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# Employment Generation and Poverty Alleviation in Developing Economies

**Abstract**
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**Keywords**
East Asia, employment, poverty, development, trade

**Comments**
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# Employment Generation and Poverty Alleviation in Developing Economies

*Gary S. Fields*

We know well that the East Asian economies have achieved higher economic growth rates than those in any other region of the world[1] and that production for world markets has featured as a hallmark of the East Asian successes. This paper has three purposes: first, to present comparative data showing that the rates at which employment opportunities improve and poverty is reduced mirror countries' differential growth experiences; second, to examine differences in labour market institutions, demonstrating that those in East Asia have similarities more likely to lead to higher output performance and shared improvements in living conditions; and third, to present a model analysing the synergy between countries' choices of trade and labour market policies.

## The Comparative Record

Table 1 displays changing labour market conditions in a number of East Asian and Latin American economies. The extraordinary improvements in employment conditions that have taken place in the East Asian economies stand out. Consistent with the famous model of Lewis (1954) and Fei and Ranis (1964), the data for each economy exhibit two phases: *i)* falling unemployment with at best modest increases in real earnings levels, followed by *ii)* essentially full employment with rapidly rising real earnings. The earnings increases are quite remarkable: real earnings increased by a factor of four in Hong Kong in 30 years, by a factor of six in Korea in 25 years, and by a factor of eight in Chinese Taipei in 30 years — in each case, with unemployment rates in the 2–4 per cent range[2].

Table 1. **Changing Wages and Unemployment in East Asia and Latin America**
(Index numbers and percentages)

**East Asia**

***Hong Kong***

| Year | Index of Real Wages | Unemployment |
|---|---|---|
| 1948 | 100 | n.a. |
| 1960/61 | 105 | 1.7 |
| 1965 | 157 | n.a. |
| 1970/71 | 167 | 4.4 |
| 1975/76 | 194 | 4.3 |
| 1980 | 253 | 3.7 |
| 1985 | 301 | 3.8 |
| 1990 | 405 | 1.7 |

***Korea***

| Year | Index of Real Earnings | Unemployment |
|---|---|---|
| 1963 | n.a. | 8.2 |
| 1966/67 | 100 | 6.2 |
| 1971/72 | 169 | 4.5 |
| 1976 | n.a. | 3.9 |
| 1980/81 | 306 | 4.1 |
| 1986 | 421 | 3.8 |
| 1990 | 660 | 2.4 |

***Singapore***

| Year | Index of Average Real Monthly Income per Worker | Unemployment |
|---|---|---|
| 1966 | 100 | 9.1 (1965) |
| 1975 | 100 | 4.8 (1977) |
| 1980 | 120 | 3.5 |
| 1985 | 176 | 4.1 |
| 1990 | 216 | 2 |

***Chinese Taipei***

| Year | Index of Real Manufacturing Earnings | Unemployment |
|---|---|---|
| 1954 | 100 | 6.3 (1955) |
| 1960 | 102 | 4.3 (1963) |
| 1970 | 183 | 1.5 (1972) |
| 1979 | 400 | 1.3 (1981) |
| 1985 | 518 | 2.9 |
| 1990 | 810 | 1.7 |

**Latin America**

***Bolivia***

| Year | Index of Real Wages | Unemployment |
|---|---|---|
| 1980 | 181.8 | 7.5 |
| 1985 | 100 | 5.7 |
| 1987 | 76.4 | 5.9 |

***Chile***

| Year | Index of Real Wages | Unemployment |
|---|---|---|
| 1978 | 82 | 14 |
| 1984 | 100 | 14 |
| 1990 | 105.2 | 6 |

***Mexico***

| Year | Index of Real Wages | Unemployment |
|---|---|---|
| 1980 | 129.4 | 4.7 |
| 1984 | 100 | 5.6 |
| 1990 | 103.3 | 2.8 |

***Brazil***

| Year | Index of Real Earnings | Unemployment |
|---|---|---|
| 1981 | 100 | 4.3 |
| 1983 | 60.3 | 4.9 |
| 1989 | 68.3 | 3 |

***Costa Rica***

| Year | Index of Average Monthly Income | Unemployment |
|---|---|---|
| 1976 | 79.4 | 6.2 |
| 1979 | 104.2 | 4.8 |
| 1982 | 60.2 | 9.4 |
| 1986 | 94 | 6.2 |

***Venezuela***

| Year | Index of Real Earnings | Unemployment |
|---|---|---|
| 1977 | 89.8 | 4.6 |
| 1980 | 100 | 5.7 |
| 1984 | 68 | 13.4 |
| 1988 | 61.9 | 6.9 |
| 1992 | 47.4 | 7.1 |

*Sources*: For Hong Kong, Korea, Singapore and Chinese Taipei: Asian Development Bank (1994).
For Bolivia, Chile, and Mexico: World Bank (1995).
For Brazil, Costa Rica, and Venezuela: Fields and Newton (1997).

Critics of the East Asian model of economic growth sometimes point to labour repression, the so–called "dark underside" of the East Asian miracle[3]. Yet despite the repressive measures that were sometimes in effect (and still are in some cases), labour participated fully in the rapid economic growth that took place. Table 2 compares the growth in real per capita national income with that of real earnings. In Hong Kong, Korea and Singapore, national income and labour earnings grew at essentially the same rate, while in Chinese Taipei earnings grew even faster than national income. Far from being left behind, workers in East Asia shared proportionately in their countries' exceptionally fast growth.

Table 2. **Growth in National Income and Earnings in Four Newly Industrialising Economies in East Asia, 1980-90**
(Percentages)

| Economy | Growth in Real GNP or GDP per capita | Growth in Real Earnings |
|---|---|---|
| Hong Kong | 64.2 | 60.0 |
| Korea | 121.8 | 115.8 |
| Singapore | 77.5 | 79.8 |
| Chinese Taipei | 88.0 | 102.7 |

*Source:* Fields (1994), Table 1.

Shared growth of so large a magnitude should produce a reduction in poverty rates. Data using country–specific poverty lines since 1980 show that this is indeed the case. In Chinese Taipei, the poverty rate (gauged by the poverty headcount ratio) fell from 47 per cent in 1980 to 15 per cent in 1992 (source: author's calculations from data in Republic of China, *Statistical Yearbook of the Republic of China*, various years). In Korea, the percentage of workers below a constant real low earnings line was 62.6 per cent in 1980 and just 10.3 per cent in 1991 (Yoo, 1995). The poverty rate fell over a five–year period from 28.5 per cent to 18.3 per cent in Hong Kong and from 31.2 per cent to 26.1 per cent in Singapore (Fields, 1994).

During the last several years, the United Nations has made extensive use of a measure which combines countries' records on education, life expectancy, and national income into a single Human Development Index (HDI). Table 3 presents these data for various regions of the world and for the newly industrialising economies of East Asia (excluding Chinese Taipei, which the United Nations refuses to recognise). These data show *i)* the increases in the HDI were 50–100 per cent greater in the Asian NIEs than in the world as a whole and, consequently *ii)* the HDI levels attained by Hong Kong, Korea, and Singapore place them on a par with the industrial countries.

Table 3. **Levels and Changes in United Nations Human Development Index**

| | Level, 1960 | Level, 1992 | Change, 1960-1992 |
|---|---|---|---|
| ***Various country aggregates:*** | | | |
| All developing countries | 0.260 | 0.541 | 0.281 |
| Least developed countries | 0.165 | 0.307 | 0.142 |
| Industrial countries | 0.799 | 0.918 | 0.119 |
| World | 0.392 | 0.605 | 0.213 |
| ***East Asian NIEs:*** | | | |
| Hong Kong | 0.561 | 0.875 | 0.314 |
| Singapore | 0.519 | 0.836 | 0.317 |
| Korea | 0.398 | 0.859 | 0.461 |

*Source:* United Nations (1994), Table 5.5 and Annex Table A5.3.

By contrast, Latin America has a quite dismal record, not only absolutely but relative to East Asia, with the 1980s correctly characterised as the "lost decade" in that region. Macroeconomic growth was essentially nil: the region's economies grew by just 0.9 per cent per year in the 1980s, but after adjusting for population increases, real per capita GDP fell by 1.2 per cent per year (Inter–American Development Bank, 1991, Table B–1). The lack of macroeconomic growth in some Latin American countries and the actual worsening of economic conditions in others manifested itself at times in disturbingly high unemployment rates (14 per cent in Chile, 13 per cent in Venezuela) and at other times in shocking declines in real wages or earnings (20 per cent in Mexico, 32 per cent in Brazil, 47 per cent in Venezuela, and 58 per cent in Bolivia). Poverty stagnated or worsened under such conditions: poverty rates doubled in Venezuela, stagnated in Colombia and Brazil, and fell modestly in Costa Rica (Morley, 1994, Table 6).

In sum, labour market conditions improved and poverty fell sharply in East Asia, while the opposite held true for Latin America, principally, of course, because the East Asian economies grew much more rapidly. While many reasons have been cited for this differential growth experience — see, for instance, the World Bank's "East Asian miracle" study (1993) and various critiques of it[4] — the balance of this paper focuses on one particular factor, namely the workings of the labour market. The following section presents and analyses ways in which the labour market institutions in East Asia differ from those in most other regions of the world, while the third section presents a model showing how a country's labour market and trade regimes may interact with one another to affect possibilities for economic development.

## Differences in Labour Market Institutions

### *Empirical Differences*

In general, East Asian wages reflect to a much greater degree than those in other regions of the developing world the forces of supply and demand in labour markets. Consider the following:

*Minimum wages* aim to assure workers an "adequate" standard of living. Long on the books throughout most of the developing world (Starr, 1981), they have little importance in East Asia. Korea introduced a minimum wage system only in 1988 and has set the minimum wage level so that it proves to be a binding constraint for only a small fraction of Korean workers (Park, 1992). Although Chinese Taipei has had a minimum wage law in force for decades, no company has ever been fined for violating the law (Chang, 1989).

*Trade unions* are often encouraged by government policy as a means of entitling workers to a "just" share of the fruits of their labour. Unions have raised the wages of their members by as much as 150 per cent in Jamaica, 31 per cent in Ghana, 24 per cent in South Africa, and 20 per cent in Malaysia (Tidrick, 1975; World Bank, 1995, Table 12.2). By contrast, in Korea and Chinese Taipei, unions are repressed and the union wage premium is at most 2–3 per cent (Lin, 1989; Park, 1991; Yoo, 1995).

*Public sector pay policies* often result in substantially higher wages for government workers than for their private sector counterparts. Costa Rica exemplifies this and as a result, "everybody" in Costa Rica tries to work for the government (Gindling, 1991). In East Asia, the public sector pays what is needed to compete with the private sector — neither more nor less.

*Multinational corporations* sometimes pay above–market wages in sub–Saharan Africa and elsewhere (Berg, 1969). Although this occurs partly for efficiency wage reasons (Stiglitz, 1974, 1976), it also happens because some governments have "encouraged" them to do so by not so subtly threatening expulsion or expropriation if they do not. In Korea and other East Asian countries, wages and working conditions are the same in foreign and domestic firms (ILO, 1996).

Finally, *labour codes* may regulate hiring and firing, impose payroll taxes on firms and mandate that employers provide certain benefits to their workers. Panama had such a labour code, which raised labour costs by an estimated 90 per cent (Spinanger, 1985) before it was finally abandoned as unsustainable. Likewise, Bolivian employment legislation raises labour costs by an estimated 90–110 per cent (Bravo, 1995). Companies in India and Zimbabwe may not dismiss workers, resulting in artificially high employment levels and artificially low economic efficiency (Fallon and Lucas, 1991, 1993). In East Asia, employers also face labour codes (for instance, severance payments must be made to laid–off workers), but with very much lower costs.

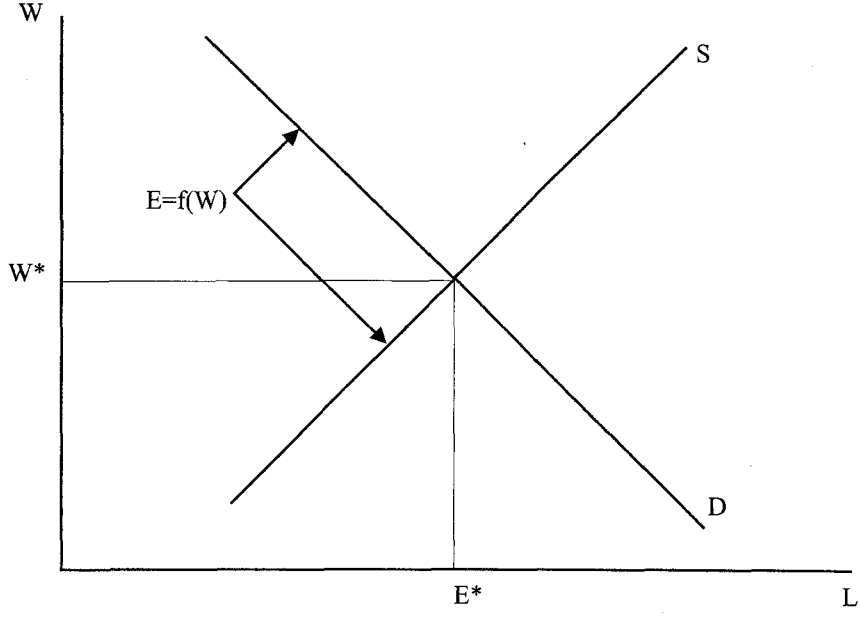
These labour market interventions, aimed at raising earnings and reducing poverty, mean well and do indeed benefit workers fortunate enough to work in covered sectors of the economy. Nevertheless, they appear to have had adverse employment and efficiency effects and to have contributed to the informalisation of the economy, as employers evaded the regulations by not engaging workers as regular employees or by not even appearing as official companies (De Soto, 1989).

It is an empirical question as to which worked better to raise workers' standards of living and thereby reduce poverty: the direct approach (pushing wages and benefits up through public policy intervention) or the indirect approach (fostering economic growth of a type that would cause wages and other benefits to be pulled up by the forces of supply and demand in labour markets). Judging from the record, the indirect approach may have something to commend it. Economic theory suggests that this pattern is by no means accidental. Several heuristic models can show it.

### *Theoretical Explanations*

The three models that follow demonstrate how market wage determination should lead to higher levels of economic activity than wage levels set artificially above or below the market–clearing level. *Model 1* consists of a labour market with a single common wage. As depicted in Figure 1, given an upward–sloping labour supply curve (S) and a downward–sloping labour demand curve (D), W* denotes the market–clearing wage and L* the market–clearing employment level.

Figure 1. **Non–market Clearing Wages Reduce Employment**



Consider what would happen if the wage were to be set anywhere above W*. Employers would move up their labour demand curves and employment would fall. Accordingly, less output would be produced and the economy would operate at a sub–optimal level. While the dynamics would have to be fully worked out, it is likely that the economic growth rate in such an economy would be lower as well.

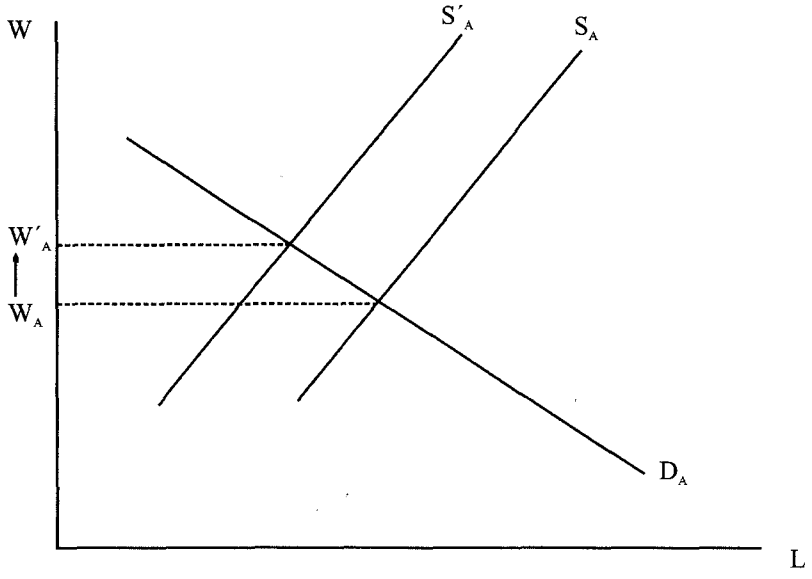
The hazards of a wage higher than one which clears the market are well understood in East Asia. Less well appreciated are those of a wage below the market–clearing level, such as Singapore tried for a number of years in the 1970s[5]. Any wage rate below W* would cause employers to want to move down their labour demand curves and workers to move down their labour supply curves. Labour supply, of course, provides the binding constraint: fewer workers appear than employers want to hire at such wages. With less labour supplied, there is less employment, hence less output, hence slower economic growth.

This analysis shows that in a single labour market model, the wage level which clears the market maximises employment and hence output. The E = f(W) locus in Figure 1 shows that the further the wage is from the market–clearing level W*, the further is employment from the maximum possible (E*). The limited role of segmenting factors in East Asian labour markets may furnish part of the explanation for why their growth rates and employment levels have been so high for so long.

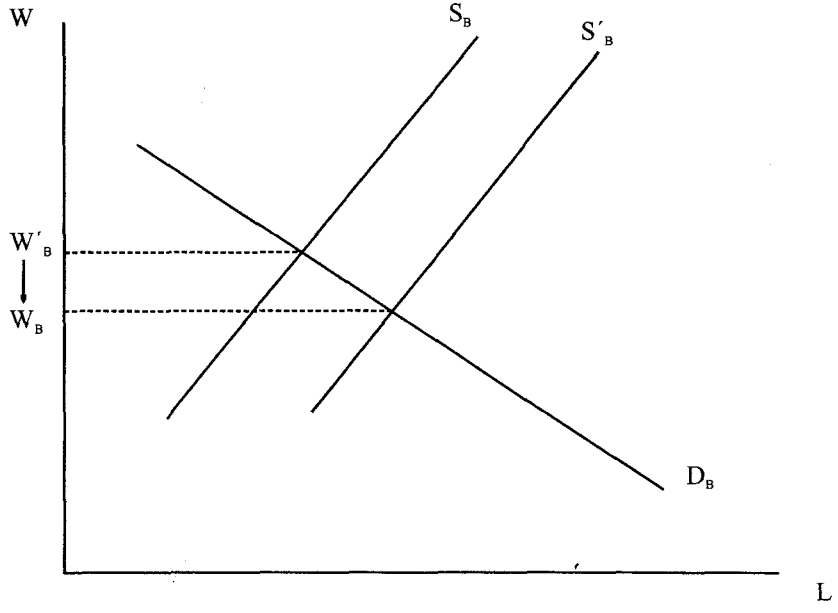
*Model 2* resembles Model 1 except that the minimum wage covers only part of the economy. In this model, some sectors face a minimum wage or other institutional wage–setting force and some do not. As shown in Figure 2, the higher wage in the covered sectors than in the non–covered sectors implies that the covered sectors face unlimited supplies of labour within the relevant range. The higher the minimum wage in the covered sectors, the smaller will be employment there. Assuming that workers not employed in the covered sectors take up employment in the non–covered sectors, an increase in the minimum wage in the covered sectors will increase the crowding of labour into the non–covered sectors[6]. This crowding results not only in lower wages in the non–covered sectors but also in greater dead–weight losses *à la* Harberger, and therefore lower aggregate output.

Figure 2. **In a Crowding Model, a Higher Wage in Sector A Reduces Employment in That Sector, Crowds Workers into Sector B and Lowers the Sector B Wage**

**Labour Market Consequence of Crowding Workers Out of Sector A**

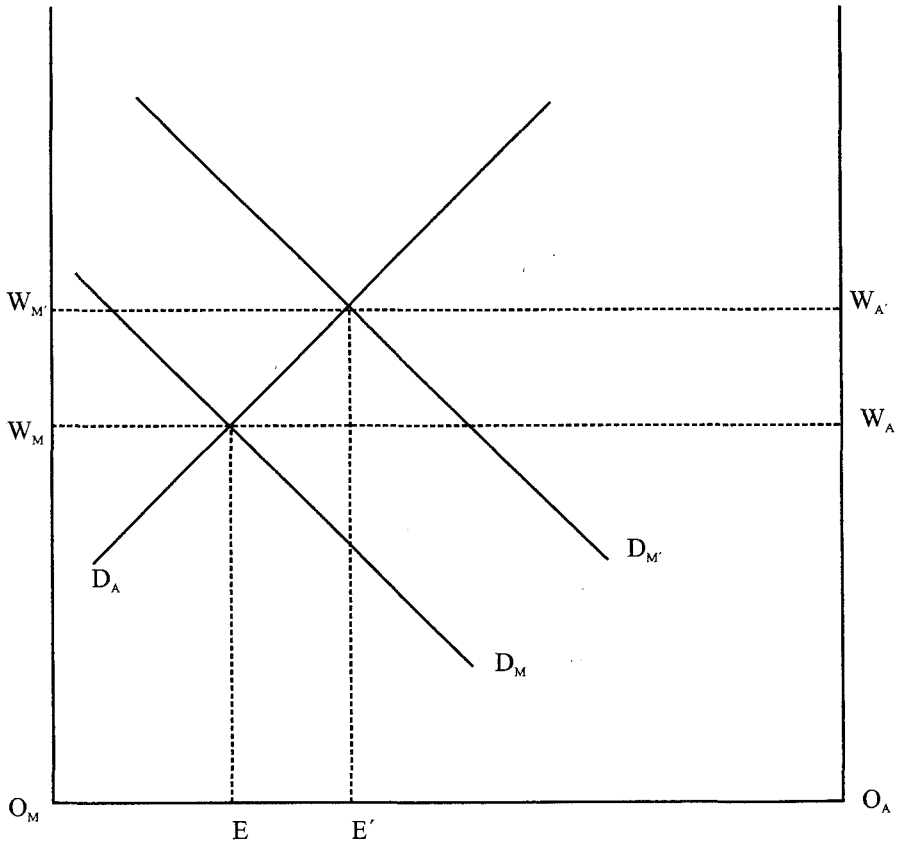



**Labour Market Consequence of Crowding Workers into Sector B**



*Model 3* offers a happier scenario. It shows how economic growth in one part of an economy leads to higher wages for all workers. Suppose for ease of analysis that the economy has two sectors, here termed "manufacturing" and "agriculture", and that the labour market is integrated in the sense that the same wage prevails in both sectors for a given type of worker — a realistic enough stylisation of the East Asian situation. Figure 3 depicts what happens when economic growth takes place in one sector, manufacturing. The original demand for labour curve in the manufacturing sector ($D_M$) is downward–sloping relative to origin $O_M$; likewise, the original demand for labour curve in the agricultural sector ($D_A$) is downward–sloping relative to origin $O_A$. The distance $O_M O_A$ represents the total labour supply. If the standard equilibrating forces in labour markets operate freely, as in East Asia, wages would equalise across the two sectors at level $W^*$ ($=W_M$). At this wage, $O_M E$ workers would be demanded in the manufacturing sector, $O_A E$ workers in the agricultural sector, and total labour demand in the two sectors combined would exactly equal the total labour supplied in the economy.

Figure 3. **In an Integrated Labour Market, Growth in One Sector Raises Wages in All Sectors**



Now suppose that economic growth takes place in the manufacturing sector. Because manufacturing firms need more workers to produce the extra output, the labour demand curve in the manufacturing sector shifts rightward to $D_M'$. Assuming no change in the agricultural product market, agricultural employers' demand for labour curve would remain stationary at $D_A$. The labour market is now in disequilibrium because at the original wage W* more labour is demanded than supplied. To resolve this disequilibrium, manufacturing employers raise wages to retain existing workers and attract new ones, and agricultural employers raise wages to prevent all their workers from leaving. The labour market then equilibrates at a new common wage $W' > W^*$. Because of the sector–specific shift in labour demand, the manufacturing sector has more workers than before ($O_ME'$ rather than $O_ME$) and agriculture fewer ($O_AE'$ rather than $O_AE$).

This analysis identifies three groups of workers: *i)* those who had been working in manufacturing and now earn higher wages than before; *ii)* those drawn by higher wages into manufacturing from agriculture; and *iii)* those who remain in agriculture and earn more than previously. In this way, economic growth in a country's export sector can benefit all workers: those who produce manufactured goods and those who produce agricultural goods.

East Asia, of course, produces manufactured goods largely for export, but not agricultural goods. The preceding discussion therefore suggests the possibility that market wage determination may facilitate not only widespread earnings gains for a country's people but expansion of exports and hence economic growth as well. The next model shows how trade policy and labour market policy may interact with each other in precisely this way.

## A Model of Interactions between Trade Policy and Labour Market Policy

### *Policy Options*

Assume an economy with two goods: a domestic good *D* and an export good *X*. Self–employed producers make the domestic good. The export good may or may not be produced in positive quantity but if it is, production occurs in an export firm facing increasing marginal costs.

Suppose the economy is controlled by a "planner" who can choose the country's trade policy (*T*). Let there be two trade policy options:

*i)* *T=X*: In this case, the planner adopts a policy of export promotion. He has many possible ways of doing this — by adjusting exchange rates, tariffs, taxes, or subsidies. The specific policy option considered here creates the resources to enable exports, for example by building a harbour, constructing an export–processing zone or opening a commercial office abroad. In the model below, *T=X* is a necessary condition for exporting; it could not take place, for instance, without a harbour.

*ii)* $T=\sim X$: In this case, the planner elects not to promote exports. He may do this by not developing domestic infrastructure, by imposing a prohibitive export duty, or by creating bad external relations. Regardless of the method chosen, $T=\sim X$ implies no export activity.

The planner makes his choice under two alternative labour market regimes:

*a)* $L=M$: In this case, the planner faces market–determined wages. Hence, the wages in the two sectors, $W_X$ and $W_D$, are equal.

Production costs are lower under $L=M$ than under:

*b)* $L=\sim M$: In this regime, the planner faces non–market–determined wages in the export sector, hence a dualistic wage structure, for reasons such as those considered in the section above.

This model asks the question: using the national income criterion, how do the two trade policies (export promotion or its absence) compare in the two labour market regimes (market or non–market wages)? As developed below it demonstrates the possibility that export promotion is superior to inaction when wages in the export sector are market–determined but not when they are above market–clearing levels.

### *Specific Relationships of the Model*

#### *Production Functions*

Output in the domestic sector ($D$) is produced with one input, labour, according to the relation $Q_D=q_DL_D$. This is a constant returns technology, as might pertain to a land–abundant economy in which anyone who wishes to till the land may do so and grow $q_D$ units of crop per period.

The export sector ($X$) uses two inputs: labour ($L_X$) and an intermediate good ($I$). Write the production function as $Q_X=f(L_X)I$. Regarding the $f$ component, labour is assumed to be essential to production, and its output is subject to diminishing returns: $f' > 0, f'' < 0, f(0) = 0$. The intermediate good (e.g. a harbour) also is essential to export production; $I=1$ if it is available, $I=0$ otherwise.

#### *Product Prices*

The domestic sector's product price is normalised to equal 1. In the export sector, assume the country is small in the world economy, so that the world market determines the product price (neglecting transport costs). Denote this price by $P_X$.

#### *Wages*

The wage in the domestic sector, $W_D$, equals average product, which also equals marginal product $q_D$. This wage is market–determined and, in a self–employment economy, clears the market.

The wage in the export sector, $W_X$, depends on the labour market regime. Under the regime of market–determined wages ($L$=$M$), $W_X$=$W_D$. In the non–market regime ($L$=~$M$), $W_X$ is set rigidly at a level $\overline{W}_X > W_D$.

*Employment and Unemployment*

The total labour force $\overline{L}$ is the sum of export sector employment ($L_X$), domestic sector employment ($L_D$) and unemployment ($L_U$). The employer in the export sector pays a wage at least as high as in the domestic sector. At that wage, he faces an unlimited supply of labour. He demands labour until the point where value of marginal product equals the wage, $f'(L_X)P_X = W_X$, provided the two can in fact be equated at some positive employment level. The division of the labour force between domestic goods production and unemployment is analysed below.

*Fixed Costs of Exporting and the Intermediate Good*

The choice of an export–oriented trade policy obligates the planner to provide an intermediate good ($I$) such as a harbour essential to export production. The intermediate good, $I$, is a quasi–fixed cost of exporting in the sense that the cost of producing it, $F$, is incurred if the export–oriented trade strategy ($T$=$X$) is adopted, but the cost may be avoided if it is decided not to export ($T$=~$X$).

*The Social Profitability of Exporting*

Exporting is socially profitable if it generates revenue in excess of costs. Revenue equals $P_X Q_X$. The costs are the direct costs $F$ and the foregone output from the domestic sector, $q_D(L_X + L_U)$. Hence, exporting is socially profitable if the following expression is strictly positive:

$$\xi = P_X Q_X - F - q_D(L_X + L_U) \tag{1}$$

*The Private Profitability of Exporting*

For the export firm to operate, it must earn a profit, $\pi$. Therefore its revenues must at least equal its expenditures, i.e. private profits

$$\pi = P_X Q_X - \overline{W}_X L_X \tag{2}$$

must be non–negative. The firm will earn zero profits if it decides not to produce, which would occur when either:

a) its profit would be negative for any positive output level, or

b) the planner decides not to promote exports, and therefore some essential input like a harbour is not provided to the export firm.

*Relationship between Social and Private Profitability*

From (1) and (2),

$$\xi = (W_X' - W_D)\, L_X + \pi - W_D L_U - F \tag{3}$$

i.e. the social profitability of exporting is equal to the increased wages received by employed labour, plus the profit earned by the exporter, minus the loss in wages of any labour that may become unemployed, minus the fixed cost of exporting borne by the planning authority.

***Results under Alternative Market Closure Rules***

Consider first the social profitability of export promotion in the case where wages in the export sector are market–determined ($L=M$). In this case, $W_X=W_D$ and there will be no unemployment. Substituting $W_X=W_D$ and $L_U=0$ into (3), we find that for any $F>0$, under $L=M$, a necessary (but not sufficient) condition for socially profitable exporting is that $\pi$ be greater than zero, i.e. that there be a privately profitable pair ($L_X$, $Q_X$). Assume that there exists at least one such pair[7]. Denote the maximum profit under market wage determination by $\pi^*$ and the corresponding employment and output levels by $L^*_X$ and $Q^*_X$. Then, when $L=M$, export promotion will increase GNP if $F < \pi^*$:

$$F < \pi^* \Rightarrow (T = X,\ L = M) \succ_{GNP} (T = \sim X) \tag{4}$$

Consider the alternative labour market regime whereby wages in the export sector are set at non–market clearing levels ($L=\sim M$). Suppose that the minimum wage is set below the first worker's value of marginal product but above the wage in the domestic goods sector, $P_X f'_X(0) > \overline{W}_X > W_D$. The next two models analyse this case, for efficient on–the–job search (Model 4) and inefficient on–the–job search (Model 5). In both of these models, export promotion is advantageous under market–clearing wages but not under non–market clearing wages.

*Model 4*: Assume there is efficient on–the–job search, i.e. any worker not employed in the high–wage export sector can search equally well while at work in the domestic goods sector at the lower wage $W_D$ or while unemployed (Fields, 1975). No one would search while unemployed under such conditions. Suppose that some positive production level remains privately profitable under the minimum wage $\overline{W}_X$. Let $\tilde{L}_X$, $\tilde{Q}_X$, and $\tilde{\pi}$ denote the profit–maximising levels of employment, output, and profit in the export sector under $\overline{W}_X$. By (3), when $L_U = 0$, the social profitability of exporting under non–market wage determination, $\tilde{\xi}$, is

$$\tilde{\xi} = \tilde{\pi} + (\overline{W}_X - W_D)\, \tilde{L}_X - F \tag{5}$$

If $F$ is sufficiently large, the social profitability of exports, $\tilde{\xi}$, can be negative even though exports are privately profitable (i.e. $\tilde{\pi} > 0$). This occurs if $F > \tilde{\pi} + (\overline{W}_X - W_D)\,\tilde{L}_X$. We therefore arrive at the condition:

$$F < \tilde{\pi} + (\overline{W}_X - W_D)\,\tilde{L}_X \Rightarrow (T = X,\ L = \sim M) \succ_{GNP} (T = \sim X) \qquad (6)$$

Conditions (4) and (6) together give us a GNP ranking for Model 4:

$$\pi^* > F > \tilde{\pi} + (\overline{W}_X - W_D)\,\tilde{L}_X \Rightarrow (T = X,\ L = M) \succ_{GNP} T = \sim X \succ_{GNP} (T = X,\ L = \sim M) \qquad (7)$$

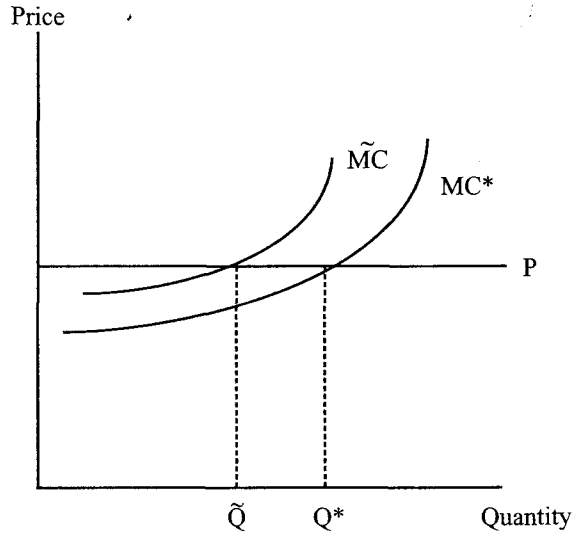
which states that the fixed cost of exporting must be small enough that it can be outweighed by private profitability in the market wage case, yet large enough to overcome private profitability and wage gain in the non–market wage case. Any set of parameters satisfying these requirements would have the property that an export orientation would raise GNP if wages are market–determined but not if they are set above market–clearing levels.

The interpretation of condition (7) is aided by subtracting $F$ from each term on the left–hand side and writing the result as:

$$\xi^*(Q^*_X) > 0 > \tilde{\xi}\,(\tilde{Q}_X) \qquad (7')$$

with $Q^*_X$ and $\tilde{Q}_X$ denoting the profit–maximising levels of export production under market wage determination and non–market wage determination respectively and $\xi^*$ and $\tilde{\xi}$ the corresponding levels of social profit. $Q^*_X$ is greater than $\tilde{Q}_X$, because the marginal cost curve of the export firm has shifted up when wages are above market–clearing levels, implying that some output units that would have been profitable under $W_X = W_D$ are not profitable under $\overline{W}_X > W_D$. Figure 4 illustrates this. Revenue $(P_X Q_X)$ moves accordingly. Condition (7') then says that the export revenue generated by the relatively high export volume under market wage determination is sufficient to cover the costs of promoting the export industry, but the revenue generated by the relatively low export volume under non–market wage determination is not.

Figure 4. **Export Volume under Market and Non-market Wage Determination**




~ = Market wage determination
* = Non-market wage determination

*Model 5*: This model differs from Model 4 in that it replaces the efficient on–the–job search assumption by the Harris–Todaro (1970) assumption that to get a job in the export sector, one must migrate there. Equations (1)–(4) hold as before; the others must be replaced. In this model, the equilibrium allocation of the labour force between sectors is given by the Harris–Todaro equilibrium condition

$$\overline{W}_X L_X/(L_X + L_U) = W_D \tag{8}$$

wherein the expected wage in the export sector (the wage if employed multiplied by the ratio of jobs to job seekers) equals the expected wage in the domestic goods sector. Substituting (8) into (3), we obtain the social profitability of exporting in Model 5:

$$\tilde{\xi} = \tilde{\pi} - F \tag{9}$$

[No terms involving wage gains appear in (9), because the increase in wage bill among those employed is exactly offset by the loss in wage bill due to induced unemployment.] Hence, the condition for exports to be socially unprofitable under non–market wage determination becomes

$$F < \tilde{\pi} \Rightarrow (T = X, L = \sim M) \succ_{GNP} (T = \sim X) \tag{10}$$

in Model 5 and the rank reversal condition becomes

$$\pi^* > F > \tilde{\pi} \Rightarrow (T = X, L = M) \succ_{GNP} T = \sim X \succ_{GNP} (T = X, L = \sim M) \tag{11}$$

In summary, the models in this section have observed the possibility that:

i) A policy of export promotion (i.e. spending public funds to subsidise the private sector) produces higher GNP than an inward–looking trade strategy when wages in the export sector are market–determined.

However:

ii) The ranking reverses when wages in the export sector are set institutionally above market levels: the inward–looking trade strategy produces higher GNP than an export–oriented trade strategy under wages not market–determined.

Therefore:

iii) Whether an export–oriented trade strategy raises GNP or lowers it depends in part on the labour market regime within which trade policy is chosen.

This analysis demonstrates that the labour market regime might cause a reversal of trade policy, but not that it necessarily will do so.

Not to be able to export profitably is bad. To export unprofitably is worse.

## Policy Conclusions

The first part of this paper reviewed the employment–generation and poverty–reduction records of newly emerging economies in various parts of the world. It observed a pronounced contrast between the remarkably rapid reductions in poverty and improvements in labour market conditions that have taken place in East Asia and the distressing lack of progress in Latin America. Of course, the East Asian countries achieved high economic growth while Latin America has had much more limited, and in some cases even negative growth. High growth causes improvements in labour market conditions and reductions in poverty, and for this reason it should be sought. Those who avoid it because they believe that it increases the misery of the poor are simply wrong.

The second section of the paper then compared the labour market institutions in East Asia with those in other developing regions. While most countries in Latin America and elsewhere have tried to reduce poverty and improve labour market conditions by directly pushing labour market conditions up, East Asia followed a much more indirect approach, relying on growth to pull conditions up. The models showed how wages above market–clearing levels might reduce both employment and output and, contrariwise, how, with market wage determination, all of a country's workers might share in the rapid growth that takes place. These data and analytical models suggest that the indirect approach to raising labour standards was the more fruitful one in East Asia and might be so in other parts of the developing world as well.

The models developed in the third section demonstrated that an export promotion activity that may be socially desirable with market–clearing wages may be socially undesirable when wages are set above market–clearing levels. In particular, the gains from adopting an export–oriented trade strategy depend in part on the labour market regime within which trade policy is chosen. These results have implications for policy:

a) If the country's labour market regime is immutable — say, because of a politically based decision to encourage strong trade unions or because of the belief that minimum wages are good in and of themselves — export promotion may cease to be socially profitable. Wages in some countries' export sectors are two or three times market–clearing levels. Such countries start out at an enormous disadvantage in trying to compete successfully in world markets with the OECD countries and the newly industrialising economies. If primacy is accorded to labour market policy, promoting exports may not be warranted.

b) If the country's labour market regime is a genuine policy instrument, labour market policy should be made in conjunction with trade policy. The two policies interact; the optimal trade policy depends on the choice of labour market policy and *vice versa*.

These models raise an important note of caution for policy makers. The advice now so freely dispensed — "develop via exports" — may well suit a country with market–determined wages but become quite disastrous otherwise because higher than market–clearing wages may adversely affect the ability to export and the social gains from exporting. This does not endorse wage repression; it argues for allowing wages to be pulled up by increasing competition for workers through export–led growth rather than pushing them up prematurely by non–market means.

Some very difficult transition issues may arise. Consider a country that starts with a dualistic wage structure and then seeks to reform its labour market policies in an attempt to stimulate economic growth. Although employment opportunities should improve and poverty decline throughout the economy once a new equilibrium is achieved, these benefits take effect only in the long run. Meanwhile, in the short run, individuals working in the favoured segments of the labour market, who stand to lose wages, benefits, or job security if reform is undertaken, may constitute a potent political force in opposition to the reform programme.

One policy response would be to try to buy the support of the potential losers. This presents two immediate problems. It may be quite expensive because of the large magnitude of the potential losses or, because the losers were relatively advantaged in the economy to begin with, it is not at all obvious that they most deserve support. Some countries demonstrate an unfortunate tendency to think of "the poor", "the vulnerable", and "the losers" as the same people and to design programmes for those who scream the loudest, namely the losers. Governments themselves must decide which group presents the most compelling case and therefore most deserves the limited safety net resources available.

## Notes

1. The average annual growth rates in real terms between 1976 and 1992 were 8.4 per cent in Chinese Taipei, 7.9 per cent in Korea, 7.2 per cent in Hong Kong, and 7.1 per cent in Singapore. Asian Development Bank (1993).

2. To put matters in some perspective, let it be noted that in my own country (the United States) over the last 25 years, median real earnings rose by just half a per cent a year in the 1970s and then fell by half a per cent per year in the 1980s and 1990s (Juhn and Murphy, 1995, Table 1). The US unemployment rate has been inching its way down and is now close to 5 per cent.

3. The phrase is due to Haggard (1994). See also Deyo (1989), World Bank (1993), and You (1994).

4. For example, Fishlow *et al.* (1994), Krugman (1994), Rodrik (1995), and Young (1995).

5. For reviews of Singapore's wage repression policy in the 1970s and subsequent wage correction policy, see Fields and Wan (1989) and Lim (1990).

6. The crowding model was first developed by Bergmann (1971) to explain why the exclusion of blacks from certain occupations led to higher wages of whites in those occupations. A consequence of such discriminatory behaviour is that blacks earn less in the occupations into which they are crowded, hence the name "crowding model".

7. This seemingly innocuous condition is sometimes forgotten when exporting is advocated regardless of profitability.

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