost 1000% in 1993 to 10% in 1997 in response to a tightly maintained exchange rate corridor and negative or zero growth. As in Turkey, the fiscal deficit was not monetized but rather financed by short-term bonds, with a large proportion sold abroad. The exchange rate became over-valued and there was capital flight on the order of \$25-30 billion per year (larger than the trade surplus and almost 10% of Russia’s \$300 billion GDP). In the mid-1990s there was a series of internal financial bubbles and Ponzi games.

External financial crisis hit in August 1998, as foreign funds that had been invested in government bonds and the stock market abruptly departed. GDP fell by 4.6% that year and the nominal exchange rate went from 5.96 rubles per dollar at the end of 1997 to 20.65 at the end of 1998.

Act four was more pleasant. Devaluation helped slow and possibly reversed deindustrialization, and higher world energy prices boosted the current account surplus from \$2-3 billion to around \$20 billion. Due in part to tighter enforcement, capital flight fell to the \$5 billion range. GDP growth rose to 5.4% in 1999, 9% in 2000, and 5.1% in 2001. Demand was led by foreign transactions as the government swung toward fiscal balance. Russia’s high saving rate (about 30% of GDP) and lagging investment demand meant that the private sector was the economy’s net lender.

Can the late 1990s recovery be sustained? There are clouds on the horizon. GDP growth continued to slow in 2001-02. Four-fifths of exports are raw materials (primarily fuels and metals), making the economy highly dependent on sales into markets susceptible to big price fluctuations.

Various estimates suggest that if the price of oil drops by one dollar per barrel, GDP growth might slow by 0.5%, investment growth by 1%, and budget revenue by 1%. Profits are far higher in the energy-related than in other sectors, a symptom of the Russian version of Dutch disease that pervades the whole economy. Government finances remain fragile, with taxes hovering around 15% of GDP and interest obligations in the 3-5% range, leaving little room for spending initiatives. Monetary policy has to concentrate on sterilizing the petrodollar inflow. Investment demand remains mired at 60-70% of saving supply (and fell well below 20% of GDP for all of the 1990s). Much of the capital formation that occurs takes place in the raw material export sectors, worsening prospects for reindustrialization.

Real wage and pensions payments suffered through the first three phases of liberalization described above. By 1997 they had fallen to one-half their levels in 1991, and by 1999 to one-third. Slow recovery began in 2000, but its prospects obviously depend on future growth of GDP. The overall Gini coefficient is near 0.4, and in 1998 over 40% of the population had incomes below the official poverty line.

More fundamentally, prior to its demise, the Soviet system had two main proto-classes, the *nomenklatura* in charge of the party/state governing apparatus and the rest of the population. The (former) *nomenklatura* were the clear gainers from liberalization, as in connection with the criminal "mafia" they seized control of the major productive assets in a blatantly rigged privatization process, and engaged in massive capital flight. The only Russians (the so-called "new Russians") whose real earnings rose were people in upper income strata who benefited from forced saving and the rapid, corrupt privatization. The production structure shows sharp duality between activities that may survive under the new economic regime and those that will not, and while Soviet-style industrial organization has been obliterated, a truly market-based system has not emerged in its place. At best, it will be many years before globalization and liberalization in Russia produce happy results for the population at large.

Post-socialist transitions

In their own historical contexts, Hungary and Poland shared much of Russia's fate of the 1990s. But the phasing and repercussions of shock therapy were milder, following non-Soviet paths.

Poland in the 1980s had already taken steps toward a market system, with a multi-faceted pricing system based on diverse values and/or rationing for the "same" commodity in different markets. This crutch was reinforced by the fact that agriculture had never been collectivized, leaving a farmer population with a significant social role.

The economy was pulled out of the initial contractionary effects of shock therapy in 1991 by fiscal stimulus, devaluation, and a strong export response. Moreover, "liberalization" during 1992-95 was incomplete. Imports were controlled through tariffs and other means, exports were (clandestinely and selectively) promoted by subsidies. Real appreciation was avoided via a managed nominal exchange rate and partially controlled capital movements. Real interest rates were moderate. In contrast to Russia, investment went up, pulling the economy out of its initial post-shock recession. Higher economic activity meant that public sector deficits could decline without reductions in spending.

After 1995, the story was different. Policy shifted toward steady liberalization of imports along with strongly reduced levels of support for exports. Less controlled capital inflows failed to bring down domestic interest rates. The still shallow forex market was given a bigger role in setting the exchange rate. Unsurprisingly there has been strong real appreciation, Growth slowed, and recently may have crossed the threshold of contraction. Unemployment has risen, foreign debt has accumulated. A "supply-side" fiscal policy misfired, resulting in big public deficits. Financial crisis may lurk in the wings.

The effective demand configuration also reversed around the transition year 1995. The government's demand contribution G/t has consistently exceeded the supply level X , falling until 1996 and increasing thereafter. The financial counterpart shifted from monetization to borrowing from the private sector, with the interest burden now running at 3% of GDP. In the latter part of the 1990s the trade surplus evaporated due to rising imports, and the private sector became a net

debtor to the rest of the world and lender to the government. Post-1995, GDP growth slowed by a percentage point on average.

Overall income inequality did not increase in the pre-1995 "illiberal" period, and rose significantly thereafter. Farmers' incomes rose before 1995, but confronted with import competition from Western Europe, they became the main losers thereafter in both relative and absolute terms. Retirees and the unemployed also suffered. Generally, the overall position of wage-earners improved but wage inequality increased strongly in the post-1995 "liberal" period. Employers and self-employed fared well in both periods, but certainly better under liberalization. In the late 1990s there has been a visible increase in poverty, largely due to rising unemployment.

There has been positive productivity growth, the consequence of high capital formation in previous years and the overall evolution of ownership structure, management practices, etc. So falling employment (and strongly rising unemployment) in recent years reflects an overall slow-down in effective demand. The fundamental causes include reduced protection against imports and less support to exports. Indirectly, the expansion of trade and current account deficits prompted macro policy adjustments (both fiscal and monetary) which magnified the tendency for domestic demand to slow.

Labor productivity rose faster during the "illiberal" years 1992-1995 than the "liberal" years 1995-1999, for both tradables and non-tradables. The differential widened in the "liberal" period. The share of tradable sector in employment did not change much in the first period and declined significantly in the second. Low-skill employment in the non-tradable sector rose after 1995. While it is difficult to single out any clear productivity leader, in both periods agriculture was certainly the lagging sector. The foreign-owned sector - which has exhibited impressive rates of growth of output and employment - appears to have been a productivity laggard. Reallocation of labor from the domestic to foreign-owned corporations has reduced the overall productivity gain.

Hungary's liberalization during the 1990s concentrated on the current account. Adverse impacts of large capital inflows were mitigated by sterilization and partial, gradual deregulation of the capital account. The country escaped the kind of “big bang” experienced by Poland and Russia. The mode of external liberalization, as well as the implementation of institutional changes in Hungary in the early years of the transition, may best be characterized as “shock therapy in slow motion”, followed by the actual shock therapy of a stabilization package in 1995. As elsewhere, the outcomes of liberalization were deeply intertwined with both the accompanying economic policies and exogenous shocks at the time.

Hungary opened up its formerly strictly controlled trade system in 1989 without any temporary protection whatsoever, and combined the liberalization of imports with significant real appreciation. With the aim of “establishing a full-scale market economy” as soon as possible, abrupt changes in the institutional and legal framework surrounding companies were implemented. They included the introduction of strict legislation on bankruptcy procedures, driving potentially viable companies out of business. (The ones most affected, due to the real appreciation, were those operating in the traded-goods sector.)

In practice, liberalization turned out to be an economic time bomb, which exploded in 1993. Its adverse effects on the trade balance were concealed because the Hungarian economy suffered a deep (“transformational”) recession between 1990 and 1992. In 1993, as the recession began to subside, the trade balance and the current account deteriorated very sharply.

Demand decomposition exercises reveal that the fall in output had a close relationship with the fall in exports due to the collapse of trade with East-European partners, with whom Hungary had a special trading framework. The jump in the external deficit in 1993-1994 had to do with deterioration of the fiscal position and an increase in private investment. But the mode of external liberalization – in particular, the associated real appreciation – had an important role in the expansion of the external gap.

By 1994, the deterioration of the current account reached such proportions that a correction became inevitable. The stabilization package of 1995 involved trade and exchange

rate policy measures (import surcharge, devaluation, introduction of a crawling peg) that could have been introduced initially. Fiscal measures aimed at cutting social benefits had some minor influence in increasing income inequalities. However, the direct importance of these steps was negligible compared to a ten-point jump in the inflation rate, with a corresponding drop in real wages and social transfers. Employment in traded sectors fell by 10%, and wage differentials widened.

In the partly deregulated capital account, FDI increased (with gross flows possibly amounting to 7-8% of a \$50 billion GDP in the late 1990s) and apparently fed into higher gross domestic capital formation. Potential negative effects on monetary developments, the exchange rate, and the external balance were more-or-less avoided by maintaining a crawling peg with a narrow ($\pm 2.25\%$) band, sterilization of excessive inflows and, in particular, by refraining from the full-scale liberalization of the capital account (the latter explains why sterilization could be effective).

While there were benefits from FDI-inflows – growth in investments, exports and GDP – disturbing inequalities and strains also emerged within Hungary. The emergence of excessive regional and sectoral disparities has been closely related to the presence (extent) of foreign capital. While the central and western part of Hungary which received large FDI-inflows has been prospering since 1996, counties in the northeast – only recently penetrated by FDI – have been characterized by high unemployment, slow growth, or recession. By 1999-2000, however, the sharp divergence in regional performances had started to subside.

Also by 1999, real GDP had returned to its level of the late 1980s, with consumption a bit over 60% of GDP (unchanged from its earlier share), investment at 26% (up from 16%) and government spending at 14% (down from 18%). The economy is quite open, with import and export GDP shares in 2000 of 65.6% and 61.6% respectively.

Between 1992 and 2000, traded goods output grew by 5.3% per year, and non-traded by 2.2%. During the same period, employment in traded goods fell at a 3.3% rate, and grew at 0.8% in non-traded. Labor productivity nearly doubled in traded goods over the period, but increased

by only 12% in non-traded. The traded goods employment/population ratio fell by 25% in 1992-95, and then gradually rose by about 5% (in part due to a population decrease of 2%, 1992-98). In non-traded goods, the ratio grew by 35% over 1992-98. This increase made up for about one-third of the employment loss in the traded goods sector.

During the 1970s and 1980s, the ratio between income levels of the highest and lowest deciles of the population was around four or five. It reached a level of 5.8 in 1988, 7.1 in 1992, and 7.5 in 2000. The Gini coefficient is now around 0.33. Entrepreneurship and level of education are the most evident determinants of inequality. Around 10% of the population is below the national poverty line, concentrated among households headed by a single person, elderly females, and the Gypsy-Roma population.

On a final note, macro policy in 2001 switched toward reducing a 10% annual inflation rate using the currently popular set of tools – exchange rate appreciation and fully opening the capital account. The liberalization measures are in line with recommendations/requirements made by the EU (as well international financial institutions), and, in the optimistic case, they may contribute to the convergence of Hungary's inflation to that of the euro-region. However, it is by no means clear whether it will also support the country's real convergence – maintaining its relatively high growth rate – as well. As noted above, exchange rate based stabilizations carry their own perils.

Summary and Conclusions

To be written

References

Appendix I: Country Authors and Paper Titles

Matias Vernengo

Belindia Goes To Washington: The Brazilian Economy after the Reforms

Li Shantong

External liberalization, Growth and Distribution in China

Gábor Oblath

Opening up the Hungarian Economy: Conditions and Consequences of Liberalizing Trade and Capital Flows in Hungary

J. Mohan Rao and Amitava Krishna Dutt

A Decade of Reforms: The Indian Economy in the 1990s

Iwan J. Azis

Indonesia's External Liberalization: Policy Dynamics and Socio-Economic Impacts

Jomo K. S. and Tan Eu Chye

External Liberalization, Economic Performance and Distribution in Malaysia

Joseph Y. Lim and Carlos C. Bautista

External Liberalization, Growth and Distribution in the Philippines

Leon Podkaminer

External Liberalization, Growth and Distribution: The Polish Experience

Alexander Vorobyov and Stanislav Zhukov

The Russian Way of Adjustment: Mechanisms of Economic Growth 1999–2001; Patterns of Poverty and Income Distribution

Mun-Heng Toh

External Liberalization and Economic Growth: The Case of Singapore

Jong-Il You

Capital Liberalization, Economic Crisis and Social Policy in South Korea

Bhanupong Nidhiprabha

Distribution and Macroeconomic Impacts of Liberalization in Thailand

Korkut Boratav and Erinc Yeldan

Turkey, 1980-2000: Financial Liberalization, Macroeconomic (In-)stability, and Patterns of Distribution

Le Anh Tu Packard

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

Appendix II: Productivity and Demand Decompositions

Because macro data are available for discrete periods of time (typically years), the analysis is set up with variables for period beginning at time t indicated by a subscript. For simplicity equations are stated with t taking only the values 0 and 1 corresponding to the beginning and end of a period respectively.

To begin with a productivity decomposition, suppose that one has data on employment and output for several sectors over time. Let $\theta_0^i = X_0^i / X_0$ be the share of sector i in real output in period zero, with $\sum_i X_0^i = X_0$. Similarly for employment: $\lambda_0^i = L_0^i / L_0$ with $\sum_i L_0^i = L_0$. The level of labor productivity in sector i is X_0^i / L_0^i with a growth rate of

$$\varepsilon_L^i = (1 + \hat{L}^i)^{-1} (\hat{X}^i - \hat{L}^i) \approx \hat{X}^i - \hat{L}^i,$$

in which the term $(1 + \hat{L}^i)^{-1}$ captures "interaction" effects on growth rates arising from their calculation in discrete time.

After a bit of manipulation, an exact expression for the rate of growth of economy-wide labor productivity emerges as

$$\varepsilon_L = (1 + \hat{L})^{-1} \sum_i [\theta_0^i (\hat{X}^i - \hat{L}^i) + (\theta_0^i - \lambda_0^i) \hat{L}^i] \quad (1)$$

Aside from the interaction term $(1 + \hat{L})^{-1}$, ε_L decomposes into two parts. One is a weighted average $\sum_i \theta_0^i (\hat{X}^i - \hat{L}^i)$ of sectoral rates of productivity growth as conventionally measured. The weights are the output shares θ_0^i . The other term, $\sum_i (\theta_0^i - \lambda_0^i) \hat{L}^i$, captures "reallocation effects" (Syrquin, 1986). A sector with relatively high labor productivity will have a higher share of output than of the labor force, $\theta_0^i > \lambda_0^i$, so that if its employment growth is positive, $\hat{L}^i > 0$, reallocation of labor toward the sector generates a positive contribution to labor productivity growth economy-wide.

Another expression for ε_L emerges after some manipulation of (1),

$$\varepsilon_L = (1 + \hat{L})^{-1} \sum_I [\lambda_0^i (\hat{X}^i - \hat{L}^i) + (\theta_0^i - \lambda_0^i) \hat{X}^i] \quad . \quad (2)$$

In (2), sectoral productivity growth rates are weighted by employment shares, and the reallocation effect is stated in terms of output growth rates. The message is basically the same as in (1).

Growth rates of employment are driven by changes in productivity and demand. The relevant decomposition (expressed in terms of continuous time for simplicity) appears in the text.

The decomposition procedure for effective demand draws on Godley (1999).

At the one-sector level (ignoring intermediate outputs and sales along with the distinction between wage and profit income flows), the aggregate supply of goods and services available for domestic use (X) can be defined as the sum of total private income (Y_P), net taxes (T) and “imports” or (for present purposes) all outgoing payments on current account (M):

$$X = Y_P + T + M \quad . \quad (3)$$

In NIPA categories, we have $GDP = Y_P + T = X - M$ so the accounting in (10) is non-standard insofar as X exceeds GDP. The aggregate supply and demand balance can be written as:

$$X = C_P + I_P + G + E \quad (4)$$

i.e., the sum of private consumption, private investment, government spending (on both current and capital account) and “exports” or incoming foreign payments on current account. It is convenient to define leakage parameters relative to aggregate supply, yielding the private savings rate as $s_P = (Y_P - C_P) / X$, the import propensity as $m = M/X$, and the tax rate as $t = T/X$.

From all this one gets a typical Keynesian income multiplier function

$$X = (I_P + G + E) / (s_P + t + m) \quad (5)$$

which can also be written as

$$X = (s_P / \lambda)(I_P / s_P) + (t / \lambda)(G / t) + (m / \lambda)(E / m) \quad (6)$$

in which $\lambda = s_P + t + m$ is the sum of the leakage parameters, and I_P / s_P , G/t , and E/m can be interpreted as the direct “own” multiplier effects on output of private investment, government spending, and export injections with their overall impact scaled by the corresponding leakage

rates (respectively, savings, tax, and import propensities). That is, aggregate supply is equal to a weighted average of contributions to demand from the private sector, government, and the rest of the world. If two of these contributions were zero, then output would be equal to the third.

Another representation involves the levels of $I_p - s_p X$, $G - tX$, and $E - mX$ which from (6) must sum to zero. Moreover, the economy's real financial balance can be written as

$$\dot{D} + \dot{Z} + \dot{A} = (I_p - s_p X) + (G - tX) + (E - mX) = 0 \quad (7)$$

where $\dot{D} (= dD/dt)$, \dot{Z} , and \dot{A} stand respectively for the net change per unit time in financial claims against the private sector, in government debt, and in foreign assets.

Equation (7) shows how claims against an institutional entity (the private sector, government, or rest of the world) must grow when its demand contribution to X exceeds X itself. So when $E < mX$, net foreign assets of the home economy are declining, while $G > tX$ means that its government is running up debt. A contractionary demand contribution from the rest of the world requires some other sector to be increasing liabilities or lowering assets, e.g. the public sector when $G > tX$. Because from (7) it is true that $\dot{D} + \dot{Z} + \dot{A} = 0$, such offsetting effects are unavoidable.

Appendix III – Summaries of Country Results

KEY

++	Strong increase
+	Increase
+/0	Slight increase
--	Strong decrease
-	Decrease
0/-	Slight decrease
+/-/+	Fluctuating trend
+/-	Up then down
-/+	Down then up
0	No change
n.a.	Not available
<u>no data</u>	<u>No data in paper</u>

BRAZIL	Transition	Liberalization	Post Real Plan
Growth, Employment and Inequality	1981–1989	1991–1994	1995–2000
Growth rate	3.3%	0.8%	2.6%
Real exchange rate (+ = real app.)	-/+	-/+	+/-
Employment rate (+ = fall in unemp.)	-/+	-	-
Wage share in GDP	--	+/0	--
Real Wages	--	+/0	0/-
<i>Income Inequality</i>			
Per capita household income	-	-	0
Primary incomes (labor force)	-	-	-
Skilled/Unskilled	-/+	++	++
Formal/Informal	-/+	++	++
<i>Employment Structure</i>			
Traded/Non-traded	-	--	-
Skilled/Unskilled	+	++	++
Formal/Informal	-	--	--
Aggregate Demand Decomposition	1981–1989	1991–1994	1995–2000
Aggregate Demand	--	-/+	-
<i>Direct Multiplier Effects</i>			
Investment/Savings	--	-/+	+
Exports/Imports	++	--	-/+
<i>Effect of Leakages on Demand</i>			
Savings	--	-/+	+
Taxes		-	+
Imports	--	+	+
Productivity and Employment	1981–1989	1991–1994	1995–1998
<i>Productivity Growth¹</i>	0.6%	1.0%	2.6%
Overall Growth in Employment	13.9% ²	-8.0%	-3.0%
Emp. Sector reallocation effects	n.a.	n.a.	n.a.
<i>Labour Supply Changes</i>			
Participation Rate Growth	0.21%	0.18%	0.11%
Unemployment Rate	5.4%	5.0%	6.5%
Macroeconomic variables	1981–1989	1991–1994	1995–2000
Trade deficit	-/+	+	++
Domestic credit	+	--	-/+
Changes in reserves	-	++	+/-
Real Interest Rate	+/-	+/-	++/-
Interest Rate Spreads	+	+/-	++
Imports/GDP	--	++	-
Exports/GDP	+	-	-/+
Imposition of export incentives	+	-	+

CHINA	Starting Up	Adjustment	Acceleration	Post-Crisis
Growth, Employment and Inequality	1979-1987	1988-1991	1992-1997	1998-2001
Growth rate	9.9%	7.2%	11.2%	7.8%
Real exchange rate (+ = real app.)	--	+/-	+/-/+	0/-
Employment rate (+ = fall in unemp.)	n.a.	n.a.	n.a.	n.a.
Wage share in GDP	-/+/-	0	0/-	+/0
Real Wages	-/+/-	+/0	++/0	0/+
<i>Income Inequality</i>				
Per capita household income	++	+/-	+	+
Primary incomes (labor force)	n.a.	n.a.	n.a.	n.a.
Skilled/Unskilled	n.a.	n.a.	n.a.	n.a.
Urban/Rural	--	0	+/-	+
<i>Employment Structure</i>				
Traded/Non-traded	+		+/0	-
Skilled/Unskilled	n.a.	n.a.	n.a.	n.a.
Aggregate Demand Decomposition	1982-1987	1988-1991	1992-1997	1998-1999
Aggregate Demand	11.97%	7.04%	11.54%	7.48%
<i>Direct Multiplier Effects</i>				
Investment/Savings	+/-	-	+/-	0
Govt/Tax	0	+	+/-	+
Exports/Imports	-/+	+	-/+	-
<i>Effect of Leakages on Demand</i>				
Savings	-/+	+	+/0	-
Taxes	+/-	-	-/0	+
Imports	+/0	0/+	+/-	0
Productivity and Employment	1979-1991	1987-1991	1992-1997	1998-2001
<i>Productivity Growth</i>				
Overall	6.63%	1.69%	10.21%	6.86%
Agriculture	4.60%	1.30%	5.46%	2.64%
Industry	5.27%	7.69%	14.76%	16.15%
Construction	0.75%	1.29%	6.54%	5.44%
Service	4.97%	3.26%	2.61%	6.26%
Overall Growth in Employment	3.09%	2.54%	1.20%	0.74%
Traded	1.96%	2.28%	-0.42%	-1.22%
Non-traded	8.25%	3.42%	6.64%	1.46%
Emp. Sector reallocation effects	n.a.	n.a.	n.a.	n.a.
<i>Labour Supply Changes</i>				
Participation Rate	n.a.	n.a.	n.a.	n.a.
Unemployment Rate	n.a.	n.a.	n.a.	n.a.
Employment Rate	n.a.	n.a.	n.a.	n.a.
Macroeconomic variables	1990-1992	1993-1994	1995-1996	1997-1998
Trade deficit	+	--	--	-
Changes in reserves	+/-/+	+	++	+
Real Interest Rate	n.a.	n.a.	n.a.	n.a.
Interest Rate Spreads	n.a.	n.a.	n.a.	n.a.
Imports/GDP	+	+	+/0	+
Exports/GDP	+	+	+	+

HUNGARY

Growth, Employment and Inequality	1990–1992	1993–1994	1995–1996	1997–1998
Growth rate	-6.3%	1.1%	1.4%	4.7%
Real exchange rate (+ = real app.)	++	0/-	--	-
Employment rate (+ = fall in unemp.)	--	--	0/+	+
Wage share in GDP	++	+	--	-
Real Wages	-4.7%	1.5%	-8.7%	4.2%
<i>Income Inequality</i>				
Per capita household income	-2.3%	-1.1%	-2.7%	2.2%
Skilled/Unskilled		+	+	0
<i>Employment Structure</i>				
Traded/Non-traded	77.5%	65.3%	61.9%	63.2%
Skilled/Unskilled	83.0%	85.5%	91.2%	94.0%
Aggregate Demand Decomposition	1990–1992	1993–1994	1995–1996	1997–1998
Aggregate Demand	-4.7%	2.0%	3.3%	7.0%
<i>Direct Multiplier Effects</i>				
Investment/Savings	--	++	-	++
Govt/Tax	+	++	-	+
Exports/Imports	-	--	+	0
<i>Effect of Leakages on Demand</i>				
Savings	-	-/+	+/0	0
Taxes	-	+/-	+	-
Imports	0/-	+	0	++
Productivity and Employment	1990–1992	1993–1994	1995–1996	1997–1998
<i>Productivity Growth</i>				
Overall	2.1%	6.8%	2.8%	4.0%
Traded	n.a.	13.5%	8.3%	6.1%
Non-traded	n.a.	2.8%	0.1%	2.9%
Overall Growth in Employment	-8.3%	-4.2%	-1.4%	0.6%
Emp. Sector reallocation effects	n.a.	small	none	small
<i>Labour Supply Changes</i>				
Participation Rate	58.6%	55.0%	52.1%	51.5%
Unemployment Rate	6.0%	11.3%	10.1%	8.3%
Employment Rate	47.7%	38.8%	36.9%	36.8%
Macroeconomic variables	1990–1992	1993–1994	1995–1996	1997–1998
Trade deficit	0/-	++	--	+
Domestic credit	--	-	-/+	+
Reserves	+	+	++	+
Real Interest Rate	++	-/+	+	0
Interest Rate Spreads				
Imports/GDP	+	++	-	++
Exports/GDP	+	-	++	++

INDIA	Pre-reform	Post-Reform
Growth, Employment and Inequality	1981–1991	1991–1999
Growth rate	5.9%	7.0% ³
Real exchange rate (+ = real app.)	-/-	-/+/0
Employment rate (+ = fall in unemp.)	+	0/+
Wage share in GDP	-	-
Real Wages	+	+/0
<i>Income Inequality</i>		
Per capita household income	+	+
Primary incomes (labor force)	+	+
Skilled/Unskilled	+	+
Urban/Rural	-	+
Formal/Informal	+	+
<i>Employment Structure</i>		
Traded/Non-traded	-	-
Skilled/Unskilled	+	n.a.
Formal/Informal	0	--
Aggregate Demand Decomposition	1981–1991	1992–1999
Aggregate Demand	no data	no data
<i>Direct Multiplier Effects</i>		
Investment/Savings	0/-	-/+/-
Govt/Tax	++	++
Exports/Imports	--/-	--
<i>Effect of Leakages on Demand</i>		
Savings	+/0	+/-/+
Taxes	+	-
Imports	0/-	--/0
Productivity and Employment	1981–1991	1992–1999
<i>Productivity Growth</i>		
Overall ⁴	3.3%	2.8%
Traded ⁵	n.a.	4.8%
Non-traded ⁶	n.a.	5.6%
Overall Growth in Employment	2.0%	0.8%
Emp. Sector reallocation effects	none	0.5%
<i>Labour Supply Changes</i>		
Participation Rate	+	+
Unemployment Rate	-	+
Employment Rate	-	0/+
Macroeconomic variables	1981–1991	1992–1999
Trade deficit	-	++
Domestic credit	0	+
Changes in reserves	-	++
Real Interest Rate	0/-	++/-/+
Interest Rate Spreads	0	+/-
Imports/GDP	0/+	++/0
Exports/GDP	0/+	+/0
Imposition of export incentives	+/0	-

INDONESIA

Growth, Employment and Inequality	1983–1986	1987–1996	1997–1999
Growth rate	6.2%	8.0%	-6.6%
Real exchange rate (+ = real app.)	-	+	--
Employment rate (+ = fall in unemp.)	-/0	-/0	0
Wage share in GDP	+	+	+
Real Wages	+/0	+/0	--
<i>Income Inequality</i>			
Gross Domestic Income per capita	+	+	-
% change primary incomes, wage	+/0	++	-
Tradeables/Non-tradeables			
Employment	+/-	+	-
Wage	+	-	+
Skilled/Unskilled (wage)	-	+	-
Urban/Rural (wage)	+	+	-
Aggregate Demand Decomposition	1983–1986	1987–1996	1997–1999
Aggregate Demand	4.5%	8.4%	-11.1%
<i>Direct Multiplier Effects</i>			
Investment/Savings	-	-/+	--
Govt/Tax	++	+/-	--
Exports/Imports	-	+	-
<i>Effect of Leakages on Demand</i>			
Savings	+	0/+	+
Taxes	0	+	+/-
Imports	-	0/+	+/-
Productivity and Employment	1983–1986	1987–1996	1997–1999
<i>Productivity Growth</i>			
Overall	8.4%	5.7%	-4.1%
Traded	n.a.	5.2% ⁷	-1.1%
Non-traded	n.a.	5.3% ⁸	-7.3%
Overall Growth in Employment	-2.7%	2.2%	1.0%
<i>Labour Supply Changes</i>			
Participation Rate	+/0	+/0	+
Unemployment Rate	+	+/-	+/-
Employment Rate	+	+/-	+/-
Macroeconomic variables	1983–1986	1987–1996	1997–1999
Trade deficit	-/+	-/+	--
% change	-	+/-	++
Domestic credit	+	++	+/-
Changes in reserves (- = increase)	-/+	--	++
Real Interest Rate	+	-	++/-
Interest Rate Spreads	+/-	-/+	+
Imports/GDP	-	-/+	+/-
Exports/GDP	0	+	+/-
Imposition of Exports Incentives	+/0	++	+

MALAYSIA

Growth, Employment and Inequality	1971–1987	1988–1999
Growth rate	6.8%	7.6%
Real exchange rate (+ = real app.)	+	
Employment rate (+ = fall in unemp.)	-	-
Wage share in GDP	no data	no data
Real Wages		
<i>Income Inequality</i>		
Per capita household income	+/-	+/--
Primary incomes (labor force)	no data	no data
Skilled/Unskilled	n.a.	+ ⁹
Urban/Rural	- ¹⁰	0/- ¹¹
Formal/Informal	n.a.	n.a.
<i>Employment Structure</i>		
Traded/Non-traded	no data	no data
Skilled/Unskilled	no data	no data
Aggregate Demand Decomposition	1971–1987	1988–1999
Aggregate Demand	no data	no data
<i>Direct Multiplier Effects</i>		
Investment/Savings	-	-/--
Govt/Tax	0/+	+
Exports/Imports	+/-/+	+/0/++
<i>Effect of Leakages on Demand</i>		
Savings	0	+/0
Taxes	0	+
Imports	0/-	--/-
Productivity and Employment	1971–1987	1988–1999
<i>Productivity Growth</i>		
Overall	+	+
Traded	+	+
Non-traded	+	+
Overall Growth in Employment	+	+
Emp. Sector reallocation effects	n.a.	n.a.
<i>Labour Supply Changes</i>		
Participation Rate	+	+
Unemployment Rate	-/+	--/+
Employment Rate	+	+/-
Macroeconomic variables	1971–1987	1988–1999
Trade deficit	-	+/-
Domestic credit	n.a.	n.a.
Changes in reserves	+/-	+/--
Real Interest Rate	n.a.	n.a.
Interest Rate Spreads	n.a.	n.a.
Imports/GDP	0/+	++/+
Exports/GDP	no data	no data
Imposition of export incentives	n.a.	n.a.

PHILIPPINES

Growth, Employment and Inequality	1980–1985	1985–1993	1993–1997	1997–2000
Growth rate	-1.1%	3.2%	5.0%	3.0%
Real exchange rate (+ = real app.)	--/0	0/+	++	--/0
Employment rate (+ = fall in unemp.)	--	++/-/0	+	--
Wage share in GDP	-	+/0	0/+	0
Real Wages	-	+/-	-	-
<i>Income Inequality</i>				
Per capita household income	+	-/+	-/+	+
Primary incomes (labor force)	n.a.	n.a.	n.a.	n.a.
Skilled/Unskilled	n.a.	n.a.	n.a.	n.a.
Urban/Rural	n.a.	n.a.	n.a.	n.a.
<i>Employment Structure</i>				
Traded/Non-traded	n.a.	-	-	-
Skilled/Unskilled	n.a.	+	+	+
Urban/Rural	+	+	+	+
Aggregate Demand Decomposition	1980–1985	1985–1993	1993–1997	1997–2000
Aggregate Demand	-1.4%	5.0%	9.0%	1.0%
<i>Direct Multiplier Effects</i>				
Investment/Savings	-	++	+	-
Govt/Tax	--	+/-	+	0
Exports/Imports	-/+/-	+/0	+	0/-
<i>Effect of Leakages on Demand</i>				
Savings	+/0	+	0/-	0
Taxes	0	0	+/0	+/0
Imports	-/+	-	--	+
Productivity and Employment	1980–1985	1985–1993¹²	1993–1997	1997–2000
<i>Productivity Growth</i>				
Overall	n.a.	+/-	+	-/+
Traded	n.a.	+/-	+	-/+
Non-traded	n.a.	+/-	-	0/+
Overall Growth in Employment	n.a.	2.75% ¹³	3.7%	1.1%
Emp. Sector reallocation effects	n.a.	to svcs, agric.	to services	to services
<i>Labour Supply Changes</i>				
Participation Rate	n.a.	0/-	+/0	0
Unemployment Rate	++	--/+	--	++
Employment Rate	--	++/-	++	--
Macroeconomic variables	1980–1985	1985–1993	1993–1997	1997–2000
Trade deficit	+/-	-/++	++	--
Domestic credit	+/-	++	+	+/-
Changes in reserves	--/++	++/-/+	+	-/++
Real Interest Rate	++	--/+/-	-	+/-
Interest Rate Spreads	+	0/-/+/-	+/-/+	+/-
Imports/GDP	--	++	++	--
Exports/GDP	+/-/+/-	++	++	--
<i>Imposition of export incentives</i>				

POLAND

Growth, Employment and Inequality	1992–1995	1995–2000
Growth rate	5.3%	5.1%
Real exchange rate (+ = real app.)	+	++
Employment rate (+ = fall in unemp.)	-	++/--
Wage share in GDP	-	+
Real Wages	0.0%	6.2%
<i>Income Inequality</i>		
Per capita household income	3.2%	4.7%
Primary incomes (labor force)	2.9%	3.8%
Skilled/Unskilled	0	0
Urban/Rural	-	++
Formal/Informal	n.a.	n.a.
<i>Employment Structure</i>		
Traded/Non-traded	-	--
Skilled/Unskilled	0	+
Urban/Rural	0	0
Formal/Informal	n.a.	n.a.
Aggregate Demand Decomposition		
	1991–1995	1995–2000
Aggregate Demand	7.2%	7.7%
<i>Direct Multiplier Effects</i>		
Investment/Savings	0	++
Govt/Tax	0	-
Exports/Imports	0	--
<i>Effect of Leakages on Demand</i>		
Savings	0	-
Taxes	0	-
Imports	+	++
Productivity and Employment		
	1992–1995	1995–1999
<i>Productivity Growth</i>		
Overall	4.9%	3.4%
Traded	9.0%	6.5%
Non-traded	2.2%	1.0%
Overall Growth in Employment	0.0%	1.4%
<i>Labour Supply Changes</i>		
Participation Rate	-	-
Unemployment Rate	0	-/++
Employment Rate	-	++/--
Macroeconomic variables		
	1992–1995	1995–2000
Trade deficit	-	++
Domestic credit	+	+
Changes in reserves	0	++
Real Interest Rate	-/+	++
Interest Rate Spreads	0	0
Imports/GDP	0	++
Exports/GDP	0	+
Imposition of export incentives	+	--

RUSSIA	Post-Gaidar	Crisis	Recovery
Growth, Employment and Inequality	1994–1997	1998	1999–2001
Growth rate	-4.8%	-4.6%	6.5%
Real exchange rate (+ = real app.)	++	--	++
Employment rate (+ = fall in unemp.)	--	-	+
Wage share in GDP	-	0	--/0
Real Wages	-/++	-	--/+
<i>Income Inequality</i>			
Per capita household income	0/+	--	-/+ ¹⁴
Primary incomes (labor force)	no data	no data	no data
Skilled/Unskilled	no data	no data	no data
State/Private&mixed	++	0	+
<i>Employment Structure</i>			
Traded/Non-traded	no data	no data	no data
Skilled/Unskilled	no data	no data	no data
State/Private&mixed	no data	no data	no data
Aggregate Demand Decomposition	1994–1997	1998	1999–2001
Aggregate Demand	no data	no data	no data
<i>Direct Multiplier Effects</i>			
Investment/Savings	--/	--	--
Govt/Tax	++/+	0	--/0
Exports/Imports	+	+	++
<i>Effect of Leakages on Demand</i>			
Savings	+	+	-
Taxes	-	0	-/+
Imports	0	0	-
Productivity and Employment	1994–1997	1998	1999–2001
<i>Productivity Growth</i>			
Overall	no data	no data	no data
Traded	no data	no data	no data
Non-traded	no data	no data	no data
Overall Growth in Employment	no data	no data	no data
Emp. Sector reallocation effects	no data	no data	no data
<i>Labour Supply Changes</i>			
Participation Rate	no data	no data	no data
Unemployment Rate	9.1%	11.9%	10.2%
Employment Rate	--	-	+
Macroeconomic variables	1994–1997	1998	1999–2001
Trade Balance	-	+/0	++
Domestic credit	n.a.	+	-/0
Changes in reserves	0/-	-	++
Real Interest Rate	no data	no data	no data
Interest Rate Spreads	no data	no data	no data
Imports/GDP	-	--	--/+
Exports/GDP	--	--	++
<i>Imposition of export incentives</i>			

SINGAPORE	Inward looking	Outward looking	Restructuring	Post-recess.
Growth, Employment and Inequality	1960–1965	1966–1978	1979–1985	1986–2000
Growth rate (by decade, annual aver.)	5.7%	10.5%	7.2%	8.0%
Real exchange rate (+ = real app.)	n.a.	n.a.	+	-/+
Employment rate (+ = fall in unemp.)	0/-	+	+	-
Wage share in GDP	n.a.	+/0	++	-/+
Real Wages	0	+	++	-/+
<i>Income Inequality</i>				
Personal income (Gini coeff.)		-	+	+
Primary incomes (labor force)	n.a.	n.a.	n.a.	n.a.
Skilled/Unskilled	n.a.	n.a.	n.a.	n.a.
Formal/Informal	n.a.	n.a.	n.a.	n.a.
<i>Employment Structure</i>				
Traded/Non-traded	n.a.	+	-/+	-
Skilled/Unskilled	n.a.	n.a.	n.a.	n.a.
Formal/Informal	n.a.	n.a.	n.a.	n.a.
Aggregate Demand Decomposition	1960–1965	1966–1978	1979–1985	1986–2000
Aggregate Demand	5.7%	10.5%	7.2%	8.0%
<i>Direct Multiplier Effects</i>				
Investment/Savings	0	+/-	0/-	0/-
Govt/Tax	+	0/-	-/+	--
Exports/Imports	-	++	+/-	++
<i>Effect of Leakages on Demand</i>				
Savings	--	+/0	+/-	-/+/-
Taxes	+	0	+	+
Imports	+	0/-	-/+	0
Productivity and Employment		1973–1975	1976–1985	1986–2000
<i>Productivity Growth</i>				
Overall ¹⁵		3.5%	3.1%	4.3%
Traded (contribution to overall)		0.8%	0.8%	2.1%
Non-traded (contribution to overall)		1.6%	1.7%	2.2%
Overall Growth in Employment ¹⁶		1.0%	0.6%	0.0%
Emp. Sector reallocation effects ¹⁷		4.2%	4.0%	3.6%
<i>Labour Supply Decomposition¹⁸</i>				
Participation Rate		0.94%	1.28%	1.02%
Unemployment Rate		-0.10%	0.04%	0.02%
Employment Rate		1.04%	1.24%	1.00%
Macroeconomic variables	1960–1965	1966–1978	1979–1985	1986–2000
Trade deficit	-	++/--	0/-	--
Domestic credit	n.a.	+	+	+
Changes in reserves	n.a.	+	+	+
Real Interest Rate	n.a.	-/+	+	-/+
Interest Rate Spreads	n.a.	-	+/-	+
Imports/GDP	-	+	+	+
Exports/GDP	-	+	+	+
Imposition of export incentives	+	+	+	+

SOUTH KOREA	Capital flows	Pre-crisis	Crisis	Aftermath
	1993–1996	1996–1997	1997–1998	1998–2000
Growth, Employment and Inequality				
Growth rate	7.4%	5.0%	-6.7%	10.1%
Real exchange rate (+ = real app.)	+/-	-	--	+
Employment rate (+ = fall in unemp.)	+/0	0/-	--	+
Wage share in GDP	-/+	+	--	+
Real Wages	+	+/0	--	+
<i>Income Inequality</i>				
Per capita household income	0	+	++	0/-
Primary incomes (labor force)			--	++
Skilled/Unskilled	0	0	++	-
Urban/Rural	n.a.	n.a.	n.a.	n.a.
<i>Employment Structure</i>				
Traded/Non-traded	+/0	-	--	++
Skilled/Unskilled	+	++	++	+
Urban/Rural	+	+	-	+
Permanent/Contingent	0/-	-	0/-	-
Aggregate Demand Decomposition	1993–1996	1996–1997	1997–1998	1998–2000
Aggregate Demand	++	+	--	++
<i>Direct Multiplier Effects</i>				
Investment/Savings	+	0	--	++
Govt/Tax	0	0	+	-
Exports/Imports	0/-	+	++	-
<i>Effect of Leakages on Demand</i>				
Savings	+	+	-	+
Taxes	+/0	0	++	+/-
Imports	-	-	0	--
Productivity and Employment	1993–1996	1996–1997	1997–1998	1998–2000
<i>Productivity Growth</i>				
Overall	no decomposition in paper			
Traded	no decomposition in paper			
Non-traded	no decomposition in paper			
Overall Growth in Employment	2.4%	1.4%	-5.6%	2.6%
Emp. Sector reallocation effects	no decomposition in paper			
<i>Labour Supply Changes</i>				
Participation Rate	+/0	+/0	-	0/-
Unemployment Rate	0	+/0	++	0/-
Employment Rate	+	+/0	--	+
Macroeconomic variables	1993–1996	1996–1997	1997–1998	1998–2000
Trade deficit	++	+	--	--
Domestic credit	++	+	--	+
Changes in reserves	++	--	--/+	++
Real Interest Rate	+	0	++/-	-
Interest Rate Spreads	+	0	++	-
Imports/GDP	+	+	-	+
Exports/GDP	+	+	++	-
<i>Imposition of export incentives</i>				

THAILAND	Trade Lib.	Financial Lib.	Crisis
Growth, Employment and Inequality	1981–1990	1991–1996	1997–2000
Growth rate	no data	no data	no data
Real exchange rate (+ = real app.)	-	0/+	--/0
Employment rate (+ = fall in unemp.)	-/+	+/0	--/+
Wage share in GDP	+/-	+	0
Real Wages	no data	no data	no data
<i>Income Inequality</i>			
Gini Index	+/-	0	0
Primary incomes (labor force)	no data	no data	no data
Urban/Rural	+	+/-	+
Formal/Informal	no data	no data	no data
<i>Employment Structure</i>	no data	no data	no data
Traded/Non-traded	n.a.	+	+
Urban/Rural	no data	no data	no data
Formal/Informal	+	+	0/-
Aggregate Demand Decomposition	1981–1990	1991–1996	1997–2000
Aggregate Demand	no data	no data	no data
<i>Direct Multiplier Effects</i>			
Investment/Savings	-/+	0/+	--/+
Govt/Tax	-/0	+	++
Exports/Imports	-	--	+/0
<i>Effect of Leakages on Demand</i>			
Savings	+	0	-
Taxes	+	0	-
Imports	0/++	+/-	++
Productivity and Employment	1981–1990	1991–1996	1997–2000
<i>Productivity Growth</i>			
Overall	-/+	0	--/+
Traded	0	0/+	--
Non-traded	0/+	-	--/+
Overall Growth in Employment	3.7%	0.7%	-0.2%
Emp. Sector reallocation effects	n.a.	n.a.	n.a.
<i>Labour Supply Changes</i>			
Participation Rate	n.a.	n.a.	n.a.
Unemployment Rate	+/-	0/+	++/-
Employment Rate	-/+	+/0	--/+
Macroeconomic variables	1981–1990	1991–1996	1997–2000
Trade deficit	0/+	++/-	--
Domestic credit	+	++	--
Changes in reserves	+	++	--
Real Interest Rate	+	++	--
Interest Rate Spreads	+	++	--
Imports/GDP	++	+	++
Exports/GDP	++	+	++
Imposition of export incentives	+	+	-

TURKEY	Export prom., Liberalization	Liberalization & Crisis	Flows & Contagion
Growth, Employment and Inequality	1980–1988	1989–1994	1995–2000
Growth rate (real GNP) ¹⁹	4.9%	4.0%	2.7% ²⁰
Real exchange rate (+ = real app.)	--	++/-	+
Employment rate (+ = fall in unemp.)	n.a.	n.a.	n.a.
Wage share in GDP	20.9%	30.2%	27.1%
Real Wages ²¹	-	++/--	0/-
<i>Income Inequality</i>			
Per capita household income	n.a.	n.a.	n.a.
Primary incomes (labor force)	n.a.	n.a.	n.a.
Skilled/Unskilled	+	+	+
Formal/Informal	+	+	+
<i>Employment Structure</i>			
Traded/Non-traded	+	-	-
Skilled/Unskilled	-	-	-
Urban/Rural	0/-	-	0/-
Formal/Informal	-	-	0
Aggregate Demand Decomposition	1980–1988	1989–1994	1995–2000
Aggregate Demand	5.40%	4.00%	6.60%
<i>Direct Multiplier Effects</i>			
Investment/Savings	-/+	0	+/-
Govt/Tax	+	+	++
Exports/Imports	+	-	-
<i>Effect of Leakages on Demand</i>			
Savings	+	+	0
Taxes	+	-/+	--
Imports	-	-	--
Productivity and Employment	1981–1988	1989–1993	1994–1997
<i>Productivity Growth</i> ²²			
Overall	11.6%	10.8%	0.7%
Traded	8.8%	11.7%	-2.0%
Non-traded	12.7%	8.5%	3.2%
Overall Growth in Employment	n.a.	n.a.	n.a.
Emp. Sector reallocation effects	small	small	small
<i>Labour Supply Changes</i>			
Participation Rate	54% ²³	55%	51%
Unemployment Rate	8.4% ²⁴	7.8%	8.0%
Macroeconomic variables	1980–1988	1989–1994	1995–2000
Trade deficit	-	-	-/+
Domestic credit	+	-	+
Changes in reserves	--	+	++
Real Interest Rate	-	++	++/-
Interest Rate Spreads	-	+	++
Imports/GDP	+	+	++
Exports/GDP	++	-/+	+/0
Imposition of export incentives	++	0	0

VIETNAM	Closed	Liberalization	Hesitancy	Fall in FDI
Growth, Employment and Inequality	1981–1988	1989–1993	1994–1997	1998–2000
Growth rate	5.6%	6.5%	9.0%	5.8%
Real exchange rate (+ = real app.)	+/-	++	-/0	0/-
Employment rate (+ = fall in unemp.)	+	+	+	+
Wage share in GDP	-/+	+	0	0
Real Wages	--/++	++	+	+ *
<i>Income Inequality</i>				
Per capita household income	n.a.	+	+	+
Primary incomes (labor force)	no data	no data	no data	no data
Skilled/Unskilled	0	+	+	+
Urban/Rural	0	+	+	+
<i>Employment Structure</i>				
Traded/Non-traded	n.a.	+	-	+
Urban/Rural	+/0	+	+	-
Aggregate Demand Decomposition	1986–1988	1989–1993	1994–1997	1998–2000
Aggregate Demand	no data	no data	no data	no data
<i>Direct Multiplier Effects</i>				
Investment/Savings	+	--/+	0	0
Govt/Tax	0	--	--	-
Exports/Imports	+/-	++	+	+/0
<i>Effect of Leakages on Demand</i>				
Savings	--	-	0	-
Taxes	++	0	+	+
Imports	-	+	-	+
Productivity Growth	1981–1988	1989–1993	1994–1997	1998–2000
Overall	2.3%	3.3%	5.9%	3.7%
Agriculture	n.a.	-1.3% **	-1.2%	-0.3%
Industry	n.a.	0.2% **	0.2%	0.4%
Construction	n.a.	0.0% **	0.2%	0.0%
Services	n.a.	0.5% **	1.4%	0.5%
Employment	1981–1988	1989–1993	1994–1997	1998–2000
Overall Growth in Employment	3.3%	3.2%	3.1%	2.1%
Emp. Sector reallocation effects	n.a.	-0.6%	0.6%	0.6%
<i>Labour Supply Changes</i>				
Participation Rate	no data	no data	no data	no data
Unemployment Rate	no data	no data	no data	no data
Employment Rate	+	+	+	+
Macroeconomic variables	1981–1988	1989–1993	1994–1997	1998–2000
Trade deficit	++	-	+	--
Domestic credit	+	++	0/-	++
Changes in reserves	no data	no data	no data	no data
Real Interest Rate	n.a.	+	n.a.	n.a.
Interest Rate Spreads	no data	no data	no data	no data
Imports/GDP	+	-	++	--
Exports/GDP	++	++	+	--
Imposition of export incentives		+		

NOTES

¹ Manufacturing sector only

² 1985–1989

³ Excluding crisis year 1991. If 1991 is included, then the figure is 6.1%

⁴ Total factor productivity growth

⁵ Labour productivity growth 1993–2000

⁶ Labour productivity growth 1993–2000

⁷ 1988–1996

⁸ 1988–1996

⁹ 1994–1996

¹⁰ 1970–1987

¹¹ 1989–1997

¹² 1988–1993

¹³ 1989–1993

¹⁴ 1999–2000

¹⁵ Average Annual Growth Rate during period.

¹⁶ Average Annual Growth Rate during period.

¹⁷ 'Reallocation' plus 'interaction' effects

¹⁸ Average Annual Change in percentage points

¹⁹ Growth rates are calculated in log-exponential form

²⁰ 1995–2001. Note that 2001 is a "crisis" year.

²¹ Numerically: –2.5%; 7%; –6%

²² Manufacturing sector only

²³ 1988

²⁴ 1988