The Migration Transition in Asia

Gary S. Fields

Cornell University

This theoretical discussion of the migration transition is Asia develops a framework to understand the turning point from labor exporter to labor importer experienced by the Asian NIEs (Hong Kong, Korea, Singapore and Taiwan). The author concludes that the NIEs' demand for labor curve shifted rapidly, primarily due to export-led growth of a labor-intensive character. Because these economies are well integrated, improvements in labor market conditions in individual sectors are transmitted to all workers, discouraging emigration. Despite industry's efforts to mitigate wage increases through labor import, new technology or relocation overseas, the rapidly improving domestic earnings opportunities induced the migration transition.

This article concerns the migration transition, viz., the fact that some countries which previously experienced substantial emigration flows are now importing labor. Such a transition has occurred in a number of countries, among them, Thailand, Korea, and Taiwan (*see*, for instance, the articles by Alburo and Park in this volume). My aim is to offer a coherent perspective to stimulate thinking on this subject rather than compiling extensive empirical evidence about it.

This article is divided into two major sections. The first develops the basic framework. The section afterwards presents various refinements and extensions. A brief conclusion summarizes the main points.

The Basic Framework

The migration transition is concerned with a change in the rate at which a country gains or loses people on balance. As in other economic applica-

tions, the analytical starting point for understanding the rate at which something occurs is to formulate a model of individuals' constrained choices.

In the migration literature, the rate at which an area gains or loses people is called "net migration." The net migration rate from a particular place at a particular time depends on conditions in that place and in other places:

$$(1)\ M_{it} = f(W_{it}, E_{it}, NP_{it}, W_{jt}, E_{jt}, NP_{jt})$$

where M_{it} is the net migration from location i and time t, W_{it} and W_{jt} are respectively the streams of (real) wages expected in the location of interest i and in other locations j at time t, E_{it} and E_{jt} are respectively measures of expected employment opportunities in i and j, and NP_{it} and NP_{jt} are measures of expected nonpecuniary attractiveness of the different locations. It is expected that net outmigration is greater the less attractive are conditions in the sending area relative to conditions in other locations, and hence:

$$(2)\ f_1, f_2, f_3 < 0 \text{ and } f_4, f_5, f_6 > 0$$

This approach to migration was pioneered by Sjaastad (1962); subsequent developments using this approach are surveyed by Greenwood (1975) and Ehrenberg and Smith (1991, Chapter 10).

This approach takes for granted that emigration has an important economic component.[1] This is not to deny the importance of legal barriers and other constraints.[2] What the economic model stresses is that the larger the differential in wages, employment opportunities, and nonpecuniary factors, the stronger the incentive to migrate. Put differently, as long as labor market opportunities in some economies remain substantially worse than labor market opportunities elsewhere, many workers seek to move when they are permitted to do so and, in some cases, even when they are

[1] It also has an essential choice component. Skeldon (this volume) incorrectly interprets this approach as implying that "the low-wage, rapidly expanding populations provided a labor force that could not be productively absorbed locally and hence *had* to emigrate" (emphasis added). This is not right. Except in the most dire economic conditions, people do not *have* to migrate. They *have the incentive to*, and that is what the economic model of migration picks up.

[2] Pang (this volume) highlights these other factors in what he calls "an eclectic approach" to turning points in migration.

not. Chinese workers, for instance, would probably prefer to remain in China, other things equal, but millions have shown themselves willing to give up the utility from staying home when the economic rewards from migrating to Hong Kong, Singapore, and other destinations are large enough. The same is true of guestworkers around the world, including in Asia, where families must be left behind.

The migration transition in the newly industrializing economies of Asia (Hong Kong, Korea, Singapore, and Taiwan, henceforth termed "NIEs") can be explained in large part by changing labor market conditions accompanying rapid economic growth. In some countries at some times, the most important changes were in terms of employment generation, while in others they were through rising real wages.

In this article, I adopt this constrained choice approach, albeit with a twist. The twist is to try to explain the economic constraints. A major role is assigned to international trade. This is because in the newly industrializing Asian economies and elsewhere, export-led growth has had a major effect on conditions in labor markets. Accordingly, I draw upon studies from international trade and economic development which bear on labor markets, among them, the works of Krueger (1981), Krause (1985), Bradford (1986), Scitovsky (1986), Ranis (1989), and Amsden (1989).

The Labor Intensity of Asian Export-Led Growth

It goes without saying that Asian economic growth was export-led. Studies have shown that countries which adopted more export-oriented trade strategies are countries which grew more rapidly (Little *et al.*, 1970; Bhagwati and Srinivasan, 1978; Krueger, 1978). The point I want to emphasize here is the labor intensity of export-led growth. Studies have also shown that export-oriented countries achieved much better employment records than did import-substituting countries (Little, 1981; Balassa, 1982; Krueger, 1981 and 1988).

Analytically, what happened was that the demand for labor curves in Asian economies shifted rightward rapidly in response to those countries' growth successes. By looking at data on specific industries in the Asian NIEs, we can see that international trade was vital to explaining the growth of output and of the derived demand for labor in a number of key industries such as metal products and textiles.[3,4]

[3] Although not in all industries — in particular, import-substitution industries and non-tradable goods and services.

[4] The following information is from Fields (1985).

"Metal products" includes the production of such items as metallic products, machinery, parts, appliances, electronics, electrical machinery, shipbuilding, motor vehicles, and precision instruments. During the 1960s and 1970s, employment in these industries grew at average rates ranging from 8 or 9 percent per annum in Hong Kong and Taiwan to 17 or 18 percent per annum in Korea and Singapore. Consequently, these industries' share of manufacturing employment grew from 13 percent to 27 percent in Hong Kong, from 12 to 28 percent in Korea, from 20 to 55 percent in Singapore, and from 20 to 33 percent in Taiwan. Direct evidence available for two of these countries shows that the metal products sector expanded output for export purposes: the fraction exported approximately doubled, from 37 to 66 percent in Hong Kong and from 33 to 69 percent in Singapore. The increases in value of machinery and transport exports were simply stunning: from US$77 million to $9,314 million in Hong Kong, from $1 million to $2,587 million in Korea, from $16 million to $5,068 million in Singapore, and from $2 million to $4,500 in Taiwan.

The story is very similar in another key export industry — textiles, garments, and kindred activities. There, too, employment grew apace of output increases, as firms increased production at average annual rates ranging from 8 to 20 percent, largely for export purposes. However, because of rising labor costs, these economies were forced to "vacate their niches in the production and export of less sophisticated industries to the less developed nations" (ESCAP, 1990). For this reason, Japan moved her labor-intensive industries to Korea and Taiwan in the 1960s, and when those countries in turn lost their competitiveness because of rising labor costs, the production bases started to be relocated in Malaysia, Thailand, Indonesia, and the Philippines (Abella, 1990).

In sum, export-led growth of the rate and character realized by Hong Kong, Korea, Singapore, and Taiwan had large direct effects on employment. It is important to emphasize that export-led growth does not always do this and that the kind of economic growth matters. Both natural and man-made forces are at work.

One reason that export-led growth may not shift the country's demand for labor curve is that the products produced for export in some countries make little use of labor. For many minerals such as oil, bauxite, copper, and tin, there is simply no efficient way of producing in a labor-intensive manner. Large inputs of capital and of energy are required, and labor cannot be substituted for them. Consequently, even if the countries that export these products could rely on successful export penetration to generate national income, they would not be able to rely on these exports to generate major shifts in employment.

There is another reason for low labor intensity of growth, and that is the distortion of factor prices. It is common throughout the developing countries of Africa, Latin America, and the Caribbean for labor to be artificially expensive and capital artificially cheap.[5] Because of these distorted relative prices, firms in those parts of the world have an incentive to use relatively less labor and relatively more capital to produce output. This affects both their choice of technique for producing any given product and their choice of which products to produce.

Circumstances in the Asian NIEs were very different. These economies were natural-resource poor. Because of this, they could not develop through mineral based growth of a type that made little use of labor. If they were to grow, they had to make use of the only resource they had — their abundant labor.[6]

Of course, whether it pays profit-seeking firms to employ the available labor force depends on labor costs. Factor prices in the East Asian economies were much less distorted than in other regions of the world: in Taiwan, for example, manufacturing wages are only 20 percent higher than agricultural wages, as compared with 150 percent higher wages in such countries as Colombia and Jamaica and 100 percent higher wages in Mexico.[7] Because labor in the Asian NIEs remained cheap as long as it was relatively abundant, firms found it advantageous to employ more and more of it as they increased their output for world markets.

The result was that the Asian NIEs exploited their natural comparative advantage, which was in labor-intensive manufactured products. As they grew through the exports of such products, labor market conditions changed accordingly.

Improvements in Labor Market Conditions

Labor market conditions in the Asian NIEs passed through two major phases. The first was a phase of increasing employment at essentially constant wages. The second was marked by rapidly rising real wages with generally full employment.

[5] *See*, for instance, Agarwala (1984).

[6] This is a point which has been emphasized on a number of occasions by Ranis; *see*, for instance, Ranis (1981).

[7] The Colombia and Mexico figures are comparisons between manufacturing and agriculture, while the Jamaica figure is for unskilled construction versus agriculture. The Mexico figures are from Turnham (1971:75), the Jamaica figures from Tidrick (1975:308-9), and the Colombia figures from my unpublished calculations from the Colombian census of 1973.

The first labor market phase (stagnant wages, rising employment) lasted until the early to mid- 1960s in the four Asian economies. Economic growth indeed led to improvements in labor market conditions in those years. The way it did so was to enable more and more workers to find jobs in the better paying sectors of their economies than before. During this phase, wages rose very little. For example, real earnings in manufacturing were only 2 percent higher in Taiwan in 1960 than they had been in 1954. This phase continued as long as an ample supply of labor was available to the growing sectors of the economy at the prevailing wage.

When labor stopped being abundant in the early to mid-1960s, these economies reached the famous Lewis-Fei-Ranis turning point (Lewis, 1958:26; Fei and Ranis, 1964:205-225; Fei and Ranis, 1975:50; Bai, 1985:155-6). Real labor earnings shot up in response to supply and demand in labor markets, as employers continuously raised wages in order to attract or retain their work forces. In real terms, labor earnings were 150 percent higher in Hong Kong in 1980 than in 1960, 200 percent higher in Korea in 1980 than in 1966, and 300 percent higher in Taiwan in 1979 than in 1960 (Fields, 1985:353). Only in Singapore did real wages not rise during that period, the reason being that Singapore had a repressive wage regime in effect at that time.

Recent evidence (Fields, 1992a) shows that this second phase (rising real earnings, essentially full employment) continued through the 1980s. Real labor earnings were 60 percent higher in 1990 than in 1980 in Hong Kong, 80 percent higher in Singapore, 103 percent higher in Taiwan, and 116 percent higher in Korea. Not only did labor earnings grow but they grew at rates very similar to the rates of national income growth (respectively, +64 percent, +78 percent, +88 percent, and +122 percent).

In sum, this evidence shows that export-led growth shifted the derived demand for labor curves, leading to continued rapid improvements in labor market conditions in these four economies. These rates of real wage growth among fully employed labor forces are the highest in the world, developed or developing.

The Well-Integrated Labor Markets of East Asia

Broadly speaking, labor markets may be characterized along a continuum ranging from highly compartmentalized (or "segmented") at one end to highly integrated at the other. I shall say that a labor market is compartmentalized if labor market conditions in one part of the economy (manufacturing, for example) have negligible effects on labor market conditions in other parts of the economy (for example, agriculture). On the

other hand, the different parts of the labor market may be so closely linked that changes in one sector have substantial and immediate effects elsewhere.

East Asian labor markets are as well integrated as anywhere. Wage differentials have not been entirely eliminated in the East Asian economies — there are important differences in wages between large firms and small firms, between workers in one sector of the economy and workers in another, and between men and women. Nonetheless, as noted above, wage differentials between agriculture and other economic sectors are an order of magnitude smaller in Korea and Taiwan than in Jamaica and Colombia.

Why is this? The simple answer is the absence in East Asia of the institutional forces making for large wage differentials elsewhere in the developing world. There are five such factors: trade unions, minimum wage laws, government pay policy, multinational corporations, and labor codes. Although these have important effects on wages in particular sectors of economies in Latin America, the Caribbean, Africa, and South Asia, they are of much less importance in East Asia.[8]

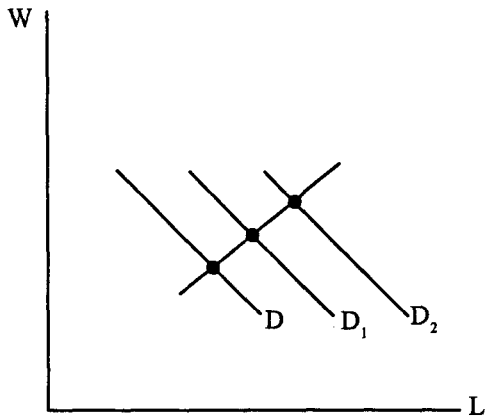
When labor markets are well integrated, as they are in East Asia, labor market analysis must be conducted in a general equilibrium framework rather than a sector-specific one. The problem with using a sector-specific framework may be demonstrated as follows.

Suppose that we have an economy with two sectors, agriculture and manufacturing. Let the economy experience a boom in its manufacturing sector, causing a rightward shift in that sector's demand curve. As shown in Figure 1, in the case of a compartmentalized labor market, the manufacturing boom would result in both higher employment and higher wages in the manufacturing sector. As the boom proceeds, employment and wages both continue to grow.

When this prediction is taken to the data, it is found not to hold in East Asia. In both Taiwan and Korea, the changes in wages in different sectors are unrelated to conditions in that sector. I found for the period 1980-87 that there was no significant correlation between the growth rate of earnings in various industries and the growth of output, of employment, or of exports in those industries (Fields, 1992b). Similarly, for the period from 1978 to 1985, Topel and Kim (1992) found for Korea that there is no relation

[8] *See* Fields and Wan (1989) for details. For evidence on other regions of the world, *see* Berg (1966 and 1969), Reynolds (1969), Turnham (1971), Tidrick (1975), and Knight and Sabot (1980). A contrary view is given by Freeman (1992), who finds only weak empirical evidence for the "distortionist" view of labor markets in developing countries — which, it should be pointed out, is more a statement about the available evidence than about the correctness of either the "distortionist" argument that labor market interventions are bad or the "institutionalist" argument that interventions are good.

Figure 1



Manufacturing Sector

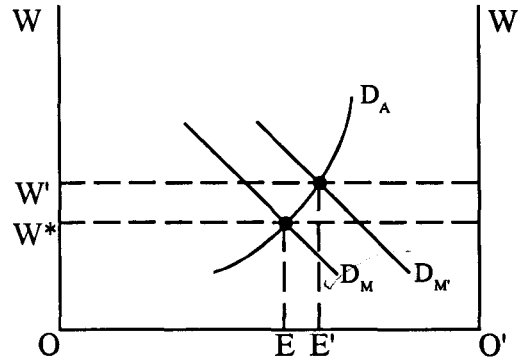
between the rate of wage growth and the rate of employment growth in different industries.

The reason that the evidence is inconsistent with the model of Figure 1 is that a sector-specific model has been applied, inappropriately, in the context of a well-integrated labor market. In Taiwan and Korea, and presumably in Singapore and Hong Kong as well, the various sectors' labor markets are integrated so closely that wage changes are determined by the growth of the economy as a whole and not by the economic growth in any particular sector.

For a well-integrated labor market, we need a general equilibrium model. Such a model is shown in Figure 2. In this figure, the original demand for labor curve in the manufacturing sector is given by D_M relative to the O origin while the demand for labor curve in agriculture is given by D_A relative to the O' origin. Both are downward-sloping functions of that sector's wage. The standard equilibrating forces are assumed to operate to equalize wages across the two sectors and to clear the labor market. For a fixed labor supply OO', the wage that clears the labor market is wage W^*. At this common wage, OE workers are employed in the manufacturing sector and $O'E$ workers in the agricultural sector.

Suppose now that a boom in the manufacturing sector shifts that sector's demand for labor curve from D_M to $D_{M'}$. Wages rise from W^* to W', not only in the manufacturing sector but in the agricultural sector as well; this happens because agricultural employers must raise wages in order to attract or retain a sufficient quantity of labor. We therefore have wages growing at the same rate in the two sectors of the economy. If the different sectors' rates of wage growth are the same, they cannot possibly be

Figure 2



Aggregate Labor Market

correlated with those sectors' rates of employment growth or output growth. This happens because with well-integrated labor markets, wage growth in one sector is a function not of conditions in that sector alone but rather of conditions in the labor market as a whole.

There is a corollary which follows from this analysis. When one sector booms, not only do the workers in that sector benefit but the workers in other sectors benefit equally. Take the case of labor-intensive export-led growth in manufacturing. Manufacturing workers benefit from the higher demand for their labor and the consequent increase in their wages. However, agricultural workers also benefit, some by moving from agriculture to manufacturing, where wages are rising, and others by remaining in agriculture, where wages are also rising. In this way, the gains from export-led growth are transmitted throughout the labor market, improving the earnings of workers in all economic sectors — which is the essence of the East Asian story.

The story told so far in this section has been cast in terms of an integrated labor market which, I have argued, is characteristic of Hong Kong, Korea, Singapore, and Taiwan. In other Asian countries, the labor markets are much less integrated, and a separate analysis is needed for them. This is taken up further below.

The Migration Response to Rising Wages and Improved Employment Opportunities

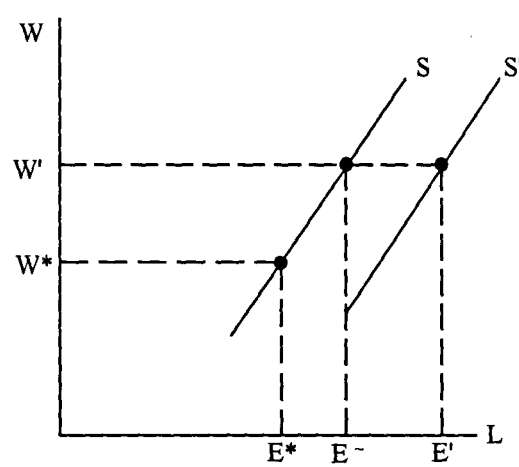
Wages in the East Asian economies have been growing at about a 7 percent real rate per year with essentially full employment. If wages and employment opportunities throughout the world were growing at that same rate,

there would be no particular migration response. But, of course, they have not been growing at the same rate: real wages have been falling in some regions of the world and employment opportunities have been falling in others. As a result, Asian workers who have already migrated to those other regions or who are thinking of migrating to those other regions have less to gain by making a move. Fewer of them would be expected to migrate; more of them would be expected to stay in Asia or return there.

This is the essence of standard labor supply analysis, in which the amount of labor supplied to a particular labor market is an increasing function of the wage and employment opportunities in that labor market and a negative function of the wage and employment opportunities in other labor markets. The increase in wages in East Asia, other things equal, is captured by movement along an upward-sloping labor supply curve, of the type shown in Figure 3. The fact that other things are not equal and conditions elsewhere are deteriorating is represented by a rightward shift of the labor supply curve from *S* to *S'*.

When wages in East Asia rise from *W** to *W'* and wages elsewhere deteriorate, we have an increase in East Asian employment from *E** to *E'*. Emigration is affected for two reasons: some who would have emigrated do not (which is part of the reason for the movement from *E** to *E~*) and some migrants return home (as reflected by the movement from *E~* to *E'*).

Figure 3



East Asian Labor Market

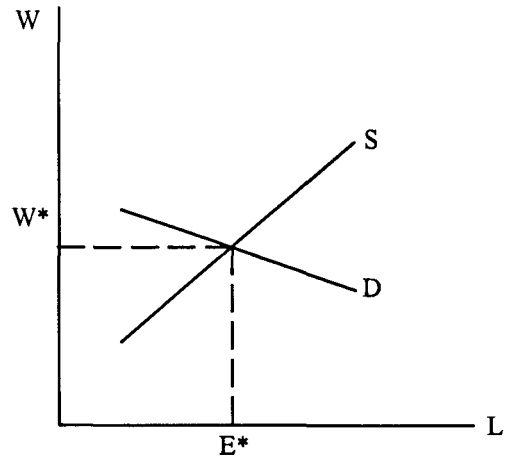
Firms' Responses

At any given time, trade-induced growth produces aggregate labor market conditions of the type shown in Figure 4: the aggregate labor supply function is *S*, the aggregate labor demand function is *D*, the aggregate employment level is E^*, and the economy-wide wage level is W^*. However, the very fact that wages are rising is an inducement to firms to try to do things differently. They have several options.

One is to import labor. To the extent that employees are able to induce the immigration authorities to open up the borders, whether officially or otherwise, the increased effective supply of immigrants shifts the aggregate labor supply curve rightward. This effect, by itself, lowers wages. However, the immigrants are also consumers. To the extent that they buy domestically produced goods and services, the derived demand for labor curve also shifts rightward. However, consumers spend only a fraction of their incomes on domestic products; the rest goes to foreign-made products or (and this is especially important for temporary migrants) to remittances. For these reasons, the rightward shift of the labor demand curve is apt to be less than the rightward shift of the labor supply curve. The net effect of immigration is that wages will be lower than they would otherwise be.

A second effect of rising real wages is to induce firms to change their production technologies by economizing on the use of labor and/or augmenting labor productivity. In some of the Asian NIEs, such economic

Figure 4



Aggregate Labor Market

restructuring was encouraged and actively aided by government. In Singapore until 1979, the government had been following a policy of "wage repression" aimed at keeping wage growth down in order to attract investment and reduce unemployment. In 1979, though, they switched to a policy of "wage correction" intended to restructure the economy away from labor-intensive and toward capital-intensive and skill-intensive industries. The wage correction policy remained in force for a number of years. Similarly, in Taiwan, because of three factors — unskilled labor becoming increasingly scarce, the need for exports to remain competitive, and the large wage differential between Taiwan and the mainland — the government adopted a development plan for the 1980s which emphasized the development of advanced, capital-intensive, labor-intensive industries (Republic of China, 1981). It bears mention that Hong Kong had no explicit policy along such lines; they continued along their largely laissez-faire course.

The third response to rising real wages is for firms to relocate. Products or technologies that may have been profitable when wages were low cease to be profitable when wages get to be sufficiently high. As a result, production shifts elsewhere. One example is the tendency for agricultural production and agricultural employment to shift as economic development takes place (Chenery and Syrquin, 1975, Table 7; Squire, 1981, Table 11; ILO, 1987, Table 1.2). In the historical experiences of Korea and Taiwan, the shares of the labor force employed in agriculture have fallen drastically: in Korea, from 64 percent in 1963 to 19 percent in 1990, and in Taiwan from 50 percent in 1964 to 13 percent in 1990.

Another example is the experience of the world's textile industry. First, there was the movement of textile firms out of the high-wage regions of the industrialized countries to low-wage regions within those same countries (*e.g.*, from the U.S. north to the U.S. south). Then, there was the movement of these firms to lower-wage regions of the world, especially in Asia. Then, within Asia, as wages rose in Japan, the companies moved to Hong Kong and Singapore, then to Korea and Taiwan, and now to Sri Lanka and the Philippines.

The textile industry is indicative of a more general phenomenon: when technology is easily transferable, when factories can relocate without special input requirements, when labor cost is a large part of total cost, and when the products are readily saleable in world markets, the industry in question is likely to be footloose. Export successes lead to increases in the demand for labor, rising real wages, and increased difficulties in competing in world markets. In this way, the comparative advantage that a country gains may be lost through the very process of economic development itself. One need not be a Marxist to see a dialectical contradiction here.

The practical implication is that countries must constantly be on the lookout for competition from below (the next-NIEs are constantly trying to find ways to get in where the NIEs are now) and constantly seeking to identify new opportunities for economic growth and for the growth of productive employment. No firm that has become an important producer in a field should automatically assume that it is insulated from competitive pressures; no country should either.

The Net Effect

In the ways just discussed, firms in developing countries have been able to mitigate the rate of wage increase in their economies. The net effect, however, has been for wages to increase throughout these economies, as documented above.

Rising wages are sometimes decried, for two quite different reasons. Some are concerned about the effect rising wages might have on labor, while others are more concerned about the effect on growth.

Some ask what happens to the poor textile workers who lose their jobs. What kinds of work are they going to do? How are they going to make a living? These questions, I would suggest, misinterpret the dynamic of why these jobs are relocating, at least within Asia. It is not that wage increases force people out of work with no place to go. (This would be the case if wages were pushed up artificially.) The reason wages are rising is that the textile workers are being bid away to other industries through supply and demand. The worker who is bid away is better off. The preceding analysis shows that in a well-integrated labor market, those who are left behind and who earn higher wages in the sectors of origin are also better off.

What about the economy? When the textile industry relocates rather than paying the higher wages, the workers whom that sector chooses not to retain are redeployed to activities in which labor's contribution is higher. Although some observers have expressed concern about the effect of rising wages on development, I would say that rising wages brought about by tight labor markets are a sign that development is taking place. As long as wages are rising because of market pressures and not despite them, such increases ought to be welcomed. More people are living better and working more productively — which, after all, is what economic development is all about.

Refinements and Extensions

The Case of Non-Integrated Labor Markets

Thus far, the analysis has dealt with the case of an integrated labor market. The labor market effects of a growing demand for labor in a country's manufacturing sector would be different in a segmented labor market than in an integrated labor market.

The most useful type of labor market segmentation to analyze is that of economic dualism. The dualistic case captures the fact that one part of a country's labor market may be fundamentally different from another part of that country's labor market, yet the limitation to two sectors makes the model analytically tractable.

Two types of dualistic labor market shall now be discussed. In both, the two sectors are labeled manufacturing (M) and agriculture (A). Both models have a wage in manufacturing (W_M) which is set at a level W_M* *above* the market-clearing level and a wage in agriculture (W_A) which is at the market-clearing level W_A*. Where the two models differ from one another is in their assumptions about how manufacturing sector jobs are gotten.

The first dualistic labor market model assumes that manufacturing sector jobs are gotten only by individuals who search actively in the places where those jobs are located. This is the assumption made famous by Harris and Todaro (1970). Under the Harris-Todaro job search assumption, each worker has two labor market options: (1) stay in agriculture and earn W_A*, or (2) migrate to the city and seek a job at W_M*, which is realized with some probability p. The probability p is in turn taken to be the ratio of manufacturing sector employment (E_M) to manufacturing sector labor force (L_M). Hence, the expected wages under the two labor market options are, respectively, $W_M{}^*E_M/L_M$ and $W_A{}^*$. The labor market reaches a Harris-Todaro equilibrium when these two options yield the same expected wage, and hence:

$$(3)\ W_M{}^*E_M\ /L_M = W_A{}^*$$

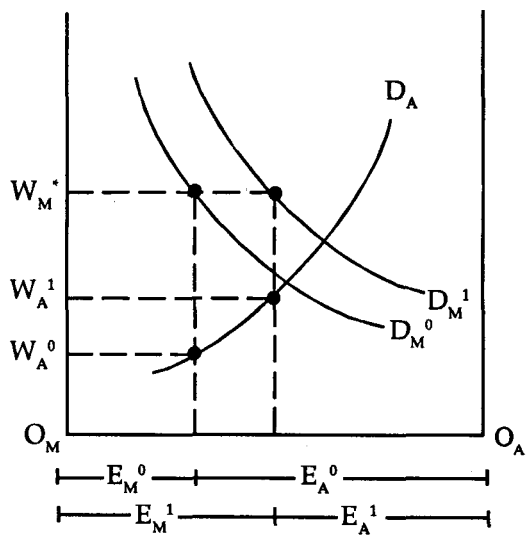
What are the labor market effects of an increased demand for modern sector labor? Suppose manufacturing employment increases from an initial value of $E_M{}^0$ to a new value $E_M{}'$. In the preceding model, we would find no change in the manufacturing wage $W_M{}'$ because that wage is determined at level $W_M{}^*$ above the market-clearing level in the first place. Suppose that the wage in the agricultural sector is sufficiently unresponsive to the size of that sector's labor force so that we can treat W_A as also

being fixed, at level W_A^*. Then an increase in manufacturing employment from E_M^0 to E_M' would increase the manufacturing sector labor force by enough to keep E_M/L_M unchanged — which, since $W_M^* > W_A^*$, implies that L_M rises by more than E_M rises. One effect of an increase in manufacturing employment in such a labor market is therefore to increase unemployment. It also follows immediately that the average wage among those employed rises, yet the total amount of wages paid in the economy would be unchanged.

A different pattern can be derived from a different set of assumptions. Assume a model similar to Harris and Todaro's in all respects except one: now, the job search technology is such that workers in agriculture have just as good a chance of securing a manufacturing job as do the openly unemployed. Clearly, the preferred search option is to work in agriculture at wage W_A until one finds a manufacturing job at wage W_M. Because nobody chooses to search while unemployed, there will be no unemployment in this model. What is interesting, therefore, is the division of employment between the relatively high-paying manufacturing sector and the relatively low-paying agricultural sector.

Figure 5 depicts this situation. It is assumed that the manufacturing sector and the agricultural sector both have downward-sloping demand for labor curves — the manufacturing sector curve (D_M^0) is downward-

Figure 5



sloping with respect to origin O_M and the agricultural sector curve (D_A) is downward-sloping with respect to origin O_A. Employment in manufacturing is determined by the point on curve D_M^0 corresponding to the manufacturing wage W_M^*; that quantity is denoted in the figure by E_M^0. All who are not employed in the manufacturing sector remain in the agricultural sector. The wage that clears the market, enabling all of them to be employed in that sector, is shown as W_A^0.

The growth of the manufacturing sector, other things equal, shifts the demand for labor curve in that sector from D_M^0 to D_M^1. At the rigid manufacturing wage W_M^*, employment increases from E_M^0 to E_M^1. Now, because not as many workers are crowded into the agricultural sector as before, the market-clearing wage in that sector increases, from W_A^0 to W_A^1. What has happened, therefore is that the growth of the manufacturing sector has (1) enabled more people to be employed in relatively high-paying jobs, which in turn (2) raised the wages of those left in the lower-paying jobs. Here, as in the integrated labor market case, the mix of jobs in the economy has improved and the average wage in the economy has increased because of the growth of the manufacturing sector due to exports or some other factor.

We do not have data for other Asian countries in a form that would facilitate a straightforward comparison between these models' predictions and the countries' experiences. Such a study remains to be done.

Non-Economic Motivations for Migrating

This article has stressed the importance of economic factors in the migration decision. This is not to say that monetary gains are the only factors that enter into the migration decision, for indeed non-monetary factors enter directly into equation (1) and other factors (demographic, cultural, ethnic, etc.) affect the form of the $f(.)$ function. My point throughout this paper has been that even when these other factors are allowed for, if economic conditions change, migration behavior will change predictably.

Emphasis has been placed here on "economic migrants," viz., those whose decisions are two-sided, in that they may be presumed to be balancing the likely gains from staying against the likely gains from leaving. Not everyone is motivated primarily by economic concerns. Some, such as refugees escaping war or political persecution, might be termed "non-economic migrants." But even for people such as these, there is an important economic element to their decisions: where to go depends on a comparison of the economic opportunities in alternative possible destinations. I say this to emphasize that in any explanation of the migration transition, economic opportunities must play a central role.

Temporary Migration

Another issue is planned temporary migration by people who migrate with the express intent of returning home at a later stage. Students who emigrate with plans to return home upon completing their studies fall into this category. So, too, do workers who emigrate for a limited period of time. In some cases, this is to earn money to send home as remittances. In other cases, it is to earn enough cash abroad for target income purposes — for example, to be able to set up a new business, afford further education, or get married. For instance, this was the motivation for many Korean workers who emigrated to the Middle East as construction workers (*see* Park, this volume).

The rate of planned temporary migration can be understood primarily in economic terms: the more to be gained by moving overseas rather than staying home, the higher the rate of such migration. At the micro level, the analysis would have to be extended to deal with optimal timing (when to make such a move) as well as optimal stopping (when to end a temporary move and return home). But this is taking us well beyond an understanding of the migration transition per se.

Return Migration

Above, I emphasized that East Asian labor markets are as well integrated as any in the world. There are therefore small earnings differences within those countries relative to the much larger earnings differences across countries.

The analysis of workers' responses to earnings differences presented above was in largely symmetric fashion, as indeed befits the migration transition process. However, migration would be asymmetric to the extent that migrants sever the ties with their home countries and cannot return. One way of severing these ties is to sell one's land, home, or business in the origin before migrating. Although in everyday parlance, people say that they have "no choice" but to stay in their new homes, there really is a choice. Migrants usually have the right to return home, but that may be such a poor option that it is quite understandable why people do not take it. The only time when migrants really and truly have no choice is when migration itself is illegal, so that they face arrest if they return home.

Most migrants have yet another option. Even if conditions in the destination do not prove to be as good as expected and even if ties to the homeland have been severed, there is often the possibility of moving on to

a third location. What may prevent this is the lack of cash for a subsequent move, which raises the next issue: that of financing.

Imperfect Capital Markets

The effects of improved origin economic conditions may be more complex than is allowed for in the basic human capital model given by equations (1) and (2) above. In that model, the better are economic conditions in an area, the lower is outmigration. This might be termed a "negative push effect": better economic conditions in the origin create a smaller incentive to leave. On the other hand, there may well be a second effect which works in the opposite direction: because prospective migrants need to save up to pay the transportation and other costs of a move, the better are economic conditions in the origin, the faster the accumulation of savings and the higher the rate of outmigration. This might be termed a "positive savings effect." If the positive savings effect and the negative push effect are of roughly equal strength in opposite directions, this might explain why empirical studies of a wide range of migrations indicate that although destination economic conditions have the expected positive pull effects ($f_4, f_5, f_6 > 0$ in equation 2), origin economic conditions often have been found to have insignificant effects, *i.e.*, $f_1, f_2, f_3 = 0$.[9] This issue warrants examination in the Asian migration transitions.

Migration Selectivity

There is also the issue of who migrates and who does not. All around the world, migration is selective. Young men migrate from East and Southeast Asia to the Middle East to work as construction workers, while young women from the Philippines migrate to be maids. In Africa, men migrate to the cities to take up manufacturing jobs while the women stay home and do the heavy work on the family farms. In Latin America, young rural

[9] The need to save for outmigration has been observed in a wide variety of migrations including the movement from Europe to North America in the nineteenth and early twentieth centuries, from Mexico to the United States in recent decades, and from Thailand and other Asian countries to the Middle East at present. The statistical significance of destination economic conditions but not of origin conditions has been observed in studies of internal migration in the United States (Greenwood, 1975; Fields, 1979), Colombia (Fields, 1982), and Venezuela (Schultz, 1982). These offsetting effects may also explain why Kuznets (1982) found in an intercountry study that the rate of migration out of agriculture was lower in countries with very high shares of workers in agriculture than in countries with intermediate shares of workers in agriculture.

women migrate to the cities to be maids; machismo makes such a thing inconceivable for young Latin American men.

For this selectivity to help explain the migration transition, it would have to be the case that the supply of a particular type of migrant dried up, and for this reason migration flows ended. I know of no such instance, which is why I have not included specific attention to who migrates in my explanation of the migration transition.

The Role of Government Policy

Government policy can have a crucial influence on international migration. All governments seek to control their borders and admit immigrants and/or guestworkers only to the extent deemed warranted by economic and/or social considerations. But in addition, immigration and emigration can be affected by government policy in a whole host of ways. For instance, governments can affect the flow of remittances, which can be a crucial source of capital for economic development. The Korean government deliberately encouraged overseas migration of workers and construction companies to the Middle East, but required that some part of the migrants' wages be paid in Korea in order to finance domestic economic growth (Park, 1991). By contrast, although Sri Lanka had no such mandatory remittance policy, voluntary remittances were so large that they brought in as much foreign exchange as did tea, that country's major export. Governments can also affect the movement of their people through mechanisms such as bonding workers who are sent overseas for education and restricting exit visas for workers and/or their families. The merits of such policies are hotly debated, and I shall not get into that discussion here.

The point is that immigration policy is itself something that can be chosen. A country's development needs must be kept in mind when such policies are formulated. And in discussing what can and should be done to influence and regulate immigration, an eye should always be kept on what is feasible — a point sometimes lost in the heat of debate, even in the more "sophisticated" countries.

Summary

My interpretation of the migration transition in Asia can be summed up as follows:

(1) The demand for labor curve shifted rapidly in the newly industrializing economies of Asia, primarily (but not exclusively) because of export-led growth of a labor-intensive character.

(2) The rightward shift of the demand for labor curve led to improvements in labor market conditions, first through increased employment opportunities and then through rising wages.

(3) The labor markets in each of these economies are well integrated. As a result, the improvements that took place were transmitted throughout each of them to workers in all sectors.

(4) As wages and employment opportunities got better and better, more and more of those who previously were willing to emigrate were no longer willing to do so; they either returned home or stayed home.

(5) Firms tried to mitigate wage increases in several ways: (a) by importing labor to the extent that immigration allows, legally or otherwise, (b) by shifting to labor-saving, labor-augmenting technologies, and/or (c) by moving overseas.

(6) Still, the net effect was rapidly improving earnings opportunities in the home countries, hence the migration transition.

REFERENCES

Abella, Manolo
1990 "Structural Change and Labor Migration Within the Asian Region." Paper presented at the Expert Group Meeting on Cross-National Labor Migration in the Asian Region: Implications for Local and Regional Development, United Nations Centre for Regional Development, Nagoya, November.

Agarwala, Ramgopal
1984 "Price Distortions and Growth," *Finance and Development*, March.

Alburo, Florian
1994 "Trade and Turning Points in Labor Migration," *Asian and Pacific Migration Journal* (this volume).

Amsden, Alice H.
1989 *Asia's Next Giant: South Korea and Late Industrialization*. New York: Oxford University Press.

Bai, Moo Ki
1985 "Industrial Development and Structural Changes in Labor Market: The Case of Korea." In *Industrial Development and Structural Changes in Labor Market - Korea and Southeast Asia*. By Moo Ki Bai and Chang Nam Kim. Tokyo: Institute of Developing Economies.

Balassa, Bela
1982 *Development Strategies in Semi-Industrial Economies*. Baltimore: Johns Hopkins University Press.

Berg, Elliot
1969 "Wage Structure in Less Developed Countries." In *Wage Policy Issues in Economic Development*. Edited by A.D. Smith. London: Macmillan.

———
1966 "Major Issues of Wage Policies in Africa." In *Industrial Relations and Economic Development*. Edited by A.M. Ross. New York: Macmillan.

Bhagwati, Jagdish and T.N. Srinivasan
1978 "Trade Policy and Development." In *International Economic Policy: Theory and Evidence*. Edited by Rudiger Dornbusch and Jacob A. Frenkel. Baltimore: Johns Hopkins University Press.

Bradford, Colin
1986 "East Asian 'Models': Myths and Lessons." In *Development Strategies Reconsidered*. Edited by John P. Lewis and Valeriana Kallab. Washington: Overseas Development Council.

Chenery, Hollis B. and Moises Syrquin
1975 *Patterns of Development, 1950-1970*. London: Oxford University Press.

Ehrenberg, Ronald G. and Robert S. Smith
1991 *Modern Labor Economics*. New York: Harper/Collins.

ESCAP (United Nations Economic and Social Commission for Asia and the Pacific)
1990 *The Restructuring of the Developing Economies of Asia and the Pacific in the 1990s*. New York: ESCAP.

Fei, John C.H. and Gustav Ranis
1975 "A Model of Growth and Employment in the Open Dualistic Economy: The Cases of Korea and Taiwan," *The Journal of Development Studies*, January.

———
1964 *Development of the Labor Surplus Economy: Theory and Policy*. Homewood, IL : Irwin.

Fields, Gary S.
1992a *Changing Labor Market Conditions and Economic Development in Hong Kong, Korea, Singapore, and Taiwan*. Ithaca, NY: Cornell University.

———
1992b "Living Standards, Labor Markets, and Human Resources in Taiwan." In *Taiwan: From Developing to Mature Economy*. Edited by Gustav Ranis. Boulder: Westview Press.

———
1985 "Industrialization and Employment in Hong Kong, Korea, Singapore, and Taiwan." In *Foreign Trade and Investment*. Edited by Walter Galenson. Madison: University of Wisconsin Press.

———
1982 "Place-to-Place Migration in Colombia," *Economic Development and Cultural Change*, April.

———
1979 "Place-to-Place Migration: Some New Evidence," *Review of Economics and Statistics*, February.

Fields, Gary S. and Henry Wan, Jr.
1989 "Wage-Setting Institutions and Economic Growth," *World Development*, September.

Freeman, Richard
1992 "Labor Market Institutions and Policies: Help or Hindrance to Economic Development?" *World Bank Economic Review*.

Greenwood, Michael
1975 "Research on Internal Migration in the United States: A Survey," *Journal of Economic Literature*, June.

Harris, John and Michael Todaro
1970 "Migration, Unemployment, and Development: A Two Sector Analysis," *American Economic Review*, March.

International Labor Office
1987 *World Labor Report*, No. 1.

Knight, John B. and Richard H. Sabot
1980 *Why Wages Differ*. Washington: World Bank.

Krause, Lawrence B.
1985 "Introduction." In *Foreign Trade and Investment*. Edited by Walter Galenson. Madison: University of Wisconsin Press.

Krueger, Anne O.
1988 "The Relationships between Trade, Employment, and Development." In *The State of Development Economics*. Edited by Gustav Ranis and T. Paul Schultz. New York: Basil Blackwell.

———
1981 *Trade and Employment in Developing Countries. Vol. 1: Individual Studies*. Chicago: University of Chicago Press.

———
1978 *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences*. Cambridge, MA: Ballinger Press for the National Bureau of Economic Research.

Kuznets, Simon
1982 "The Pattern of Shift of Labor Force from Agriculture, 1950-70." In *The Theory and Experience of Economic Development*. Edited by Mark Gersovitz *et al.* London: George Allen and Unwin.

Lewis, W. Arthur
1958 "Unlimited Supplies of Labor: Further Notes," *Manchester School*, January.

———
1954 "Development with Unlimited Supplies of Labor," *Manchester School*, May.

Little, Ian
1981 "The Experience and Causes of Rapid Labor Intensive Development in Korea, Taiwan, Hong Kong and Singapore and the Possibilities of Imitation." In *Export-Led Industrialization and Development*. Edited by Eddy Lee. Bangkok: ILO-ARTEP.

Little, Ian, Tibor Scitovsky, and Maurice Scott
1970 *Industry and Trade in Developing Countries*. Paris: OECD.

Pang, Eng Fong
1994 "An Eclectic Approach to Turning Points in Migration," *Asian and Pacific Migration Journal* (this volume).

Park, Young-Bum
1994 "The Turning Point in International Migration and Economic Development in Korea," *Asian and Pacific Migration Journal* (this volume).

———
1991 *International Labor Migration and Labor Market Developments: Past Patterns and Emerging Issues in Korea*. Seoul: Korea Labor Institute.

Ranis, Gustav
1989 "The Role of Institutions in Transition Growth: The East Asian Newly Industrializing Countries," *World Development*, September.

———
1981 "Challenges and Opportunities Posed by Asia's Superexporters: Implications for Manufactured Exports from Latin America," *Quarterly Review of Economics and Business*, Summer.

Republic of China
1981 *Economic Development, Taiwan, Republic of China*. Taipei.

Reynolds, Lloyd G.
1969 "Relative Earnings and Manpower Allocation in Developing Economies," *The Pakistan Development Review*, Spring.

Schultz, T. Paul
1982 "Lifetime Migration within Educational Strata in Venezuela: Estimates of a Logistic Model," *Economic Development and Cultural Change*, April.

Scitovsky, Tibor
1986 "Economic Development in Taiwan and South Korea, 1965-1981." In *Models of Development*. Edited by Lawrence J. Lau. San Francisco: ICS Press.

Sjaastad, Larry A.
1962 "The Costs and Returns of Human Migration," *Journal of Political Economy*, Supplement, October.

Skeldon, Ronald
1994 "Turning Points in Labor Migration: The Case of Hong Kong," *Asian and Pacific Migration Journal* (this volume).

Squire, Lyn
1981 *Employment Policy in Developing Countries*. New York: Oxford University Press.

Tidrick, Gene M.
1975 "Wage Spillover and Unemployment in a Wage-Gap Economy: The Jamaican Case," *Economic Development and Cultural Change*.

Topel, Robert and Dai-Il Kim
1992 "Labor Markets and Economic Growth: Lessons from Korea's Industrialization, 1970-1990." Paper presented at the Universities Research Conference: The Labor Market in International Perspective, National Bureau of Economic Research, Cambridge, MA, April.

Turnham, David with I. Jaeger
1971 *The Employment Problem in Less Developed Countries*. Paris: OECD Development Centre.