Managing Foreign Labor in Singapore and Malaysia: Are There Lessons for GCC Countries?

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The author gratefully acknowledges the valuable assistance of Branko Milanovic and Vijay Gupta.

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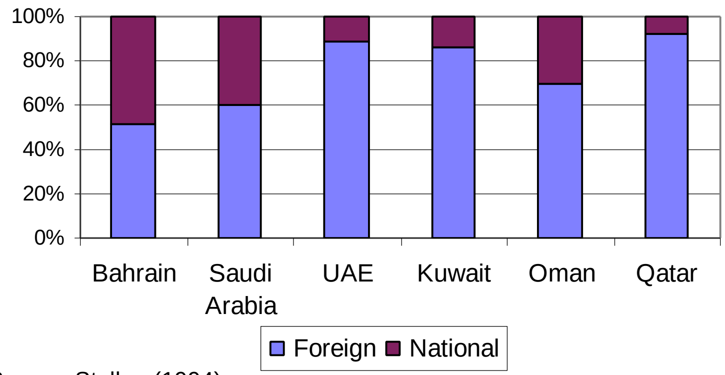
I. Overview

In a climate of increasing economic integration and globalization, the exchange of goods and services has played a central role with respect to the growth of economies, at both the country and the regional levels. Labor migration has also been an important phenomenon. Whereas labor flows into most OECD countries peaked earlier in the century, with migration to Europe and the U.S. especially high during post-conflict periods, the emerging economies of East Asia and the Middle East have been affected by increasing international labor mobility during the past twenty-five years. Labor inflows and outflows have occurred both intra-regionally and across continents, facilitated by advances in communication, transportation and technology exchange, and driven by increasingly competitive international markets.

In the oil-producing countries of the Middle East, rapid development financed by petroleum revenues resulted in robust economic growth, infrastructure development and the expansion of public goods provision. This pattern was especially strong during the mid-to-late 1980s in the wake of high oil prices. Despite high population growth rates, the rising aggregate demand attendant to steadily increasing incomes led to excess labor demand that could not be met by domestic labor resources. To resolve this imbalance, foreign workers were "imported" to fill the gaps. Over time, many of the GCC (*Gulf Cooperation Council*) countries became highly centralized economies dominated by the public arena, consisting primarily of a large government administration and publicly owned, oil-related industries. Labor markets in this region exhibit considerable segmentation along public/private lines that is in fact accompanied (and exacerbated) by distortionary employment and wage policies (World Bank, 1994, 1995a, 1996). Moreover, the distinction and separation between domestic and foreign workers has become more apparent in line with the growing size of the foreign labor force in the region. The presence of expatriate workers has in fact outgrown the indigenous workforce, and typically represents a large majority, as shown in Figure 1 below. In Kuwait, Qatar and the United Arab Emirates, over 80 percent of the labor force is foreign (Stalker, 1994).

In response to rapidly growing foreign populations, many countries introduced mechanisms to stem the inflow of workers and encourage the employment of nationals; measures typically included permit requirements for foreign workers as well as incentives to promote job creation targeted specifically to nationals. Some of these policies actually contributed to the proliferation of foreign workers, however. In Kuwait, for example, the decision to create public sector jobs for nationals led to high wage expectations among Kuwaitis, due to relatively high wages and generous benefits in the public sector, and insufficient labor supply to the private sector. On the demand side, employers must finance the military service obligations of Kuwaiti males, rendering foreign workers relatively less expensive. These price and quantity controls effectively distorted the labor market in Kuwait such that private sector labor demand had to be met by an ever-present supply of cheap foreign workers. In Bahrain, all foreign workers in the public sector other than those judged to be indispensable were replaced with Bahraini nationals. High public sector compensation compared to the private sector led to high reservation wages and queuing for government jobs by Bahraini nationals, generating even greater demand for foreign workers to fill unskilled jobs despite the additional costs of work permits. Across the region, the composition of the pool of foreign workers has evolved considerably over time, and the available supply has increased in conjunction with globalization. Moreover, policies to limit foreign labor face considerable challenges because they may be counter-productive with respect to economic growth. The tension between competing objectives to generate employment through sustainable economic growth on the one hand, and to limit the number of expatriate workers on the other hand, has impeded the efforts of GCC policy makers on both fronts.

Figure 1
Foreign Labor in GCC Countries, 1990
% of Labor Force



Source: Stalker (1994).

Are there lessons from other regions that provide insight into effective labor management with respect to foreign labor? Among the emerging East Asian economies, Singapore and Malaysia have experienced sustained and robust economic growth with considerable reliance on foreign labor. As labor importers, their policy experience and labor market outcomes are instructive for policy makers in the GCC countries. This paper analyzes the policies used to manage foreign labor in Singapore and Malaysia in terms of immigration policies as well as related measures that contribute to their successful implementation.

The paper is organized as follows. Singapore's and Malaysia's immigration policies are laid out in section II, followed by a discussion in section III of additional measures that complement immigration policy, together forming a comprehensive and effective strategy to manage foreign labor. The fourth section describes evidence of trends in the composition of labor with respect to citizenship, and section V presents the results from regression analysis on Malaysian household data to assess the determinants of earnings. The paper then explores additional factors contributing to the success of foreign labor policy in Singapore and Malaysia, as well as policy shortcomings, evidenced by large informal economies staffed mostly by illegal aliens (sections VI and VII, respectively). Finally, section VIII concludes the analysis with a discussion of the lessons for GCC countries with respect to the policy experience of Singapore and Malaysia.

II. Foreign labor management policies in Singapore and Malaysia

Although Singapore and Malaysia have relatively smaller foreign shares of total employment compared to the GCC experience, they nevertheless play host to vast numbers of expatriates. Malaysia's large formal economy employs 1.2 million foreigners (plus an estimated 800,000 illegal aliens), representing a moderate but still significant 13 percent of the labor force (according to the Malaysian Ministry of Human Resources).[1] More than one-fourth of Singapore's labor force consists of legal foreign workers, numbering an estimated 500,000 in 1997 (Wong, 1997; *Economic Survey of Singapore,* 1996). Both Singapore and Malaysia manage their large expatriate populations through complex and tightly regulated immigration policy.

Singapore

Singapore's foreign labor management relies on immigration regulations in the form of work permits. There are four different types of permits that control both the quantity and quality of labor entering Singapore. Permits are differentiated by skill level, sending country, permit duration, and sector of work, and a variable levy is charged according to classification. For example, a permit is granted to a

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1 The foreign labor share including illegal workers is estimated at 20 percent.

specific firm at the request of the employer. The permit application must specify the prospective employee, his/her country of origin, the job to be performed and the duration of the job. The number of permits granted to employers is subject to a dependency ceiling, or dependency ratio, which is defined as the maximum share of foreign workers in a firm's total employment. Dependency ceilings are set for each sector and are uniform across firms. Although this restriction is unduly rigid, since it imposes a single limit that is unlikely to be optimal for all firms within a sector, the Singapore authorities apparently have the capacity to monitor and enforce it.[2] The four permit types are: (i) work permit for unskilled workers; (ii) work permit for skilled workers; (iii) employment pass; and (iv) entry/re-entry permit (see Table 1 for a detailed summary). Higher levies apply to the less-skilled categories, thus discouraging over-reliance on cheap unskilled foreign labor.

Work permit for unskilled workers. Unskilled workers who fall below a maximum salary cap equal to S$2,000 per month (equivalent to US$1,190 per month) are eligible for a work permit.[3] Durations can last up to two years and are renewable up to a cumulative total of 4 years. The monthly fee for an unskilled work permit starts at S$330 (US$196), which applies to the service and harbor craft sectors, domestic workers (e.g. maids, gardeners) and manufacturing firms whose dependency ratio is under 40 percent. For employees of manufacturing firms who fall between the dependency ratios of 40 and 50 percent, the monthly fee is S$400 (manufacturing firms are subject to a two-tiered dependency ceiling). The maximum fee, equal to S$470 per month, is applicable to construction workers. Employers are required to post a S$5,000 (almost US$3,000) security bond for each worker, in order to guarantee repatriation following the expiration of the permit. Additional restrictions to dissuade permanent settlement of unskilled foreign workers include limits to personal freedoms such as prohibiting reunion of workers' dependents, marriage to a Singapore national and pregnancy. The extreme restriction of personal liberties is illustrated by the fact that women are subject to mandatory pregnancy tests and are deported in the case of a positive result. Workers holding unskilled work permits are ineligible for permanent residence and must leave the country within 7 days of permit expiry, upon threat of deportation. The dependency ratios are lowest for services, at 1:3 (one foreign worker for every three Singaporean workers), with

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2 A flexible system of tradable dependency ceilings could achieve a more efficient allocation of foreign workers that responds to firm-specific needs while achieving the same aggregate foreign employment objective. There is a rich literature on the related concept of tradable pollution rights.

3 Throughout the paper, conversions from Singapore to U.S. dollars are calculated using the average exchange rate over the first three quarters of 1998 equal to 1.68S$/US$ (International Monetary Fund, 1998).

manufacturing evenly split between foreigners and nationals; harbor craft firms, on the other hand, are predominantly foreign, with dependency ratios set at 9:1.

Work permit for skilled workers. Skilled workers who fall below the same monthly salary cap (S$2,000) are eligible for work permits up to 3 years' duration that are renewable up to a total of 10 years. They are available to workers in the construction, marine and harbor craft sectors, subject to the same sectoral dependency ratios for unskilled workers above. Similarly, employers must purchase a security bond, but workers are eligible for permanent residence and are not subject to limits on personal freedoms, unlike their unskilled counterparts. The permit fees are in fact lower for skilled workers compared to the unskilled, at only S$200 per month in marine and harbor craft firms and S$100 in the construction sector, resulting in relatively less disincentive to hire skilled foreigners compared to unskilled foreigners. Moreover, for 3-year permits, employers are exempt from paying the permit fee.

Employment pass. Skilled workers with professional or tertiary qualifications can be hired with an employment pass if their compensation exceeds S$2,000 per month. Employment passes are valid for up to 5 years and are renewable. Although the S$5,000 security bond is still required, employment pass holders are eligible for permanent residence after 6 months. There are no dependency ceilings imposed on this category of workers and no limits to personal freedoms. Finally, no fee is charged to obtain a pass.

Entry/Re-entry permit. Permanent residents, or skilled workers holding work permits or employment passes who are also eligible for permanent residence, can be issued an entry/re-entry permit that is valid for up to five years and renewable. Also eligible for this type of permit are the skilled and professional staff of foreign firms choosing to relocate to Singapore. Entry/re-entry permits can also be obtained for employees of firms that meet some minimum capital investment criteria. No security bond is required, no fee is charged, and services to ease the settlement and assimilation of workers into Singapore society are provided by the government-established Social Integration Management Service to encourage permanent integration of workers with desirable skills into the labor force. Additional incentives for permanent residency include access to subsidized health care, education and housing. Furthermore, permanent residents are eligible to apply for citizenship after a period of 2-10 years.

Table 1: Singapore's Foreign Labor Management System of Permits and Passes								
Type of permit	**Type of worker**	**Duration**	**Sector**	**Levy[1] (monthly)**	**Maximum Dependency Ratio (Foreign: Local)**	**National-ities Prohibited**	**Security Bond**	**Commen**
Work Permit - Unskilled	Unskilled workers with maximum salary of S$2000 per month.	up to 2 years, renewable annually for a total of up to 4 years.	Manu-facturing	S$330 (< 40% depend.); S$400 (betw. 40% and 50% depend).	1:1	NTS[2]	S$5,000	Strictly lir freedoms of families pregnancy within 7 d expiration permanent
			Construc-tion	S$470	5:1			
			Marine	S$385	3:1			
			Service	S$330	1:3	NTS[2]		
			Harbor Craft	S$330	9:1			
			Domestic Worker	S$330	Na	PRC[3]		
Work Permit - Skilled	Skilled workers with maximum salary of S$2000 per month.	up to 3 years, renewable for a total of up to 10 years.	Construc-tion	S$100	5:1	NTS[2]	S$5,000	Eligible fo residence; 3-year per exempt fr
			Marine	S$200	3:1			
			Harbor Craft	S$200	9:1			

1/ Exchange rate averaged over January-September, 1998: 1.68S$/US$.
2/ NTS denotes non-traditional source countries: Indonesia, Thailand, Sri Lanka, India, Bangladesh, Philippines, Myanmar.
3/ PRC denotes workers from the People's Republic of China.

Table 1: Singapore's Foreign Labor Management System of Permits and Passes (continued)								
Type of permit	**Type of worker**	**Duration**	**Sector**	**Levy (monthly)**	**Maximum Dependency ratio (Foreign: Local)**	**National-ities Prohibited**	**Security Bond**	**Commen**
Employment Pass	Skilled workers with professional or tertiary qualifications with a minimum salary of S$2000 per month.	up to 5 years, renewable.	na	none	na		S$5,000	Eligible f residence months.
Entry/ Re-entry Permit	Permanent residents or those eligible with skilled work permit or employment pass; skilled and professional staff of firms re-located to Singapore; firms meeting min. capital criteria.	Renewable every 5 years.	na	none	na		none	Incentive integrate into perm force; pe residents citizensh years.

Malaysia

Immigration policy in Malaysia consists of a system similar to that found in Singapore, namely a series of three permit types: (i) a visit pass for temporary employment; (ii) a visit pass for professional employment; and (iii) an employment pass. In applying for a permit, employers identify the prospective employee and specify the job to be performed and its duration. As such, permits are firm- and job-specific and are non-transferable. Furthermore, foreign workers are subject to age and nationality restrictions (Table 2 contains a detailed summary of the system).

Visit pass for temporary employment Unskilled and semi-skilled workers are eligible for visit passes of short duration, up to one year. Skilled workers are also eligible if they fall below the salary cap of RM1,200 per month (equivalent to US$302).[4] Workers must be between 18 and 45 years of age, and no resettlement of dependents in Malaysia is allowed. A security deposit is required to cover the cost of repatriation following permit expiry, and levies are imposed at differential levels depending on skill. Visit pass levies range from RM840 per year for unskilled manufacturing jobs, to RM1,200 per year for semi-skilled jobs, to RM1,800 for skilled workers in manufacturing. Viewed as a payroll tax, the permit fee for skilled workers is equivalent to at least 12.5 percent of the wage. Only citizens of the Philippines, Indonesia and Thailand are issued passes for domestic/household employment; for the manufacturing, construction, plantation and service sectors, the list of eligible nationalities is extended to include Bangladeshis and Pakistanis. There are minimum income requirements for households to employ domestic workers, in order to minimize fraud, and visit pass fees for domestic workers are tax deductible for employers.

Visit pass for professional employment Workers on short-term contracts with professional qualifications can be retained with a visit pass for professional employment. Contract duration is up to 12 months, and does not permit resettlement of families in Malaysia. A security bond is required by employers hiring foreign workers under this type of pass.

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[4] Conversions to U.S. dollars are made using the average exchange rate over the first three quarters of 1998 equal to 3.97RM/US$ (International Monetary Fund, 1998).

Table 2: MalaysianForeign Labor Management System of Passes

Type of permit	Type of worker	Duration	Sector	Levy[1] (annual)	Nationalities Allowed	Security Deposit	Comments
Visit Pass - Temporary Employment	Unskilled and semi-skilled workers, age 18-45 years.	up to 1 year, renewable up to 5 yrs. in Plantation sector, 3 yrs. in Manf., Services	Manu-facturing	Unskilled: RM840; Semi-skilled: RM1,200; Skilled: RM1,800	Bangladesh, Philippines, Indonesia, Pakistan, Thailand.	yes	Pass is employ specific; no resettlemen Malaysia.
			Construction	yes			
			Plantations	yes			
			Services	yes			
			Domestic Worker	yes	Philippines, Indonesia, Thailand.		Minimum inco requirements f domestic help (RM2,000/mo Indonesian or RM4,000/mor Filipino maids are tax deduct
Visit Pass - Professional Employment	Professional workers on short-term contracts with any agency.	up to 1 year	na				Pass is employ specific; no resettlemen Malaysia.
Employment Pass	Skilled workers with a minimum salary of RM1,200 per month.	at least 2 years, renewable for 5 years.	Manu-facturing	Technical: RM2,400; Professional & middle management: RM3,600; Upper management: RM4,800			Can obtain vis dependents (i. pass); number allowed depen paid-up capita
			Other	yes			

1/ Exchange rate averaged over January-September, 1998: 3.97RM/US$.

Employment pass. Skilled workers on contracts of at least 2 years' duration are eligible for employment passes, provided that compensation exceeds the minimum monthly salary requirement of RM1,200. The levies range from RM2,400 for technical personnel, to RM3,600 for professionals and middle managers, and up to RM4,800 for upper level managers. Passes are renewable up to 5 years, and workers holding employment passes can obtain visas for their dependents. The number of key posts awarded to foreign workers is limited and depends on the level of a firm's foreign paid-up capital.

Permit system objectives

The growing presence of foreign workers in Singapore and Malaysia can be explained by excess demand for labor associated with rapid economic growth, as well as the relatively cheaper cost of foreign labor. This is attributable to the lower reservation wages of foreigners seeking employment opportunities outside their home country labor markets which are characterized by excess labor supply and low wages. In addition, expatriates generally tolerate poorer working conditions and physically demanding jobs compared to Singapore and Malaysian nationals who are better-trained and have higher wage expectations. Moreover, foreign workers in Malaysia do not benefit from the same social protection in terms of the pension savings scheme requiring employer and employee contributions for Malaysian nationals, effectively lowering the cost of foreign labor further. As a result, strong demand for foreign workers in an environment of robust economic growth led to the emergence of a large foreign labor force.

In order to stem the influx of expatriate labor and encourage the employment of nationals, the system of variable permits and fees effectively raises the cost of foreign labor, and enables the targeting of workers to fill the skill gaps that emerge in the context of sustained growth. However, raising labor costs negatively affects output, thereby impeding the over-arching objective of economic growth. There may be additional objectives with respect to foreign population size and labor force composition as well. These conflicting objectives highlight the tremendous challenges in designing effective policies to achieve various results; moreover, policy objectives evolve over time. In general, immigration policy in Singapore and Malaysia seeks to manage foreign labor flows and at the same time facilitate growth by targeting an appropriate skills mix. It accomplishes this by directly affecting both the demand and supply of foreign labor. Singapore's policy provides an illustration: unskilled foreign labor demand is discouraged via permit fees, which are in fact higher compared to skilled workers, and by tightly restricting personal freedoms and the immigration of dependents.

Singapore's policy explicitly distinguishes between unskilled and skilled workers, targeting the former for only temporary jobs by effectively placing them in a revolving pool of workers with high rates of turnover. This result is reinforced by sector-specific targeting of workers by nationality and gender, leading to segregation and gendering into single-sex communities that are marginalized from Singaporean society (Wong, 1997).[5] In addition to generating hiring disincentives through price signals (i.e. permit fees and repatriation bonds), there is an economic justification behind raising the price of foreign labor, namely to cover the social cost of hosting foreign workers in terms of their consumption of public goods. This is addressed in part by requiring employers to provide and finance housing for foreign employees; Singapore's government bears some of this cost through public housing targeted to foreigners and incentives to construct housing. Highly skilled workers, by contrast, are in demand especially in the context of greater international competition (e.g. in the financial services sector); as a result, they are encouraged to emigrate through minimal restrictions on residence and naturalization, facilitated by non-wage incentives.

Malaysia's immigration policy is also characterized by skills targeting, but differs from the Singapore model due to different foreign labor needs with respect to sector and skill demand. Whereas Singapore's status as a city-state with a small domestic population of 3.6 million implies that excess labor demand was met by outside resources, this was not the case in Malaysia, whose population of 21 million is geographically disperse. Full employment of Malaysian citizens was not reached until 1991, compared to the early 1970s for Singapore. Despite some fundamental differences in economic structure, immigration policy in both countries targets unskilled foreign workers for temporary contracts, whereas skilled workers can remain on long-term contracts, albeit subject to higher permit fees relative to unskilled workers in the case of Malaysia.

III. Complementary policy measures

An assessment of Singapore's and Malaysia's management of foreign labor cannot be limited to immigration policy alone. An array of factors contributes to particular labor outcomes and strong

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5 For example, Thai and Bangladeshi workers are targeted for construction jobs, whereas manufacturing and service sector firms can only hire foreigners from traditional source countries. There are risks associated with ethnic specialization, however, illustrated by the political economy issues that emerged in the aftermath of the Filipina maid abuse incident. The domestic service sector's over-reliance on a single source country caused an exodus of domestic workers returning home to the Philippines. While this did not have broad economic implications, the effect could be significant in a larger or higher value-added industry.

economic growth; this section will examine the relevant nationalization policies, macroeconomic variables and labor market regulations and institutions that affect foreign labor and complement immigration policy and growth objectives.

Nationalization

In conjunction with Malaysia's existing immigration rules, policy makers introduced several nationalization measures in an effort to encourage firms to hire Malaysian citizens instead of foreign workers. Under the Seventh Malaysia Plan (1996-2000), labor market policies focus on promoting local (i.e. Malaysian) workers through flexible work arrangements and the re-employment of qualified retirees. Additional measures include incentives to increase labor mobility toward areas with excess labor demand by providing transportation, for example, and to encourage the replacement and repatriation of expatriate workers. By directly increasing the demand for Malaysian labor, nationalization policies effectively reinforce the permit system of foreign labor management.

It is important to consider foreign labor management policies (both immigration and nationalization policies) in the context of on-going measures to promote the employment of Malays in particular. Malaysia has a long history of multi-culturalism and ethnic diversity; in 1975, indigenous Malays represented only half of the population, while ethnic Chinese represented another 35 percent and the remaining share was mostly Indian (Blau, 1986). The share of Malays in the total population has grown, and is projected to reach 63 percent by the year 2000 (*The Star Online*, May 7, 1996). Economic activity tends to be segmented along ethnic lines, with Chinese Malaysians dominating the commercial sector. Malays fare the least well; they live mostly in rural areas and have lower average incomes and higher rates of poverty. To address this disparity, affirmative action measures were adopted in the early 1970s to encourage the employment of Bumiputra (i.e. Malay) citizens. Despite the intervening period of strong economic growth and increasing incomes, Malay nationals continue to occupy the lower echelons of income distribution. In 1987, poverty incidence was estimated at 21 percent for Malays, 9 percent for Indians and only 4 percent for Chinese (Ahuja, 1997; World Bank, 1991). The 1995 household survey data indicates that two-thirds of the poor are Malay, and although poverty incidence for the entire population is between 8 and 10 percent, some 13 percent of Malays fall below the poverty line (according to calculations by Branko Milanovic).[6]

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[6] N.B. The poverty incidence definitions used in the 1987 and 1995 analyses are slightly different.

Macroeconomic environment

The macroeconomic context in which the labor market functions is central to labor outcomes, and is in turn affected by the regulatory and institutional framework governing employment and wages. Both Singapore and Malaysia have established macroeconomic environments conducive to growth, fostering private sector activity and assigning a distinct role to foreign labor. Labor market regulations and institutions affect the demand and supply of both domestic and foreign labor, thereby affecting economic growth. In general, Singapore can be characterized as a highly regulated society in which the state influences economic as well as civic behavior through restrictive rules under which individual rights and preferences are subjugated to the goals of the state. The Singapore labor market, by contrast, operates relatively free from state interference in the form of protective labor legislation. There is no minimum wage, free "conciliation" and arbitration services are provided to workers and employers for dispute resolution, and workers are permitted to join unions, all of which are government-sponsored (private unions were abolished in the 1960s).

On the other hand, the government of Singapore plays a central role in wage determination. In 1972, a tripartite commission was established to address labor unrest; the National Wages Council was formed as a consultative body to advise the government on wage policy by recommending wage increases that are linked to observed productivity gains and are consistent with overall macroeconomic policy objectives. Beginning in 1988, a flexible two-part wage structure was widely implemented, consisting of a base wage and a variable wage portion, respectively averaging 84 and 16 percent of total average wages in 1995. Increases in the variable wage are linked to productivity growth, thereby promoting worker productivity and allowing employers greater flexibility to make more economic, less political decisions regarding incomes policy. Representatives from government, private employers and employees mutually agree on the proposed wage increases, heretofore always accepted by the government. The Council's recommendations have gained credibility over time, and were adopted by 70 percent of private firms in 1985.[7] As a result, Singapore has successfully kept inflationary pressure in check in an environment of rapid economic growth. The Council's collaborative and representative structure contributes to social cohesion (not difficult in periods of growth, although the 1985-87 episode of an actual decline in wages did not result in disruptive popular dissent); however, its effectiveness is facilitated by the fact that unions are

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7 This represents a marked improvement since 1972, when only 9 percent of private firms adopted the guidelines. Such broad consensus despite the fact that the recommendations are strictly optional indicates a wide and increasing acceptance of the Council's wage-setting process. For a discussion, see Taschereau and Campos (1997).

government-approved and generally pursue employment-maximizing objectives.

Despite a certain degree of government interference in wage-setting through the National Wages Council, Singapore's labor market responds to market signals, in part because wage policies provide the right incentives. The special consensus-building role of Singapore's tripartite advisory council is mirrored by a similar institution established in Malaysia in 1991. Under a broader mandate to supply policy advice, the Malaysian Business Council provides a forum for dialogue on economic and business policies among its members who are business leaders, policy makers and government workers. Its objective is to facilitate constructive exchanges and foster partnership between the public and private sectors in order to effect policies that are conducive to industrial development and private sector growth. The expanding private sector investment and privatization witnessed in Malaysia during the mid-1990s suggests an important role for the Council and the related Budget Dialogue Group, by facilitating information flows and coordinating policy response to a changing economic environment (Campos and Root, 1996).

During the last decade, the industrial relations climate in Malaysia has evolved towards a pro-business stance, evidenced by the formalization of once informal consultative councils; nevertheless, it continues to be affected by a series of regulations originally adopted in the 1950s and 1960s. For example, union membership is legally protected, although general broad-based unions are prohibited and strikes are subject to certain pre-conditions. There are some restrictions on firing, and workers have recourse to free adjudication services in the event of disputes with employers. Labor standards are codified in legislation determining minimum benefits, annual and sick leave, maximum overtime, and limits on the type payroll deductions permitted. A new housing standards act was adopted in 1990 requiring plantation employers to provide a minimum level of amenities to workers on estates. Despite this relatively high degree of regulation, there is no minimum wage, and wage policies appear to be fairly flexible, as expected in a tight labor market (Anandarajah (1997) reviews Malaysia's labor legislation). In view of the great strides in stimulating private sector activity in Malaysia, it is unclear to what extent labor market institutions have aided or hindered this.

As mentioned above, inflation was kept in check while economic growth boomed; in Singapore, consumer prices rose by an annual average of 5 percent during the first half of the 1980s, and a modest 1 to 2 percent since then, while budget surpluses consistently exceeded 10 percent of GDP in the 1990s (until the 1997-98 East Asian financial crisis). Malaysia, on the other hand, has maintained annual inflation around 4 percent during this decade, and fiscal accounts were balanced in the early 1990s and subsequently moved into surplus. Foreign participation was encouraged through fairly liberal investment codes, and domestic private savings were mobilized via the Employees' Provident Fund in Malaysia and the Central Provident Fund in Singapore. Both are essentially forced savings mechanisms to encourage workers to save for retirement. Employers and workers share a mandatory payroll tax that accrues to individual savings accounts, and withdrawals are contingent on retirement or disability, with some provisions for housing investments.[8]

Interaction between immigration and macroeconomic policy in Singapore

Based on the above analysis, both Malaysia and Singapore appear to have established stable macroeconomic conditions (prior to the 1997-98 East Asian financial crisis) and a policy environment conducive to private sector growth in which foreign labor plays an integral role. Up to this point, immigration policy and macroeconomic policy have been considered separately; it is instructive to examine the interactions between the two. In fact, Singapore's immigration policy has evolved over time, demonstrating a degree of flexibility to respond to a changing macroeconomic climate and sometimes driven by political pressures. Foreign labor management in Singapore can be divided into three distinct stages since 1965, each representing different policy objectives (Wong (1997) presents a thorough chronology of Singapore's immigration policy). The initial period was characterized by a severe labor shortage and a large jump in the quantity of foreign labor, primarily Malaysians. Permits were introduced, accompanied by levies for foreign workers in the construction sector, and immigration was extended to non-traditional source countries (i.e. Bangladesh, India, Sri Lanka, Philippines, Thailand and Indonesia). Permits also were extended to household workers (e.g. maids) to facilitate the increase in labor force participation among Singaporean women. In general, permits for Malaysians were much less restrictive than for foreigners from other countries.

The second period began in 1981 with a policy announcement that foreign workers were to be phased out completely by 1986 (except in construction, ship-building and domestic services from non-

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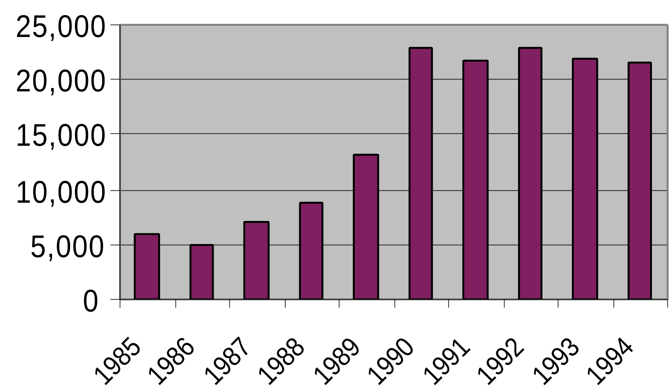
8 The total contribution rate to Malaysia's Employees' Provident Fund is equal to 22 percent of net wages (as of 1993) and interest earned on contributions accrues to individual savings accounts. Withdrawals may be made in the event of death, incapacitation or for an optional housing finance scheme. There is no provision for unemployment or health care, however. Singapore's Central Provident Fund has a total long-term contribution rate of 40 percent of net wages. In addition to old-age and housing withdrawals, the Singapore system also permits financing of pre-approved investments, hospitalization and other health care charges (see Asher (1994) for a detailed discussion).

traditional source countries). This was followed by measures to impose levies on all unskilled foreign workers and to restrict access to the social security system (Central Provident Fund) to skilled foreign labor only. Rising labor demand was met by extending permits to migrants from other (mostly Asian) countries of origin. As economic development objectives shifted toward high-tech industries, the booming construction sector contributed to continued foreign labor growth. When economic fortunes turned, however, immigration policy effectively reversed the inflow of foreign labor; during the 1985-6 recession, 102,000 jobs were eliminated and 60,000 foreign workers were forcibly repatriated.

A comprehensive levy system was implemented in 1987 and dependency ceilings were introduced (foreign workers were limited to 50 percent of a firm's total employment). Levies were viewed as flexible pricing mechanisms to equalize the cost of foreign labor relative to domestic labor; this change in official policy reflected an admission that foreign labor was in fact an integral part of Singapore's work force (in contrast to the earlier objective of minimizing imported labor). Administrative measures were added thereafter to improve enforcement (such as punishment by caning for overstayers). Levies were extended to Malaysians in 1989, and the dependency ceiling was lowered to 40 percent. The criteria for issuing employment passes and permanent residence status were liberalized in 1989, especially to attract Hong Kong residents in the wake of the Tiananmen Square crackdown in China. This is evident from the considerable jump in the number of permanent residents from 1988 to 1989 to 1990 (see Figure 2). Under the 1990 Employment of Foreign Workers Act, employers wishing to hire foreigners are required to apply for permits, and violators are subject to fines and/or imprisonment.

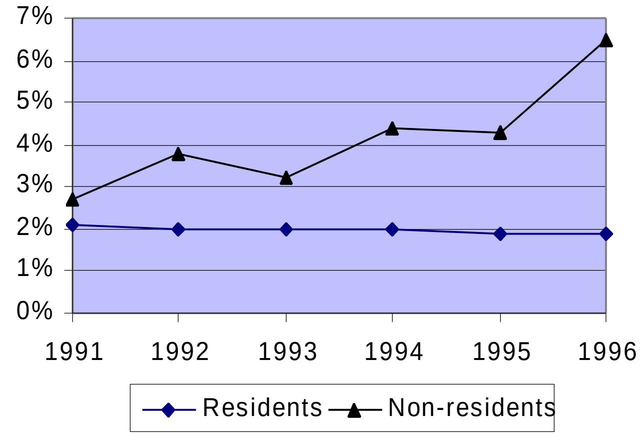
Figure 2
Number of Persons Aquiring Singapore Permanent Residency



Source: Chew and Chew (1995)

The third period of foreign labor management policy coincides with the strong economic growth experienced during the 1990s which did not diminish the demand for labor; in response to employers' needs, foreign labor (both legal and illegal) expanded. This was facilitated in part by easing migration restrictions: dependency ceilings were liberalized (raised to 45 percent in manufacturing, and up to a ratio of 5:1 in the construction sector) and a two-tier levy system was implemented in the manufacturing sector in which a premium was required for each foreign worker in excess of the 35 percent cut-off. For example, up to the 35 percent dependency ceiling, the per worker levy was S$300 per month; for additional workers between 35 percent and 45 percent, the unit levy was S$450 per month.[9] This resulted in sustained and increasing growth in the non-resident population, which grew at an annual rate of 2.7 percent in 1991, rising to 6.5 percent annual growth by 1996, outpacing the growth of residents (see Figure 3). It was at this time that more radical policy reform was being considered in terms of an auction system for permits (discussed below). By end-1995 the number of foreigners reached more than half a million (about 16 percent of the population), 70 percent of whom held unskilled work permits (Wong, 1997). Enforcement measures shifted toward targeting employers who are the main contractors, holding them responsible for permit abuses among their sub-contractors, with infractions punishable by large fines.

Figure 3
Population Growth in Singapore



In response to the increasing pressures of international competition, there has been a concerted effort to attract "talent", namely highly skilled experts, through additional incentives such as housing benefits. Not only is immigration policy integrally linked to macroeconomic policy to achieve growth targets and increase market share, but it also complements population policy. In effect, immigration policies have been used to mitigate the negative demographic trends of a declining indigenous population by encouraging young foreign professionals to settle permanently. Persistent labor shortages have led to more prevalent easing of requirements through exceptions, such as allowing municipal cleaning contractors to hire from non-traditional sources in order to meet demand (*Straits Times Interactive*, December 3, 1996).

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9 In June of 1997, the levy was reduced to S$400, and the two-tiered dependency ceilings were raised to 40 and 50 percent. The levy was subsequently raised to S$440.

Most recently, the East Asian financial crisis had a palpable impact on the Singapore economy, particularly through the depreciation of the exchange rate, and will certainly translate into slower growth. Although there has been no explicit threat of mass repatriation of foreigners as in neighboring Malaysia, unions have responded by calling for wage adjustments to the flexible "bonus" portion of wages before undertaking retrenchment. Many have cited the need to retrain low-skilled workers who are likely to be laid off and are not employable elsewhere at their current skill level. The government responded to these negative macroeconomic shocks by effectively increasing the tax on foreigners through eliminating the tax deduction for foreign worker contributions to the Central Provident Fund. Because employer contributions are not mandatory, unlike for Singapore nationals, this *de facto* tax increase discourages participation by removing the employer's incentive to contribute, implying a tax-hit to foreign workers that is double in magnitude (i.e. for the total contribution), and simultaneously reducing private savings.

A tighter permit allocation system and stricter enforcement measures were introduced, effective in 1998, in which permit entitlements are issued to main contractors only, who will be held responsible for the foreign employees of their sub-contractors. Moreover, main contractors are required to employ and house workers laid off and abandoned (i.e. not repatriated) by sub-contractors; failure to do so results in forfeiture of the S$5,000 security bond per worker in addition to exclusion from any future application for permit entitlements. In March 1998, additional adjustments were made to encourage higher productivity in the construction sector through increases in the levy on unskilled workers, from S$440 to S$470 per month, and sharp cuts in the levy on skilled workers, from S$200 to S$100 (*Straits Times*, March 19, 1998). This wider disparity in permit pricing for skilled vs. unskilled workers provides greater incentives for employers to hire more productive labor. Table 1 above provides a summary of the current dependency and levy parameters by sector.

This catalogue of changes in Singapore's immigration policy over the last three decades demonstrates a capacity to adjust to the current economic environment by promoting the latest priority objectives. Initially facilitating expatriate inflows to meet excess demand, immigration policy evolved to restrict the foreign labor market more tightly; ultimately, however, the need to attract skilled workers was recognized and embraced. These policy changes were typically achieved indirectly through price controls to effect a change in the quantity and composition of labor, but also directly through restrictions on the quantity of permits issued. The complexity of the system, especially in the context of a fluctuating economic environment, requires considerable monitoring and discreet and frequent adjustments. The

Singapore authorities proposed to reform the system in 1991 by implementing tradable permits whose prices would be determined through a market mechanism. The so-called "tender" system was proposed by the Ministry of Labor to eliminate the guess-work in price setting and enable labor to respond to market signals. Intended to work like the system in place for Certificates of Entitlement for cars, the tender system would allow employers to bid for extra work permits above the dependency ceiling; permits would be issued for a duration of 2 years, and each sector would have its own system and market for exchange. Despite the economic efficiency arguments supporting the new system, however, the proposal was withdrawn due to opposition from unions (seeking to protect the jobs of their members) and employers (who feared uncertainty in labor costs and labor supply).[10]

Overall, the Singapore experience provides an example where the interaction between immigration and macroeconomic policies was mutually reinforcing, in some ways improving the effectiveness of both. Policy makers have managed foreign labor resources in conjunction with the performance of the macro-economy, easing permit requirements to attract particular skills, or alternatively tightening requirements to shed labor during economic downturns, thereby using foreign labor as a buffer against economy-wide shocks. On the other hand, the failure of attempted policy reform in terms of the proposed tradable permit system illustrates the potential role of vested interests and political economy vis-à-vis immigration policy and labor demand. It is easy to conceive a situation in which poorly integrated policies generate contradictory incentives. Singapore's track-record highlights the importance of careful and comprehensive policy that is not undermined by existing distortions.

IV. Trends in the composition of labor

Based on the robust economic performance of Malaysia and Singapore during the last decade and in view of their reliance on expatriate labor, general conclusions can be drawn regarding their successful management of the large foreign labor force through immigration policy and complementary measures. Is there more substantial evidence of policy effectiveness in managing foreign workers? Micro-level data exists for both Singapore and Malaysia, generated through periodic labor force surveys and household

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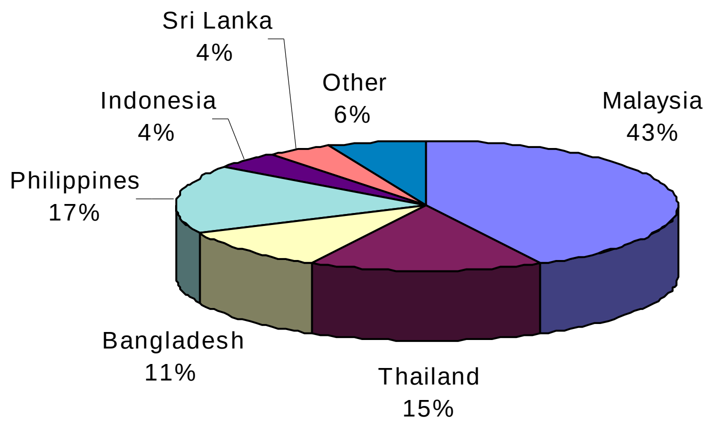
10 Manufacturers reportedly worried that multi-national corporations would have a comparative advantage in buying up permits (*Straits Times*, October 7, 1991). Although the existing two-tier system is less efficient and less responsive to the market, they argued, at least it provides flexibility at a known price. In the existing tight labor market, it was feared that permit prices would be very high and that concomitant speculative behavior would increase uncertainty.

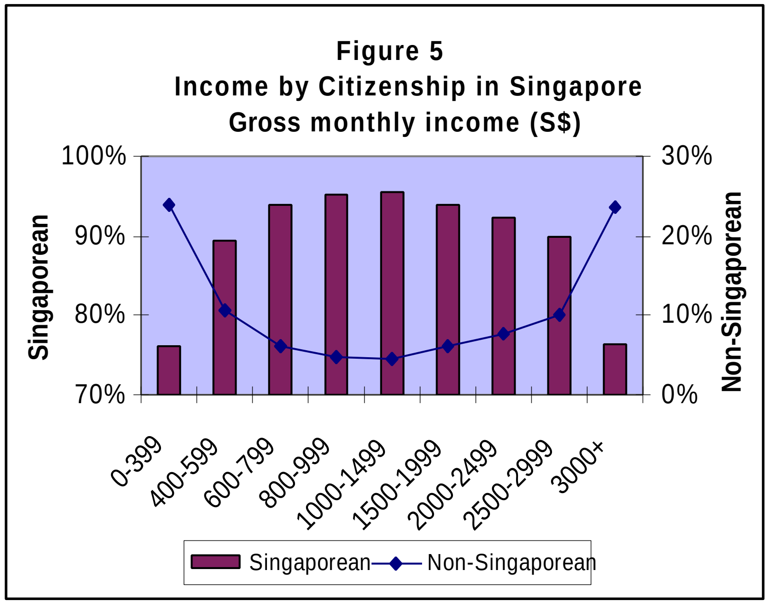
income and consumption surveys; although only summary data is available for Singapore, recent household level data is available for Malaysia. The 1995 Household Income Survey data covers a large sample, documenting the earnings, work activities and education profiles of 36,700 households in Malaysia. The extent of the survey's coverage of foreign workers is likely to be fairly representative, since non-citizens represent 4.5 percent of the sample (or about 1600 observations), which would be equivalent to nearly a million foreigners in a total population of 21 million. This is not inconsistent with official statistics that foreign workers number 1.2 million, clearly within the same order of magnitude. The survey does not include illegal foreign workers, however, estimated to account for an additional 800,000 workers.

Looking at the individual characteristics of foreign workers in Malaysia and Singapore compared to nationals gives a sense of the degree to which immigration and other policies have effectively targeted foreigners for unskilled and skilled positions. The evidence suggests that policies indeed affect the composition of foreign labor. The ethnic and sectoral segmentation observed in Singapore is consistent with policy that targets foreign workers by country of origin for certain categories of work. As shown in Figure 4, the majority of foreign workers are from Malaysia, the so-called traditional source country, and are primarily employed in manufacturing and services; Malaysians employed in the construction sector are typically skilled workers (Wong, 1997). Expatriates from Thailand and Bangladesh are predominantly employed in the construction sector, in semi-skilled and unskilled jobs, and an estimated 25 percent of all foreigners are employed as domestic servants, primarily women from the Philippines, Indonesia and Sri Lanka.

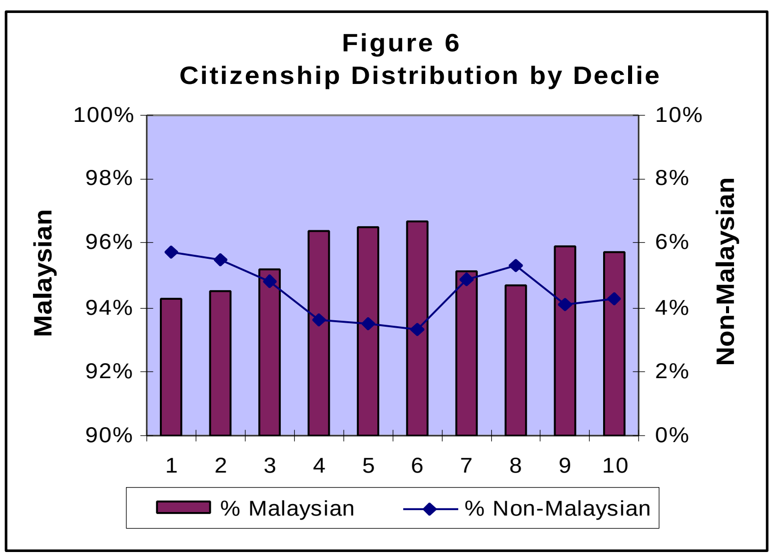
Figure 4
Singapore: Foreign Labor Composition



How does the foreign worker population fare relative to the domestic population with respect to income? In Singapore, there is a higher concentration of foreigners at both the bottom and at the top of the income scale (Chew and Chew, 1992). Whereas non-citizens accounted for 10 percent of total employment in 1989, nearly 25 percent of the lowest income group were non-Singaporean (see Figure 5); the same pattern emerges among top income earners. This suggests that low-wage unskilled jobs are more likely to be held by foreign workers compared to their proportional representation in total employment, supporting the assertion that immigration policy targets foreign workers for unskilled positions and for highly skilled professional jobs. In the middle income categories, the opposite pattern is observed; although Singaporean workers represent 90 percent of total employment, more than 90 percent of middle income earners are Singapore nationals.



Using the Malaysian survey data, the sample can be broken into deciles according to household per capita income to evaluate the distribution of foreigners and nationals across income groups. A pattern similar to that observed in Singapore emerges. Whereas the sample mean for the share of non-citizens is 4.5 percent, the poorest three deciles have a moderately higher concentration of non-citizens relative to the sample mean, whereas deciles 4 through 6 have a lower concentration. Non-citizens become more prominent again in the 7th decile and above (see Figure 6). Although these deviations from the sample mean are small in magnitude, the evidence nevertheless suggests a dichotomy in the quality of jobs held by



foreigners. Clumping at the extremes of the scale reflects a greater demand for expatriates in unskilled jobs as well as in highly skilled or professional positions.

It is interesting to decompose total household earnings into the various sources of income to examine how these differ between Malaysians and non-Malaysians. Sources include employment income, pensions, gifts in cash and in kind, property income and other transfers. For citizens, the incidence of individuals receiving pensions is generally low and rises across deciles until a peak in the 7th decile, in which almost 7 percent receive a pension. By contrast, few non-citizens earn a pension: incidence is zero for half of the non-citizen population, below one percent for deciles 6 through 9, and jumps only to 2 percent for the richest decile of foreign households. Gifts are relatively more important to the poor, but the impact is similar for poor Malaysians and poor non-Malaysians. In the poorest decile, for instance, gifts represent 4 and 5 percent of net household income for non-citizens and citizens, respectively; this share falls to 3 percent of income in the middle deciles and only 1 percent for the top income groups.

The employment status of non-Malaysians provides another indication that the labor market responds to immigration policy; non-citizens are much more likely to be employees rather than employers or self-employed, compared to the work status of Malaysian citizens. For example, 90 percent of non-citizens in the sample are employees, versus 68 percent for citizens. Self-employment, herein defined as own-account workers, is much more common among Malaysians, nearly 30 percent of whom are self-employed, compared to under 10 percent for non-Malaysians.[11] This is not surprising given that foreign workers entering the country legally must be sponsored by a prospective employer; the exception is the employer category (representing a mere 1 percent of non-citizens) which includes foreign investors seeking to set-up business in Malaysia.

The income implications of these employment status results are ambiguous at this stage. Milanovic (1998) finds that self-employment in Malaysia is much more common among the poor, and that the incidence of poverty is 32 percent for those primarily self-employed in agriculture, compared to 10 percent for the population at large. On the other hand, the greater share of own-account workers among Malaysians corroborates earlier assertions by Blau (1986) that workers in Malaysia tend to move from employee status to self-employment at older ages. Naturally, this is easier for citizens than non-citizens,

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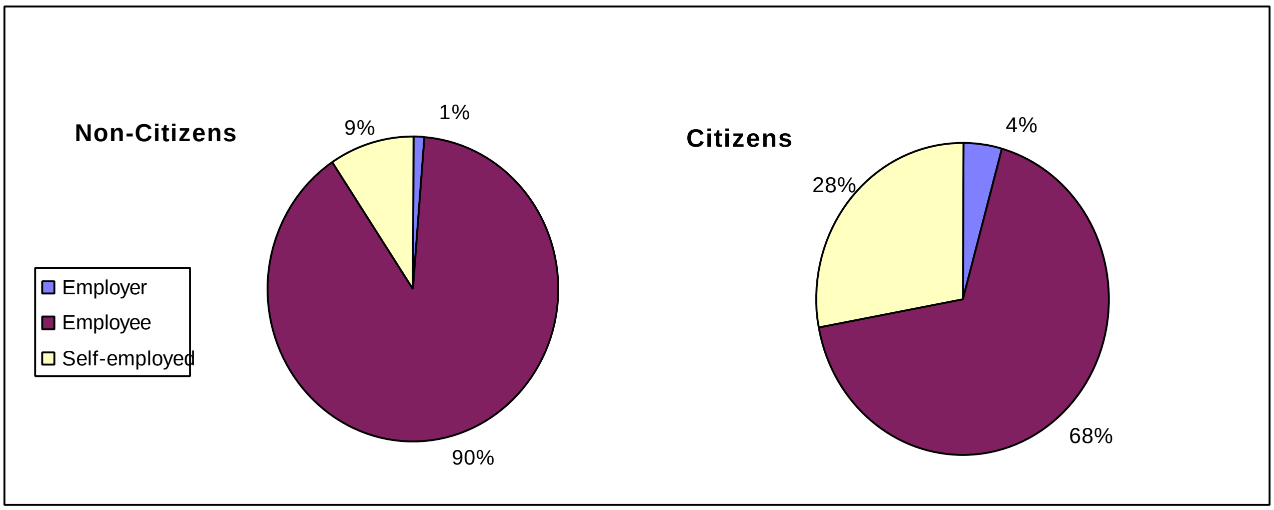
[11] The 1995 labor force survey yields somewhat different estimates for own-account workers: 19 percent for Malaysians, 9 percent for non-Malaysians (*Malaysia: Labor Force Survey Report 1995*).

due to the time limits on foreign work permits. A similar pattern of work status is observed in Kuwait, where there is a tendency for Kuwaiti public sector employees to retire upon eligibility, prior to retirement age, and become self-employed, or in fact shift from part-time informal activity to devoting full-time to their on-going ventures in the private sector. Blau (1986) also finds that earnings of urban self-employed males are higher than their counterparts with similar characteristics in wage employment.[12] Neither Milanovic (1998) nor Blau (1986) distinguish between citizens and non-citizens, however; more detailed analysis of the determinants of earnings is necessary to test the relationship between employment status and income, and will be undertaken using the 1995 household survey data in the following section.

Figure 7
Distribution by Employment Status



Are there other trends in the composition of labor in Malaysia that reflect foreign labor management policies? Consider the characteristics of individual households with respect to family structure, size and age. The marital status of citizens differs markedly from that of non-citizens; the restrictions on the reunion of families for workers holding visit passes is borne out by the lower incidence of marriage among non-Malaysians, as well as the smaller household size. Whereas 79.8 percent of Malaysians in the sample are married, only 68.1 percent of non-Malaysians are married (see Table 3). Moreover, singlehood is uncommon among Malaysians; less than 10 percent of those surveyed were single,

12 There is a growing body of evidence contradicting the widely accepted dual labor market assertion that informal self-employment earnings are lower than formal wages; for example, Maloney (1998) finds evidence that contract employees and self-employed workers (including small business owners) earn more than salaried workers in Mexico's formal sector.

compared to 27.5 percent of non-citizens. Average household size also varies according to citizenship. For Malaysians, households have a mean of 4.6 members, with a fairly normal distribution. Non-citizens, however, typically reside in smaller households, averaging 3.8 members; the observed log-normal distribution also indicates a higher concentration among smaller households. The age composition of foreign workers compared to Malaysian nationals lends further support to the assertion that immigration policy targets foreign labor for only temporary contracts, discouraging permanent settlement among the low-skilled. The mean age for males interviewed was 34 for non-citizens and 44 for citizens. The discrepancy among women is even greater, with female non-citizens averaging 33 years of age, compared to 49 years for citizens.

Table 3: Household Characteristics in Malaysia, 1995

	Citizens	**Non-citizens**
Marital Status (% of sample):		
Single	9.1	27.5
Married	79.8	68.1
Other	11.1	4.4
Household size (# of members)	4.6	3.8
Age (years):		
Male	44	34
Female	49	33

Total sample of 36,700 observations, of which 95.5 % are Malaysian.

V. Determinants of earnings in Malaysia

The results comparing the group profiles of Malaysians and non-Malaysians on the basis of age, marital status, household size, type of employment and sources of income, are consistent with the predicted effects of foreign labor management policy. In an effort to assess the actual policy impact, the analysis in this section investigates the determinants of earnings using regression analysis on household income data and controlling for individual characteristics. Malaysia's immigration policy suggests that foreigners will be paid less than Malaysian citizens with similar characteristics, due to the added unit labor cost incurred by employers for work permit fees. In theory, the wage gap between citizens and non-citizens at the margin should be equal to the permit fee (minus any savings in employer charges for social benefits unavailable to foreigners). The following analysis measures the difference in earnings on the basis of citizenship and other variables such as employment status, region of work and gender. By assessing the variables that contribute to earnings, I derive precise and robust conclusions with respect to wage and employment patterns in Malaysia. It is important to note that earnings analysis typically uses labor force survey data, which consists of data on the sources and levels of income for a particular worker as well as his/her individual characteristics. Unfortunately, only household-level data is available for this analysis on Malaysia; this distinction does not diminish the validity of the results, however.

In order to analyze the determinants of income, it is necessary to establish at the outset the appropriate measures of income. The analysis considers two dependent variables, the logs of (i) total labor income and (ii) net household income. The reasons are two-fold. In order to determine the effect of immigration and labor market policy on employment and wages, I use total labor income, which is equal to earnings from wages and other employment. This allows me to detect pay practices that discriminate against non-Malaysians, for example, as well as wage discrimination (positive or negative) against ethnic groups among Malaysian citizens. On the other hand, I do not wish to exclude other types of income that may also be affected by labor management policies. I therefore use household income including all sources, thus creating a more complete picture of various economic activities and the associated remuneration across population groups. After-tax income, i.e. net household income, represents a more appropriate measure of disposable income and at the same time avoids biasing the results with respect to non-citizens, who generally have a smaller tax burden. Two separate regressions are run, one for each dependent variable.

What factors affect household income? Earnings vary by occupation, experience, skill level and employment status (i.e. employee, employer or self-employed). The independent variables used in this regression analysis are consistent with the vast literature on earnings functions. They include: age and age^2, years of schooling, region of employment, status of employment, household size and category of principle occupation. Because age and work experience are correlated, I do not include work experience as an independent variable; moreover, the age^2 variable is used to capture the shape of the age-earnings profile. The survey data does not directly quantify skill level; as a result, I rely on the measure of years of schooling as a proxy for skill level.[13] I use additional individual characteristics on gender and citizenship to capture discrimination effects. The results from the two regressions are shown in Table 4 below. All of the variables are significant, and the adjusted R^2 terms are fairly high at 0.36 and 0.38 for dependent variables labor and net household income, respectively, suggesting that these 9 independent variables together explain more than one-third of the variance in incomes (earnings functions typically have adjusted R^2 terms near 0.3).

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13 Despite common practice, Gupta (1998) points out that years of schooling is unlikely to reflect perfectly individuals' skill level or productivity.

Table 4: Regression Results Testing for the Effect of Citizenship		
OLS Regression		
Dependent Variable:	**ln (Total labor income)**	**ln (Net household income)**
Independent variables:	**Coefficients**[a]	**Coefficients**[a]
Age	0.0329	0.0299
Age^2	-0.0003	-0.0002
Education (years)	0.0197	0.0185
Household size	0.0648	0.0639
Citizen	0.0619	0.0164
Region 1: Peninsular Malaysia	0.0743	-0.0470
Region 2: Sabah	-0.1761	-0.2737
Female	-0.3367	-0.2094
Employer	0.2379	0.2982
Self-employed	-0.2695	-0.1669
Unpaid family worker	-0.3412	-0.2249
Occupation 1: Managers	-0.1745	-0.1314
Occupation 2: Professionals	0.3861	0.3687
Occupation 3: Assoc. professionals	-0.4308	-0.4083
Occupation 4: Clerks	-0.3886	-0.3647
Occupation 5: Service workers	-0.7000	-0.6383
Occupation 6: Skilled agric. workers	-1.1690	-1.0845
Occupation 7: Craft-related workers	-0.6564	-0.6219
Occupation 8: Plant, machine operators	-0.5535	-0.5368
Occupation 9: Elementary occupations	-0.7973	-0.7460
Constant	9.1410	9.1891
Adjusted R^2	0.3785	0.3639
No. of observations	36,693	36,693

[a] All significant at the .01 level.

The results of the two regressions are very similar with respect to coefficient values for the independent variables (results will be discussed jointly unless otherwise indicated). The age coefficients are around 3 percent, and for age^2, coefficients are very small and negative, albeit still significant, as expected. The returns to education are modest at around 2 percent. Employment status proves to be an important determinant of earnings. The returns to being an employer are high relative to being an employee, with a coefficient of 0.24 vis-à-vis dependent variable labor earnings. Self employment, on the other hand, is poorly remunerated; labor income is 27 percent lower for an own-account worker than for a wage earner with similar characteristics. This result supports Milanovic (1998) but contradicts earlier findings by Blau

(1986) regarding self-employed urban males; on the other hand, Blau finds that the other sub-groups of own-account workers indeed had lower earnings (i.e. urban females, and rural males and females).[14]

Although detailed information on the occupational codes is unavailable, the broad single-digit categories are known, and are included as explanatory variables in order to eliminate any omitted variable bias introduced by differential pay lines across sectors of production. The composition of employment is fairly disperse across the 10 occupation categories, as shown in Table 5. This dispersion is corroborated by data from the 1995 labor force survey (Malaysia Department of Statistics, 1996). The coefficients on occupations 1 through 9 are measured relative to the income of a worker with similar characteristics in occupation 0, which consists of the police and the armed forces. The returns to the various occupational categories are large in magnitude, especially for agricultural workers (occupation 6) and unskilled workers (occupation 9) who earn far less, indicated by negative coefficient values.

Table 5: Employment Composition by Occupation

Occupation Category	**Description**	**Share (%)**
Occupation 0	Police and armed forces	3.6
Occupation 1	Managers, senior officials	4.1
Occupation 2	Professionals	4.1
Occupation 3	Technicians, associate professionals	6.1
Occupation 4	Clerks	8.0
Occupation 5	Service workers, shop and market sales	9.1
Occupation 6	Skilled agricultural workers	18.0
Occupation 7	Craft-related workers	4.8
Occupation 8	Plant and machine operators	7.0
Occupation 9	Elementary occupations: sales, services, agriculture, mining, construction, manufacturing	13.5
Total		100.0

N.B. Data missing for 21.6 percent of sample.

Household size is an important explanatory variable, contributing 6.4 percent to household earnings (both labor and net income) per additional household member. Interpreting this result requires caution, since the causality between earnings and the number of household members is indeterminate. It may be the case, for instance, that economically active members of large families work more hours; alternatively, it may be that higher wage earners can afford to have larger families.

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14 The different results for urban males might be explained by the fact that Blau's regression analysis accounts for hours and weeks worked, but does not include occupational category or household size among the independent variables, and considers Peninsular Malaysia only.

Considerable segmentation is observed with respect to region of residence. Labor force participants and activities are divided among the three main regions of Malaysia, namely Peninsular Malaysia, Sabah and Sarawak, respectively identified as Regions 1, 2 and 3. The regional variable has significant explanatory power. In Peninsular Malaysia, for example, wage-employment as reflected by labor earnings is more important relative to the other two regions. Sabah, by contrast, is the poorest region, with a poverty head-count equal to 18 percent (Milanovic, 1998). Both labor and household earnings in Sabah lie below those in Sarawak and Peninsular Malaysia.

The standard gender discrimination against women is observed in Malaysia. It is especially severe for labor earnings, which are one-third lower than a male worker with otherwise identical characteristics. The coefficient on the gender variable is somewhat more moderate with respect to net household earnings, falling to -0.21 (see Table 4). This indicates that gender discrimination is more prevalent in wage employment but still significant elsewhere.

Finally, to answer the central question of this investigation, what does the analysis yield for the returns to being a foreign worker? Returns are negative but small. This finding supports the proposition that foreign workers earn less than their Malaysian counterparts. With respect to labor earnings, the results yield a 6 percent gap between citizens and non-citizens, and only a 2 percent differential vis-à-vis net household income. These coefficient values indicate that, despite their lower social costs in terms of transfers and benefits, foreign workers are paid less than citizens, reflecting work permit fees that raise the effective unit labor cost incurred by employers. The magnitude of the earnings differential is only RM335 (based on average per capita labor income), well below the minimum permit fee of RM840 for unskilled workers; however, this difference may reflect the lower employer charges for social benefits not available to foreigners. The coefficient values on the citizenship dummy variable are smaller than anticipated, suggesting that earnings differentials are due mostly to other factors.

Consider the effect of ethnicity. Malaysia's labor market is segmented not only along citizenship, occupational and regional lines, but also with respect to ethnicity. The economic marginalization of ethnic Malays mentioned in section III led to affirmative action policies to address implicit discrimination. To what degree is ethnicity a determinant of income? I consider this question by transforming the citizenship dummy variable into two dummies that classify workers as Malay citizens, non-Malay citizens and non-citizens.[15] Non-Malay citizens are predominantly ethnic Chinese, based on the population composition discussed in section III above.

Two new regressions were run using this re-specified earnings function (for both dependent variables, as above). The results, reported in Table 6, are similarly significant, with an even higher adjusted R^2 equal to 0.4. By accounting for ethnicity among Malaysian citizens, the coefficients on all the other independent variables change very little, except for the Region 1 dummy. However, the citizen-ethnic returns are much larger than under the broader citizenship variable. For labor income, the returns to being a citizen of non-Malay ethnicity are over 17 percent compared to a foreign worker, controlling for other individual factors, and for net household income, the returns are smaller but still important, on the order of 12 percent. The data reveal considerable discrimination against Malay nationals, who earn between 15 and 18 percent less than similar foreign workers (with respect to labor and net household earnings, respectively). At the same time, the increase in the coefficient on the Region 1 variable suggests that under the previous functional specification, this variable was capturing at least part of the effect of Malay ethnicity among nationals in this region.

[15] This analysis does not consider differential discrimination against foreigners by country of origin.

Table 6: Regression Results Testing for the Effect of Citizenship and Ethnicity		
OLS Regression		
Dependent Variable:	**ln (Total labor income)**	**ln (Net household income)**
Independent variables:	**Coefficients[a]**	**Coefficients[a]**
Age	0.0269	0.0243
Age^2	-0.0003	-0.0002
Education (years)	0.0207	0.0194
Household size	0.0726	0.0712
Non-Malay citizen	0.1754	0.1224
Malay citizen	-0.1457	-0.1776
Region 1: Peninsular Malaysia	0.2074	0.0774
Region 2: Sabah	-0.1945	-0.2909
Female	-0.3422	-0.2148
Employer	0.1905	0.2540
Self-employed	-0.2571	-0.1552
Unpaid family worker	-0.3075	-0.1942
Occupation 1: Managers	-0.1602	-0.1179
Occupation 2: Professionals	0.3196	0.3065
Occupation 3: Assoc. professionals	-0.4000	-0.3797
Occupation 4: Clerks	-0.4601	-0.4317
Occupation 5: Service workers	-0.6687	-0.6090
Occupation 6: Skilled agric. workers	-1.1537	-1.0703
Occupation 7: Craft-related workers	-0.6762	-0.6404
Occupation 8: Plant, machine operators	-0.5979	-0.5782
Occupation 9: Elementary occupations	-0.8251	-0.7721
Constant	9.1953	9.2400
Adjusted R^2	0.4059	0.3923
No. of observations	36,693	36,693

[a] All significant at the .01 level.

Regression analysis of the determinants of earnings provides evidence that foreign labor management policies affect labor outcomes by differentiating workers on the basis of citizenship. The labor earnings differential with respect to non-Malay citizens is equivalent to RM946 (i.e. 17 percent of average labor income), a figure more closely aligned with permit fees in the lower end of the skills range. The data also indicate a degree of discrimination against ethnic Malay citizens, suggesting that affirmative action policies have not fully eliminated discriminatory practices. (Both of these effects are outweighed by the severe discrimination against women, however.) It would be interesting to measure the change over time in returns to being an ethnic Malay, to assess the degree to which affirmative action policies have reduced discrimination. This could be done by carrying out the same regression analysis using earlier data, for example the 1976-77 Malaysian Family Life Survey. I leave this question as a possible avenue for further research.

VI. Success Factors

The micro-level data on the composition of households with respect to age, type of employment and earnings, together with evidence of differential compensation for citizens vs. non-citizens suggest that immigration policy, possibly in conjunction with complementary measures, can control the quantity and quality of foreign labor. It is likely that additional factors played a role in policy effectiveness in Malaysia and Singapore, in view of their particular country circumstances. In the first place, both countries exhibit tremendous institutional capacity to implement and enforce regulations. Singapore's priority of the state over individual preferences facilitates policy effectiveness, albeit at the expense of individual rights. The permit system, involving issuance of new permits to large numbers of applicants as well as the renewal of expired permits subject to eligibility, requires substantial monitoring, enforcement and effective administration. Singapore's Work Permit and Employment Department of the Ministry of Labor is efficient in processing applications, especially in view of the volume of business; this is reflected by an average processing period of 3 working days for electronic submissions and 7 working days for all others (Singapore Ministry of Labor, 1995). Malaysia is less successful at enforcing and regulating permits, due to greater challenges with respect to the size of its foreign labor force and its vast territory and borders. Nevertheless, Malaysia exhibits significant institutional capacity that has improved during the recent wave of development.

Additional explanatory factors of Singapore's and Malaysia's effective foreign labor management include the structure of their economies and the associated skills mix which accommodates foreign workers. For example, Singapore's production base is highly diversified and labor-intensive in fairly high value-added industries. Moreover, government policy promotes private sector development and encourages investment and foreign participation with a view to competing on international markets. Both countries are outward-oriented and export-driven, in addition to importing intermediate goods, labor and technology. The Malaysian economy still depends to a large extent on commodity exports that demand unskilled labor (such as rubber, timber and palm oil) and a manufacturing sector that accounts for almost 25 percent of total employment and more than 30 percent of GDP (World Bank, 1995; International Monetary Fund, 1997).

Despite the public sector's integral role in industrial policy, the actual size of public employment including public enterprises is moderate, at less than 18 percent in Singapore, and 8 percent for government services alone (Soon and Tan, 1993). Economic growth in both Malaysia and Singapore has been integrally linked to job creation and increased value added, thereby contributing to private sector growth through aggregate demand and positive synergies conducive to dynamic growth. This lies in stark contrast to the oil-based economies of the GCC countries, whose output is driven by petroleum production and world oil prices. Non-oil production, characterized by large public industrial firms, sizable government administrations and relatively little private activity, is typically residual, primarily driven by public expenditures that in turn depend on cyclical oil revenues.

Are there other explanations behind the success stories of Singapore and Malaysia with respect to foreign labor? This paper has addressed immigration policy directly, as well as complementary macroeconomic policy, institutional capacity and the diversification of economic production. Perhaps the successful containment of the growing foreign labor force is the product of dynamic path-dependent development, such that the pattern and speed of growth are integrally linked to the expatriate labor component. At the earliest stages of development, the East Asian economies competed on international markets by exporting inexpensive products manufactured using abundant cheap labor. The subsequent expansion raised incomes and the private demand for better skills, constituting indigenous growth in response to private market forces largely unfettered by government regulation and using foreign labor only to meet the relatively limited, albeit persistent, excess labor demand. The oil-producers of the GCC followed a different path. Economic development was financed using windfall oil profits, with an infusion of public resources into infrastructure and education investment. The relatively rapid increase in demand for goods and services outstripped domestic capacity, leading to extensive reliance on foreign labor.

There may be a size dimension to this issue, in which the dynamics of the labor force vis-à-vis growth and skill composition depend on some critical value of the foreign labor share. Below this value, the community of foreign workers remains self-contained and the externalities it generates (e.g. social capital) either are small or remain within the scope of their separate community. Above the critical value, however, the expatriate labor force acquires dynamic forces of its own, with externalities affecting the entire labor market and generating additional supply in sending countries. Within the context of such a framework, Malaysia's and Singapore's foreign labor policies apparently kept the share of expatriate workers in check below the trigger point, whereas in the GCC countries, the foreign labor share exceeds the trigger point, leading to increasing foreign labor inflows that are mutually reinforcing and facilitated through the formation and accumulation of social capital.

VII. Policy Failure

Foreign labor management has been largely successful in Singapore and Malaysia for a variety of reasons, not least of which is effective immigration policy. The news is not all good, however. The shortcomings of immigration policy are evidenced by the existence of a large informal sector of illegal foreign workers. Anecdotal evidence indicates that employment of foreign workers in the informal sector has grown rapidly in Singapore in recent years, concurrent with the liberalization of restrictions on legally imported labor. Malaysia's legal foreign labor force more than doubled between 1990 and 1996, and currently exceeds a million workers, equivalent to 13 percent of the total labor force according to official statistics. Unofficial estimates that include illegal workers put the figure closer to 2 million, however. Illegal workers are found primarily in the construction sector, but also work in services, manufacturing and hotels and restaurants. In 1991, nearly 30 percent of all foreign labor in Malaysia was employed in the construction sector, while almost half of non-Malaysian workers were employed in agriculture and forestry where they constituted 30 percent of sectoral employment (World Bank, 1995).

Restrictions and permit fees have given rise to evasion through illegal recruitment and forged documents (a thriving industry) as well as informal trading of permits. Firms employing workers on unofficial contracts can pay lower wages and fewer benefits than stipulated by law, and can impose harsh working conditions on illegal workers who are powerless to complain for fear of deportation. Most evidence suggests that employers retain the premium saved by avoiding levy payments and compensate illegal workers below their legal counterparts; there is some countervailing evidence, however, that savings are passed on to the illegal workers, whose wages are effectively higher than their legal counterparts (Wong, 1997).

It is important to recognize the disadvantages associated with informal employment. Workers on informal contracts do not benefit from protective legislation and social benefits. Stories of abuse are not uncommon, especially involving domestic workers (e.g. the Filipina maid incident in Singapore cited above). Whereas the informal sector effectively acts as a buffer to the formal sector, insulating total economic output from negative exogenous shocks, losses are not altogether avoided. On the contrary, they are incumbent on the informal sector. Without labor market institutions that protect workers' rights, such as firing restrictions, collective bargaining and a legal framework to enforce contracts, fluctuations in product demand are passed quickly to labor demand and thence to workers.

The East Asian crisis of 1997-98 provides a vivid illustration in which a negative regional shock generated huge layoffs. In Malaysia, the foreign labor force, and especially the illegal foreign labor force, was particularly hard-hit, given their prominence in the severely depressed construction industry. An estimated 80 percent of the 700,000 workers employed in the construction sector are non-citizens (*Associated Press*, January 13, 1998). Foreign workers were strategically retrenched first--as of February, 1998, approximately 400,000 expatriates had been laid off (*Oxford Analytica*, February 16, 1998). Instead of returning to their home countries, however, many jobless expatriates opted to remain in Malaysia, resulting in a massive influx to the informal sector. Government efforts to repatriate foreigners led to the expulsion of 20,000 expatriates lacking jobs with valid permits. The situation was exacerbated by crisis conditions prevailing in neighboring Indonesia and Thailand, where mass unemployment led to illegal migration across Malaysian borders. Contagion effects of regional exogenous shocks are impossible to quantify, but there is general consensus that the Malaysian and Singapore economies will survive the 1997-98 crisis with most industries intact and functioning, although growth in Malaysia is projected to be slightly negative in 1998. Because official statistics do not capture the effects on the informal economy, however, economic losses may be underestimated.

Whereas the proliferation of a large and mostly foreign informal labor force indicates that labor management policies in Malaysia and Singapore imperfectly control the flow of foreign workers, the informal sector may have played an integral role in the growth success story. Typically perceived in negative terms as an intrinsic drain on public resources at the expense of exploited and underpaid workers, the informal sector is also dynamic and flexible and creates jobs, properties that form the standard pre-conditions for economic growth. Arguments supporting the merits of informal activity have in fact penetrated mainstream economic theory, and cross-country evidence from a variety of sources indicates that informal wages can in fact be higher than formal sector wages (as cited above for Mexico (Maloney, 1998)), suggesting that self-employment is not necessarily involuntary. Despite the associated disadvantages, the informal sector cannot be unambiguously characterized as a policy failure in light of its contribution to growth.

VIII. Lessons for GCC Countries

This paper assesses the impact of foreign labor management policies on labor outcomes in Singapore and Malaysia, two countries characterized by robust economic growth and significant foreign labor. Are there lessons applicable to GCC countries, where foreign labor force shares ranging from 50 to 90 percent are much higher than in Singapore and Malaysia? Several conclusions emerge from this analysis. The first involves the fact that managing foreign labor not only requires immigration controls but also a conducive macroeconomic environment and mutually reinforcing labor market institutions regarding wage and employment policy, as well as a capacity to enforce immigration rules. As is demonstrated by Kuwait's recent experience, it is not enough to establish a stable macroeconomic climate with favorable investment incentives (necessary but not sufficient conditions).

Singapore and Malaysia benefit from more diversified economic structures relative to the oil-dependent GCC economies. Moreover, the East Asian economies' private sectors have been integral to overall economic growth, especially with respect to manufactured exports that are competitive on international markets. Without comprehensive policies that address these related issues, measures to control foreign labor flows are likely to be ineffective. Policy changes must be considered within the context of the theory of second best; i.e. correcting one distortion will not necessarily lead to a welfare improvement if other distortions remain. In the Bahrain context of distorted public employment and pay policies, for example, it may take a large increase in the price of work permits to induce a significant shift in private employment toward Bahraini nationals. The solution to stem the influx of foreigners into GCC countries is complex; firm- or micro-level data on employment and wages would be useful in estimating labor demand elasticity in order to quantify the likely employment response to various policy measures.

It is notable that both Singapore and Malaysia face difficulties in setting the price and quantity of work permits in their highly regulated immigration systems where permit types vary according to nationality, skill level, and sector of employment, enforced with the help of high quality administrative capacity but also rather draconian measures that sometimes violate individuals' rights. Despite labor legislation promoting equitable conditions of employment, earnings evidence from Malaysia indicates that ethnic discrimination among citizens persists. Moreover, the proliferation of large informal sectors consisting primarily of foreign workers suggests imperfect enforcement. In view of these challenges, it may be more efficient to rely on market signals to address labor misallocations, for example through tradable work permits.

This analysis begins by identifying a fundamental challenge facing the GCC countries with respect to excess demand for labor. In brief, the skills shortage in the private sector cannot be met by indigenous labor supply. There are two trends observed in GCC labor markets: (i) for low-level jobs, there is a lack of domestic supply due to high reservation wages among nationals as a result of public sector pay distortions, and (ii) for jobs requiring high skills or expertise, there is little demand for nationals who lack the necessary skills. The apparent skills mismatch can be addressed through education and wage policy, with options ranging from basic education improvements to expanded vocational training to employer-driven training programs, in order to strengthen the skills in particular demand by private firms.

Any policy reforms will need to consider implementation feasibility with a view to the various affected constituencies. Political economy issues are central to changes in foreign labor management policy, as witnessed in Singapore when the proposal for tradable permits was scuttled by employer opposition. In Malaysia, tighter immigration controls were introduced in the wake of the East Asian financial crisis, and thousands of laid off and illegal foreign workers were deported. Original plans to repatriate 1 million foreigners were scaled back considerably, however, in response to criticism from neighboring Indonesia, where a massive repatriation from Malaysia would exacerbate their own severe crisis conditions.

Political fall-out from immigration policy could be minimized if the “losers” vis-à-vis policy changes are foreign workers who do not enter into the welfare function of the host country. This approach still risks negative effects on economic growth, however, especially in the highly segmented GCC economies. In Kuwait, for example, raising the cost of foreign labor is likely to affect private sector firms disproportionately, depressing private output and raising the price of domestically-produced non-tradable goods. Furthermore, opposition is likely to emerge among those engaged in the thriving secondary market in work permits. Whereas foreign labor management policy is largely effective in Singapore and Malaysia for numerous reasons that include both replicable and unique factors, aspects of political economy are nevertheless determinate in implementing and reforming policy.

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