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The World Bank and other multilateral institutions have long advocated the removal of tariffs and other barriers to trade as an important step in structural adjustment. Although the benefits from trade reform are well understood, there is no consensus regarding the short-run costs of adjustment. Few studies actually measure the unemployment or wage effects of trade reform in developing countries. One major problem is that it is difficult to disentangle the effects of stabilization and trade reform on employment. Many trade reform episodes are undertaken concurrently with macroeconomic stabilization policies (such as fiscal and monetary restraint), so it is difficult to measure the impact of trade measures on unemployment.

Labor markets are important for two reasons. First, painful spells of unemployment, rising poverty, and rapid real wage declines clear cannot be ignored. Rising poverty and high unemployment are likely to threaten the very sustainability of the reforms. Second, changes in labor market institutions or regulations may be critical to the success of a proposed reform. Nowhere is this more evident than in the transitional economies of Eastern Europe and the former Soviet Union (FSU), where the lack of labor mobility and the large size of the public sector is a significant impediment to trade reform.

One partial solution has been to encourage foreign direct investment (FDI). The issue is twofold. First, what is the effect of trade reform on foreign investment? Does opening up to trade lead investment to leave the country, or does liberalization attract new investment? Second, how can policymakers alleviate the short-run costs of adjustment by encouraging foreign investment?

This chapter reviews the available evidence on the linkages between trade reform, labor markets, and FDI. We begin by drawing on studies of sixteen countries.

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that underwent trade reforms in the 1980s and 1990s. These sixteen countries were chosen because of their inclusion in the United Nations Development Programme (UNDP)-World Bank Trade Expansion Program (TEP). Wherever possible, we supplement these studies with additional studies and empirical evidence.

The evidence suggests that the employment and wage effects of trade reforms are generally small. The only exceptions are in the transitional economies, such as Czechoslovakia, Mongolia, Poland, and Romania, where trade reforms were accompanied by a restructuring of the entire economy. In these countries, however, it is difficult to distinguish the effects of trade reform from the overall transformation of the economy.

In general, the employment effects of trade reforms were fairly small for a number of reasons. First, a number of studies suggest that real wages in developing countries are very flexible. As a result, wages are allowed to adjust instead of employment. The flexibility of real wages is consistent with minimum wages that are either very low or not enforced.

Second, many other labor market policies that in principle could have affected adjustment to trade reform were also not enforced. In many countries, hiring and firing laws, employer payroll taxes to finance social security and unemployment, and minimum wages are widespread; however, empirical evidence suggests that compliance with these labor market restrictions is poor. In some countries, such as Morocco, implementation of labor laws is highly inadequate. In other countries, labor market regulations are redundant; for example, minimum wages are often set at levels that are not binding to the employer.

Other factors cushioned the impact of trade reform on the labor force. Trade reforms are often implemented in conjunction with exchange rate devaluation, which cushions the effect of the reforms. Finally, many firms responded to greater international competition by cutting profit margins and raising productivity.

One factor that does impede adjustment is the presence of a large and inflexible public sector. In countries like Poland, the lack of public sector adjustment endangers trade reform for two reasons. First, maintaining a large public sector reduces the pool of available labor for private sector growth, and also makes wage adjustment difficult if the public sector acts as a wage leader. Second, the significant fiscal costs of paying public sector employees have significantly hampered efforts to achieve fiscal and monetary restraint.

In all the countries with available data, trade reform was accompanied by significant increases in foreign investment inflows. This appears to be largely because trade reforms were generally accompanied by a liberalization of the foreign investment code and a more positive attitude toward foreign investors in general. There is no evidence that trade reform led foreign investors to leave formerly protected markets.

The remainder of the chapter is organized as follows. Wage and employment responses to trade reform describes the impact of trade reform on these areas; labor market regulations discusses the role of the public sector in impeding response to reform; and Trade Reform and Foreign Direct Investment discusses the foreign investment response to liberalizing trade.

Wage and Employment Responses to Trade Reform

The debate on the labor market effect of trade reform is not new. Anne Krueger’s book on trade and employment in developing countries appeared in the early 1980s. Yet we actually know very little about the short-run impact of trade policy reforms on the labor market. Krueger’s book, while illuminating, provides no actual country experience; it merely hypothesizes that trade reform should lead to employment increases because the labor force shifts toward labor-intensive tradables (Krueger 1983).

Aggregate Wages and Unemployment

In a general equilibrium framework provided by the trade models of Ricardo and Heckscher-Ohlin, moving toward international prices via trade reform should have no effect on employment because full employment is generally assumed. In a world where labor mobility is not perfect, however, trade reform could lead to short-run adjustment costs. Heckscher-Ohlin models provide more explicit predictions regarding the impact of changes in international prices on wages to the extent that industrializing countries have a comparative advantage in labor-intensive goods, trade reform will lead to more production of those goods. The shift toward greater production of labor-intensive goods will in turn increase the demand for labor and raise wages. Although higher wages will lead to a reduction in the capital-labor ratio across all sectors, there will be a reallocation of output toward labor-intensive goods. This implies that trade reform would lead to higher wages, a reduction in the relative returns to capital, and demand shifts to more labor-intensive sectors. However, only data on manufacturing wages is available, so we cannot look at the relative returns to capital and labor.

Figure 8.1 shows a time series of total employment for those TEP countries with available data, before and after each trade reform. Each trade reform was dated based on the year when standard trade reforms were first introduced in a country, such as the conversion of quotas to tariffs, tariff reduction, elimination of state trading agencies, or the relaxation of foreign exchange rationing for import purchases. Information dating these reforms was taken from World Bank and TEP reports. In many cases, the dates of the trade reforms do not coincide with the dates of structural adjustment loans.
According to figure 8.1, aggregate employment increased after trade reform in all countries except those economies in transition. In Costa Rica, for example, trade reforms were accompanied by strong aggregate Gross Domestic Product (GDP) growth, employment expansion, and increasing wages. In Czechoslovakia, Poland, and Romania, the onset of trade reforms was accompanied by sharp declines in total employment. However, in the transitional economies one could easily argue that the employment decline was not due to the trade reform component of the adjustment package. The transitional economies did not experience the usual expansion in trade that is expected to accompany trade reforms and provide the mechanism that could expand employment. Instead, the collapse of the Council for Mutual Economic Assistance (CMEA) and the conversion of a barter to a hard currency system led to trade decline, disruption, and reorientation. Figure 8.2 shows that exports and imports as a share of Gross National Product (GNP) declined in almost all the CMEA countries with available data in the late 1980s, when trade reforms were introduced. In Bulgaria and Mongolia, where the declining share of trade in the GNP was less severe, stable trade shares mask a significant decline in the volume of trade (see figure 8.3). Stable or increasing trade shares can be explained in the context of declining trade volumes by the fact that GNP declined even more quickly than trade.
Another explanation for the very different experiences of the transitional and non-transitional economies under adjustment emphasizes the definition of employment. In countries like Kenya, where the social safety net is not well developed, many workers simply cannot afford to become unemployed. Instead, underemployment may rise and wages may fall, but total employment may remain fairly stable. We explore the role played by a well-developed social safety net in fostering employment reallocation later in this chapter.

The trends in manufacturing wages, taken from the International Labour Organisation (ILO), are reported in figure 8.4. The data generally show the same pattern as employment. Wages are reported in U.S. dollars in order to make them comparable across countries. One problem with reporting wages in dollar terms is that many trade reforms were accompanied by devaluation, and exchange rate changes are partly responsible for the observed decline in wages for some countries.

In Costa Rica and Mauritius, trade reforms were accompanied by a rise in manufacturing wages. In the transitional economies, as well as Kenya and Zimbabwe, however, the onset of trade reform coincided with sharp declines in manufacturing wages. Sharp wage declines during the 1980s and early 1990s were not confined to the transitional economies; between 1981 and 1991, real wages in Kenya (across all sectors) fell by 31 percent.

Unfortunately, almost no countries in the sample report unemployment figures. Even those unemployment figures that are available are likely to be underestimated or unreliable. However, for those five countries with unemployment data from the ILO (figure 8.5), the pattern remains the same. Costa
Rica, Peru, and Uruguay report declines in unemployment post-reform, while Czechoslovakia and Poland report very large increases in unemployment with the introduction of trade reform.

The evidence presented in figures 8.1 through 8.5 is drawn from a small sample. But more detailed cases for other TEP countries not included in these figures, such as Guatemala, Morocco, Mongolia, Uganda, and Vietnam, reveal the same general pattern. In Guatemala, where trade reforms were introduced in 1987 and 1990, the drop in real wages during the first half of the 1980s was reversed in 1987. Unemployment also declined, from 14 percent in 1987, to 7.8 percent in 1989. In Morocco and Uganda, trade reforms in the mid-1980s were accompanied by rising employment and stable or rising wages, as well as a reduction in poverty. Trade reforms were introduced in Uganda in 1987 as part of the government’s Economic Recovery Program. In both rural and urban areas, real GDP per capita growth recovered. However, the economy was also recovering from the political chaos of the Obote II regime, which makes it difficult to disentangle the benefits from the “peace dividend” from the benefits of structural adjustment per se. Nevertheless, a combination of exchange rate adjustment, elimination of import and export licenses, removal of price controls, export monopolies, and trade taxes has encouraged the monetization of the agricultural sector. Despite an overall decline in the terms of trade for agriculture, farmers have shifted resources toward tradables and higher-paying export crops. Real wages of agricultural labor, including both casual and permanent agricultural labor, a good measure of the welfare of the poor, rose steadily during the 1980s.

Trade reforms in Morocco were introduced in 1984, with elimination of quotas and reduction of tariffs continuing throughout the 1980s. Between 1984 and 1991, poverty declined in Morocco, a conclusion that is robust for the types of poverty measures used for the analysis. The reduction in poverty can be traced to the growth of employment opportunities, particularly in export-oriented manufacturing. Although employment growth was accompanied by a decline in the real manufacturing wage of about 0.4 percent per year between 1985 and 1990, increased employment opportunities appear to have offset the wage declines and led to an overall reduction in the incidence of poverty.

In Mongolia, as in the other transitional economies, reforms were accompanied by sharp declines in employment and real wages. Real wages dropped 50 percent between 1990 and 1992, with an estimated further decline of 33 percent in 1993. With a growing rate of unemployment, the percentage of the population living below the poverty line was estimated to have increased from essentially zero before 1990 to 27 percent in 1994. However, it is difficult to estimate how much, if any, of the unemployment and wage declines were due to trade reform, because structural adjustment encompassed every aspect of the economy. The increase in poverty in Mongolia is more likely to be due to
several other factors, including termination of financial support from the FSU, fiscal contraction, inflation, privatization, the closure of nonviable enterprises, and reductions in such services as basic education, health care, and social assistance. In fact, it could be argued that price and trade liberalization are bringing benefits to Mongolia that offset the contractionary effects of other policies. The growth of employment in tradables such as garment industries, meat, meat products, and skins and hides has been significant.

Vietnam, which shares many of the characteristics of the transitional economies, has nonetheless managed to avoid many of the large adjustment costs shared by these other economies. Although unemployment did increase following the trade and other reforms introduced in 1988, it was only at 6 percent in 1991. In part this reflects the country’s rapid growth rate (9.3 percent in 1992), yet it also reflects the fact that Vietnam began the transition away from Central Planning with a significantly lower percentage of the labor force in public sector employment. Nevertheless, it is difficult to attribute the lower adjustment costs purely to the smaller public sector share. The small public sector share could simply reflect the largely agricultural nature of the economy, which in turn implies that a relatively small fraction of the labor force was “misllocated” to nonviable sectors. Yet the relative ease of the transition does provide some insights into the conditions that could sustain a less costly reform process.

Vietnam was and continues to be a heavily rural, agricultural society, and the vast majority of Vietnamese families are not dependent on enterprises for income and subsistence. Total public sector employment in Vietnam accounted for only 15 percent of the labor force in 1987, in contrast to the 77 percent of the labor force in state-owned enterprises (SOEs) in the FSU. In addition, other social services such as health care, education, and social safety nets were provided in transitional economies through the SOEs; whereas in Vietnam they play no role in the provision of social services. Vietnam has a tradition of community-based systems of social safety nets, which were also provided through the central command mechanism in the transitional economies.

At the aggregate level, trade reform seems to have been accompanied by employment expansion and relative wage stability in all the countries under TEP except for the transitional economies and some of the African countries. The evidence also suggests significant wage flexibility across countries. For economies in transition, it is easy to argue that the significant declines in wages and employment are more likely to arise from the difficulties in moving from a centrally planned economy dominated by public sector enterprises, than from trade reforms alone. This certainly seems to be the case when we compare countries such as Mongolia and Vietnam. Nevertheless, trade reforms are likely to have uneven effects across sectors because protection is reduced more in some sectors than in others. The evidence on sectoral responses to trade reform is discussed below.

Sector-Level Effects of Trade Reform: Testing for Employment Reallocation

Although it is difficult to establish statistical linkages between changes in the trade regime and employment or wage effects at the aggregate economy-wide level, it is easier to measure the differential effect of trade reform across subsectors. This so-called partial equilibrium approach is possible because changes in the trade regime typically are uneven across goods. In a well-functioning labor market, one would expect small wage changes and larger employment shifts between sectors because wages for similar occupations should equalize across sectors. But changes in output prices should lead to reallocation of labor toward the higher-priced goods. The United States, for example, which by most standards has a very flexible labor market, clearly shows small wage responses to changes in relative prices across sectors and big employment effects.

One of the first attempts to measure the partial equilibrium effects of import competition was by Grossman (1986, 1987). Grossman analyzed the effect of tariff protection in the United States, finding that wages are fairly unresponsive to (tariff-inclusive) import prices but that employment responses in some sectors have been quite significant. Grossman concludes from the low wage elasticities and higher employment elasticities that there is fairly high intersectoral labor mobility within the United States. Other cross-industry studies of the United States and Canada include Freeman and Katz (1991), Revengha (1992), and Gaston and Trefler (1994). These studies also find significant effects of changes in import competition on intersectoral changes in employment, but smaller effects on wages. In the United States and Canada, it appears that trade policy changes lead to employment reallocation across industries, with very little effect on wages.

Evidence on trade and employment linkages is much weaker for developing countries. Krueger (1983) describes a project sponsored by the National Bureau of Economic Research (NBER) that analyzed the linkages between trade policies and employment in ten industrializing countries. The NBER studies focused on (a) measuring the relative labor intensity of exportables against import-substituting production, and (b) measuring the extent to which greater protection encourages a shift toward more capital-intensive means of production. Krueger and her colleagues hypothesized that moving toward a more neutral trade regime led to greater labor intensity in production. However, none of the case studies directly measured the actual impact of trade reforms on the labor market.

One study that does explicitly examine the relationship between trade reform and employment is the work on Chile produced by de la Cuadra and Hachette (1989). Yet their study also leaves many questions unanswered. They argue that the 16 percent unemployment rate in Chile during the 1976-81 episode cannot be ascribed solely to trade reform, given the deteriorating terms of
trade and severe recession (beginning in 1975) during that period. De la Cuadra and Hachette attempt to disentangle the relative effects of other factors and trade reforms on employment. Using a simulation model, they argue that the effects of trade reform were in fact quite small. They argue that, overall, the effect on employment in manufacturing and mining was negative, but that it was more than compensated for by an increase in agricultural employment. They also find very different effects across manufacturing. For example, they find that employment went up by 50 percent in some exportable sectors such as wood products, and declined by essentially the same amount in import-competing sectors such as electrical and non-electrical machinery.

Partial equilibrium approaches, similar in spirit to the U.S. studies, have recently been completed for Mexico, Morocco, and Uruguay. For Uruguay, which introduced trade reforms in 1979 and again in 1985, Rama (1994) used four-digit industry data between 1978 and 1986 to measure the effect of trade liberalization on employment reallocation and real wages in the manufacturing sector. The results show that trade reforms had a significant impact on the level of employment across manufacturing subsectors, but almost no effect on real wages. Reducing the protection rate within a sector by 1 percent led to an employment reduction of between 0.4 and 0.5 percent within the same year. These results suggest that during those years the labor market in Uruguay was fairly competitive, with significant employment reallocation between sectors after the reforms.

Currie and Harrison (1997) find small wage and employment responses to trade reforms, using plant-level data for Morocco between 1984 (when the trade reform began) and 1990. Although employment in most manufacturing firms was unaffected by the tariff reductions and the elimination of quotas, there was a significant employment response for firms most highly affected by the reforms. The 21-point decline in tariff protection for firms in the textiles, beverages, and apparel sectors was associated with a 6 percent decline in employment.

Puzzled by the small employment response to seemingly large reductions in tariffs and quotas, Currie and Harrison explore several possibilities. They present evidence on the fluidity of the market and argue that labor market rigidities cannot account for the small response. Instead, their explanation centers on the ability of capital to share the cost of adjustment. Instead of adjusting employment, most firms reduced their profit margins.

Currie and Harrison also examine the employment response for exporting firms, which were generally located in the sectors that experienced the largest reductions in protection (such as textiles and apparel). Exporting firms were able to adjust to a 24 percentage point decline in tariff protection by reducing employment by less than 2 percent. Faced with a contraction in domestic demand, export-oriented firms were able to adjust by reorienting themselves toward export markets, at very little cost to employment or wages.

Revena (1997) examines the impact on wages and employment of Mexico's trade reform, which began in 1985. Revena also finds a small effect of the reform on employment. Unlike Currie and Harrison, who attribute the small employment response to product market imperfections, Revena addresses imperfections in factor markets. In contrast to Morocco, where unions are few and organizers are sometimes jailed, organized labor is important in Mexico. Around 30 percent of the labor force is unionized, which is high by developing-country standards.

Revena finds that most of the adjustment to trade reform in Mexico occurred through wage reductions. Prior to the trade reform, rent-sharing agreements allowed workers to earn higher wages. Revena estimates that on average real wages declined by 3 to 4 percent as a consequence of the trade reform, with more-affected sectors experiencing a 10 to 14 percent decline. In firms in which rent-sharing had previously allowed workers to benefit from industry-wide protection, the fall in real wages was even greater.

These partial equilibrium studies, combined with the more aggregate evidence discussed above, present a general picture of well-functioning labor markets (except in the transitional economies) that respond smoothly to trade reforms. At the aggregate level, aggregate employment generally rose. At the subsector level, employment was reallocated away from formerly protected sectors. Real wages rose in some economies and fell in others; the fall in real wages in countries such as Kenya, Morocco, and Zimbabwe suggests that real wages were certainly not rigid downward. As expected in a labor market in which employment adjusts to output shocks, wages equalized across sectors, generating no observable wage effects at the subsector level. One surprising result is that in some countries the extent of employment reallocation in responding to trade reforms seemed too low. In Morocco, employment in most sectors was unaffected by trade reforms, and even in highly affected sectors the employment effects were not large. These relatively small effects have been estimated for both industrial (United States, Canada) and industrializing (Mexico and Morocco) countries.

There are several explanations for the small response of employment to trade reforms. If firms simply respond to increased international competition by raising productivity of the existing labor force, efficiency gains can be achieved without shedding labor. Currie and Harrison (1997), Haddad (1990), and Tybout and Westbroek (1995) show an increase in firm-level productivity in both Morocco and Mexico following the trade reforms. Although trade reforms were often far reaching, protection levels still remained high in comparison to the industrial countries. In Morocco, despite the elimination of quotas and tariff reduction, average tariffs remained above 30 percent throughout the 1980s. In both Morocco and Mexico, the real exchange rate (REER) also depreciated significantly with the onset of trade reform. Figure 8.6 using the International Monetary Fund's
(IMF's RER series) shows that, compared with other developing countries during this period, the RER in Mexico and Morocco depreciated significantly in the mid-1980s, when trade reforms were introduced in both countries. In Mexico, however, the RER began to appreciate beginning in 1988. Consequently, the exchange rate changes partially offset the greater competition due to lower tariffs, and firms were able to avoid dramatic changes in their labor force. Evidence consistent with this hypothesis is the sluggish output response to tariff and quota reforms in both Mexico and Morocco. In very poor countries, it is likely that employment adjustment is lower due to the lack of a social safety net.

**Labor Market Regulations**

One puzzling aspect of trade reform in Mexico and Morocco is that it has had almost no impact on employment or wages. Trade reforms have not led to a significant reallocation of labor. One popular explanation is that labor market policies such as hiring and firing costs or minimum wage policies inhibit the response to reform. Inability to fire may prevent employers from reallocating production to more profitable areas of production. Evidence for both India and Venezuela suggests that this may be the case. Minimum wage laws may inhibit wage flexibility and undermine international competitiveness, leading to the observed lack of wage declines in most TEP countries. Lack of downward wage flexibility could also be important if rapid expansion of the private sector labor force is necessary to absorb workers released from public sector enterprises. Other labor market regulations that could affect labor market flexibility include payroll taxes imposed on employers, large tax burdens that discourage labor demand, and large or sluggish public sectors. A large and inflexible public sector is likely to be particularly problematic in transitional economies, where the development of the private sector is dependent on a labor force drawn from downsizing public enterprises.

We argue below that labor market regulations have not been a significant impediment to trade reforms in most TEP countries. Minimum wages are often set too low to be binding for the majority of enterprises. Even in countries where the minimum wage is set high enough to be binding, as in Morocco, stringent labor laws conceal the fact that implementation of labor laws is almost nonexistent. Payroll taxes, although sometimes high, can generally be passed on to employees in the form of lower wages. The only real impediments seem to be (a) the difficulty in firing labor, which is significant in countries such as India, and (b) a large public sector, typical of most transitional economies.

**Payroll Taxes**

Mandated payroll taxes, shared between the employer and employee, vary from as low as 15 percent of the payroll in Mauritius to as high as 58 percent in Costa Rica. To what extent do these high payroll taxes inhibit wage responses to trade reform and affect the competitiveness of enterprises? Due to paucity of research in this area, the answer is somewhat unclear. Payroll taxes will only affect labor costs and employment if the cost of these taxes cannot be passed on to workers in the form of lower wages. In fact, if there is full shifting to wages, employers will see no net rise in their compensation costs, and there will be no resulting disemployment. However, if wages were rigid downwards, possibly due to minimum wage laws, employers would be unable to shift the tax burden to employees in the form of lower wages. The only evidence to date on the incidence of payroll taxes in developing countries are two studies, by Gruber (1997) and MacIaac and Rama (1997).

Gruber examines the effect on employment of reducing payroll taxes in Chile. In 1981, Chile shifted from a social security system paid through taxes on employers to a privately funded system, which led to a reduction in the employer's share from 30 to 5 percent. Gruber finds that the payroll decline was fully offset by an increase in wages, with no effect on employment. MacIaac and Rama examine the incidence of nonwage costs in Ecuador, where these account for 75 percent of take-home pay in some cases. Like Gruber, MacIaac and Rama conclude that a large fraction of the mandated nonwage costs imposed on employers are shouldered by workers in the form of lower wages.
If evidence for Chile and Ecuador is transferable to other countries, this would suggest that payroll taxes per se are unlikely to affect the relationship between trade reform, wages, and employment. The only exceptions would be where taxes are unusually high or wages are rigid downwards due to binding minimum wages. However, minimum wages are not binding in most TEP countries.

**Minimum Wages**

Minimum wages, or other price-setting mechanisms such as tripartite agreements to regulate wages, exist in quite a few of the TEP countries, including Costa Rica, Kenya, Mauritius, Morocco, and Uruguay. Despite their widespread use, however, the evidence suggests that most minimum wage laws are not binding. In Costa Rica, which has eighty or so different minimum wages defined by occupation, the minimum wages are nevertheless not directly binding in determining wages in most sectors (World Bank 1992). One possible reason is that minimum wage increases in Costa Rica during the second half of the 1980s generally kept pace with inflation, but rarely exceeded it. In Kenya, another country with an elaborate system of seventy-eight minimum wages specified by sector, occupation, location, and age group, the minimum is also not binding (World Bank 1993). During the entire decade of the 1990s, the minimum wage for adults declined more quickly (3.1 percent per year) than average wages (2.1 percent per year), which suggests a steady deterioration in the real value of the minimum wage.

Bell (1997) and Harriss and Islam (1993) analyzed plant-level and household data for Mexico and Morocco to measure compliance with minimum wages. In both countries, the evidence suggests that a large percentage of individuals receive earnings below the statutory minimum wage. Further evidence for Mexico also suggests that the minimum wages had no impact on overall labor demand. In the Moroccan case, such behavior has been legitimized by recent laws allowing firms to legally ignore labor legislation when hiring new entrants into the labor force. This law, which was passed in an effort to address the high rates of unemployment for youth, suggests that in the cases in which minimum wages do inhibit employment growth, the government is likely to find politically acceptable means to remove the minimum wage constraint.

Although there is insufficient evidence to suggest any effect of minimum wage laws on employment in the TEP countries, in part due to their nonbinding nature and in part to poor compliance, minimum wages should not be ignored. Case studies of countries with relatively high minimum wages, as in Puerto Rico and Colombia, do show that high minimums have contributed to unemployment rates and reduced overall labor demand. Castillo-Freeman and Freeman (1991) show that in Puerto Rico, imposition of the U.S. minimum wage raised average earnings on the island, lowered the aggregate employment-population ratio by a significant amount, and shifted employment away from low-wage sectors. Bell (1997) found that increases in minimum wages in the Colombian manufacturing sector led to a significant reduction in employment. Even in countries where the minimum wage does not appear to be a binding constraint, as in Costa Rica and Morocco, it appears that the minimum wage has contributed to an overall compression in the structure of wages. In addition, minimum wages may reduce incentives for firms to provide on-the-job training, because firms often provide this type of training only if workers are able to "pay" for it through lower wages. Thus, minimum wages may limit on-the-job training by eventually becoming binding for apprentices or trainees.

Minimum wages, often readjusted with great fanfare at the start of a new year, provide a visible means for governments to respond to the welfare of poorer segments of the population. From this perspective, eliminating minimum wages would be a politically volatile solution, and in many cases not even possible. Instead, developing-country governments appear to be coping with the issue by allowing the real value of the minimum wage to deteriorate. As described by Freeman (1993), increases in minimum wages did not keep pace with inflation during the 1980s, leading to real minimum wage declines that exceeded 50 percent between 1980 and 1989 in Mexico. Yet even in cases in which the legislated minimum increased substantially in real terms, as in Morocco, firms appear to have implemented the legislation selectively.

**Hiring and Firing Laws**

Many industrializing countries have highly restrictive labor codes that make it both difficult and costly to hire employees. In Kenya, Mauritius, Morocco, and Uruguay, private firms must first obtain permission from government bodies to hire permanent employees, and must then pay a severance payment to dismissed employees ranging from two weeks' to one month's pay per year employed. For public sector firms, restrictions on dismissals are typically even more severe. These restrictions can make it extremely difficult for firms to restructure or for economies to reallocate labor following a trade reform.

In practice, it is unclear how important role restrictions on dismissals actually play in allowing private sector enterprises to respond to trade reform. Restrictions on dismissals typically only apply to the largest formal sector enterprises. In Kenya, Mexico, and Morocco, many enterprises have responded to restrictions on firing permanent workers by hiring temporary employees, who can be easily dismissed. In Morocco, the share of temporary workers in manufacturing rose by nearly 20 percentage points between 1984 and 1990.
Econometric evidence on the extent to which job security regulations affect the speed of labor market adjustment is available for India, Morocco, and Zimbabwe. For India and Zimbabwe, Fallon and Lucas (1991) estimated the effect of tighter job security legislation on adjustment in employment levels. For Morocco, Currie and Harrison (1997) examined the extent to which a sluggish adjustment of the labor force could explain the low elasticities of employment and wage responses to trade reform.

Fallon and Lucas find no evidence that the introduction of job security legislation in India or Zimbabwe affected the speed of labor market adjustment to demand shocks. This suggests that labor market regulations affecting hiring and firing cannot provide the explanation for lack of a labor market response to reforms, at least in these two countries. However, Fallon and Lucas do find that these laws reduced the level of total employment. One interpretation for these somewhat puzzling results is that total formal sector employment in India and Zimbabwe was replaced by temporary labor when stricter job security regulations were enforced, allowing employers to maintain flexibility of the labor force but leading to an observed decline in the formal sector labor force.

Currie and Harrison used a lagged adjustment model of labor demand to test the speed of adjustment in Morocco. They find that with the exception of parastatals, employment adjustment takes place within the year. Their econometric estimates are in the same range as most of the industrial country estimates surveyed by Hammerness (1993). In terms of the speed of adjustment, private sector firms in Morocco are more like North American firms than European firms. The latter typically adjust employment more slowly. These comparisons support the contention that in Morocco, despite legislation that on paper appears to be quite restrictive, labor mobility is comparable to the United States, where there are essentially no restrictions on hiring or firing. However, the evidence for Morocco does suggest that parastatals adjust much more slowly.

Despite this evidence that hiring and firing laws do not appear to pose a significant problem for adjusting firms, there are important exceptions. In Mauritius, regulations on dismissal in the sugar sector have prevented it from downsizing and also deprived the rest of the economy of additional labor. This is particularly problematic because employment shortages have led to rising wages, which in turn threaten the competitiveness of export-oriented sectors. The sugar sector employs approximately 40,000 workers, or almost 15 percent of the labor force employed in large firms. Under the Sugar Industry Efficiency Act, plantations with more than ten hectares are required to provide job security to all workers hired before 1986, even during the intercrop season. These plantations are not allowed to reduce their labor force through attrition either, because they are obliged to hire additional workers to make up any difference between their current employment and their 1988 labor force.

Estimates of labor redundancy in the Mauritius sugar industry range from 25 to 50 percent of total employment in that sector. If those workers could be released to other sectors, yielding a 3 to 7 percent increase in employment in the rest of the economy, GDP could increase by several percentage points.

Restrictions on dismissals and the resulting overstaffing problems are most severe in the public sector. This is the case for countries as diverse as Mauritius, Morocco, and Vietnam. The need to reduce the size of the public sector labor force is particularly important for two reasons. First, the release of workers into the private sector acts as a mechanism to lower wages elsewhere in the economy and provides a growing employment pool for the expanding private sector. Second, public sector layoffs are particularly important as a means of reducing public sector deficits, improving fiscal constraints, and attaining macroeconomic stability. These issues are critical in the transitional economies, which have a large public sector component.

Easing the Costs of Adjustment

Adjusting to trade policy reform almost always involves some social costs in the short run. These costs can be substantial if reform comes in the midst of a deep economic crisis, as is the case of the transitional economies. The combination of aggregate drops in demand and sectoral shocks can lead to sharp drops in employment. For the individuals involved, and for their families, displacement can entail substantial welfare losses. The affected family may lose a portion or even all of its income, sometimes for a long period of time. Moreover, displaced workers often face a loss of specific human capital tied to firms or sector-specific skills, and such a loss can be permanent. Research from the United States indicates that, even in dynamic labor markets in industrial countries, long-term losses for reemployed displaced workers can be as high as 30 percent of previous earnings (see Carrington and Zamar 1994).

The welfare costs of reform raise some key questions regarding the role of government policy. In particular, can government policy facilitate adjustment and alleviate the social costs? Can it do so without disrupting the process of sectoral reallocation necessary for a resurrection of growth?

The main issue in designing a safety net is resolving the conflict between economic efficiency and equity. Policy needs to satisfy two sometimes conflicting objectives: providing flexibility to the labor market, and helping those individuals adversely affected. This potential conflict is well exemplified by the use of severance payments. On the one hand, they represent a safety mechanism for displaced workers; on the other, they may reduce labor mobility. In designing a safety net, governments must find an acceptable balance between the necessity of ensuring flexible labor markets and the concern about providing income security.
In most cases, resolving the dual objectives of flexibility and income security will require a combination of measures. Policies aimed at increasing labor mobility—geographical, as well as occupational—will be crucial to accelerating adjustment. These policies may include removal of rules and regulations that impede job mobility, measures to encourage retraining of workers, and, particularly in the case of transitional economies, reform of the housing market.

Policies aimed at increasing flexibility should be combined with mechanisms that support the standards of living of those adversely affected by reform. How much protection governments should grant depends on what they can afford. The priority should be to protect the most vulnerable groups falling below a poverty line. Yet more ambitious programs may be needed on political economy grounds, to ensure support for the reforms.

The experience of different countries illustrates that the degree of government involvement and the types of policies it uses varies greatly according to a country’s structure, administrative capacity, and income level. The challenge is to design mechanisms that are rational, provide the right incentives, and are comprehensive and easy to administer. In general, simplicity and transparency should be a guiding principle. There are examples of effective and sophisticated assistance to workers of collapsing enterprises in many Organisation for Economic Co-operation and Development (OECD) countries, but it is unlikely that these administratively intensive schemes would work in economies characterized by much lower administrative capacity.

In developing countries, much simpler schemes would be preferable. For example, in economies with relatively large formal sectors, simple severance pay mechanisms jointly financed by firms and workers may be more appropriate than complex unemployment insurance schemes. Ideally, the precise amount of the payment should be negotiated between workers and employers, with some government oversight to ensure equity. Costs would be partially paid by workers benefiting from the insurance, either directly (as in Chile) or through lower wages.

Where public sector retrenchment is an important element of reform, it may be preferable to offer retrenched workers a menu of options combining severance payments, early retirement, and possibly funds for retraining. This may help reduce the burden on the budget and, if designed appropriately, could reduce some of the selection problems involved in reducing employment in the public sector, namely, the loss of those workers with better outside opportunities. The menu approach has been followed in a number of developing and industrial countries with some success. Chile and Spain are two examples. In other countries, however, public sector adjustment to reforms has been more sluggish, in large part because of obstacles to dismissing redundant labor. India and Zambia are two such examples.

In low-income countries, or in countries with a large informal sector, programs involving low-paid public works are most often the only effective mechanism for providing a safety net. Low wages act as a self-selection mechanism because only the truly needy will accept the jobs. These schemes are particularly appropriate during economic downturns, when other job opportunities are unavailable. They are also well suited for rural areas during the slack season, and can have a secondary benefit of building or maintaining important infrastructure assets.

Public works programs have been used extensively in many developing countries. The Food for Work program in Bangladesh and the Emergency Social Fund in Bolivia provide a basic level of employment and consumption for some of the poor. The Employment Guarantee Scheme in Maharashtra, India uses taxes to redistribute income from the wealthier urban areas, particularly Bombay, to the poor who work in rural parts of the state. Chile introduced large government-financed urban public works programs during the recessions of the mid-1970s and early 1980s. Like the Indian scheme, the Chilean program’s main objective was to create employment. At the bottom of the recession of the early 1980s they absorbed more than 10 percent of the labor force. By December 1988, a year after Chile’s vigorous economic recovery, that share had fallen to less than 0.1 percent.

Public works programs tend to have a greater chance of success where labor is more mobile and where there is a tradition of community work. When workers are able to move, the location of the program can be determined mainly by the quality of the projects. Poor laborers looking for public jobs are usually willing to relocate, at least temporarily, to obtain them. In addition, community participation greatly enhances the probability of success. Studies from Niger and Senegal indicate that communities with strong employment pooling traditions can assist in the mobilization of workers and facilitate the production of public goods, such as local production on common fields for common stockholding or simple neighborhood assistance schemes.

The level of wages in such programs is important in determining their success at targeting the needy. High wages may attract better-off workers and, given limited budgets, lead to fewer jobs created for the truly destitute. The importance of appropriate wage setting is illustrated by the Maharashtra program in India, which seeks to guarantee employment on demand. In its initial fifteen years, the program maintained wages at the level of market wages for unskilled casual agricultural labor. But in 1988 wages were sharply increasing, in line with a doubling of the statutory minimum wage. The higher wage, combined with budgetary pressures, eliminated the employment guarantee a year after the wage increase.

Most public works programs have two objectives: providing relief to laborers in distress and creating a public asset. To achieve both objectives,
programs must be flexibly managed with the capacity to expand employment rapidly during a crisis. This suggests focusing on high-return public works programs during normal times but expanding public investments that generate employment, to include lower priority projects, during crises. Nevertheless, designing effective programs is always difficult. Such programs may become permanent fixtures if politicians are reluctant to dismantle them after economic recovery.

Trade Reform and Foreign Direct Investment

Many of the TEP reports point to FDI as an important source of capital that could help reforming countries acquire valuable technology and at the same time ease the transition to a more open economy. We begin by analyzing the trends in foreign investment in the TEP countries before and after the trade reforms. We then briefly discuss the role that foreign investment has played to ease the transition process, and conclude with policy recommendations for countries wishing to maximize the benefits from FDI.

The Impact of Trade Reform on Foreign Investment

Until recently, a significant share of foreign investment in industrializing countries was drawn by the prospect of highly protected home markets. Multinationals producing automobiles in Mexico and Venezuela were able to benefit from high tariff walls and weak domestic competition. With the movement toward more open markets, some feared that “tariff-jumping” FDI would leave these countries. Other factors, however, were expected to offset the expected loss of this kind of FDI. Trade reforms were often accompanied by liberalization of the foreign investment code (see, for example, India, Morocco, Poland, Venezuela, and Vietnam). In addition, the trade reforms conveyed reassuring messages to investors about the future strength of the economy.

Figure 8.7 plots the annual share of net foreign investment in GDP for each TEP country with available World Bank data. The time series, available before and after each trade reform, allows us to quickly summarize the relationship between foreign investment inflows and trade reform. In most countries, net foreign investment inflows increased substantially following trade reforms. In some countries, the magnitudes are quite large. In Costa Rica, foreign investment nearly tripled, amounting to an inflow of more than 3 percent of GNP by 1992. In all three transitional economies, foreign investment surged in 1990, although as a share of GNP it was very small in Poland and Romania. Other TEP countries not shown in figure 8.7, such as Vietnam, also experienced a surge in foreign investment.

The combination of freer trade and more generous policies on foreign investment, both of which boost investor confidence, appears to have led to significant increases in foreign investment inflows. Despite the overall positive trend, however, two points are worth noting. First, the magnitude of the foreign investment inflows was often small. Foreign investment inflows into Romania, for example, were a very small fraction of GDP. Second, at least one TEP country did lose foreign investors after reform. In Kenya, foreign investment inflows declined following trade reforms in 1980 and 1987. One reason may be that foreign investment has traditionally been attracted to the protected manufacturing sector. According to the TEP study on Kenya, most of this investment was actually welfare-worsening, because the after-tax repatriable earnings to foreign investment actually exceeded the value added of these investments when measured using world prices (World Bank TEP report).

One important policy question is the extent to which these postreform surges in foreign investment in the TEP countries reflect the impact of the trade reforms, more liberal foreign investment regulations, or an improved macroeconomic environment. Case studies of the individual TEP countries suggest that more liberal foreign investment codes, as well as an improved macroeconomic climate, are important factors. Trade reforms did not appear to play any independent role in encouraging foreign investment inflows. However, trade reform is critical for ensuring that foreign investment is not “imrimizing,” as in Kenya. In addition, when foreign investment flows to more open economies it is much more likely to be oriented toward export markets than domestic markets. A joint program of trade reform and liberalization of foreign investment codes will ensure that increased foreign investment inflows lead to welfare gains, not losses, for the host country.

Individual case studies help to shed light on the importance of policy and macroeconomic climate in promoting foreign investment inflows. In Guatemala, although the surge in foreign investment coincided with the trade reform in 1987, the increase in FDI probably reflects the sharp increase in maquila assembly and investment related to the Caribbean Basin Initiative (CBI). Guatemalan investment policy, one of the most liberal in Central America, has not been a deterrent to foreign investment. The only detrimental aspects are the treatment of foreigners under the tax code and the processing delays associated with informal approval procedures that can take up to three years. Under the tax code, dividend income to resident investors is exempt from income tax, whereas dividends to foreign shareholders are subject to a 12.5 percent withholding tax. An even more important deterrent to FDI in Guatemala is the perception that the country is unstable economically and politically. This perception is exacerbated by the fact that foreign exchange is frequently unavailable and exchange rate policy is often erratic.
Figure 8.7. Trends in Foreign Investment (net FDI flows as share of GDP)

[Graphs showing trends in foreign investment for various countries such as Costa Rica, Czechoslovakia, Guatemala, Kenya, Morocco, Madagascar, Mauritius, Peru, Poland, Romania, Uruguay, and Zimbabwe.]

Note: Dotted lines represent years of trade reforms.
In Vietnam, FDI has been increasing since a foreign investment law was introduced in 1987 and the country began to encourage foreign investors. Following a 1990 revision that clarified several provisions to the law, reviewing authorities approved twice as much foreign investment as the previous year. The increasing trend continued in 1992 and 1993 as further reforms were introduced. Yet the actual share of foreign investment in the country remains quite small. In large part, this reflects continuing uncertainty about the macroeconomic climate. Nevertheless, regulatory constraints in three areas do remain a problem for foreign investors, and efforts to remove those impediments could help to increase foreign investment inflows. First, the current screening process for foreign investment should be streamlined by abolishing the list of priority industries, which is too broad to be useful. Second, the requirement for feasibility studies by small- and medium-scale foreign investors should be eliminated. Third, the issue of overlapping authority for approving foreign investment between local and central governments, and among multiple agencies within the central government, needs to be resolved.

The role played by trade reforms, policies, and the macroeconomic climate is well illustrated by the varying degrees of success experienced by the Czech Republic, Poland, and Romania in attracting foreign investment. Although all three countries introduced trade and other reforms at about the same time, the Czech Republic has been much more successful than either Poland or Romania in attracting foreign investment (see figure 8.7). Romania has been the least successful of the three countries. Yet all three countries had similar transitional programs, and offered close proximity to European markets, low wages, and a relatively skilled labor force. What accounts for the differential response of foreign investors?

The success of the Czech Republic in attracting more foreign investment stems from the combination of a better macroeconomic outlook and a more liberal investment regime. In contrast, Romania’s poor performance in attracting foreign investment has been caused by a weaker macroeconomic environment, distortions in the investment regime, and a binding limitation on profit repatriation that was not removed until July 1993. Although promotional incentives such as tax holidays and tariff exemptions on imports have been very generous in Romania, particularly in relation to the other economies, these types of incentives are clearly not critical to attracting new investment.

Instead, the customs duty exemptions, tax holidays for foreign investors, and joint ventures in Romania have generated distortions and abuse. Because the types of goods eligible for customs duty exemptions have been vaguely defined, customs officials have been granted considerable discretion. Consequently, importers have attempted to bribe officials to qualify for these exemptions, and even exporters have found it more attractive to register as a joint venture than to apply for duty drawback treatment. The exemptions have also raised the effective rate of protection for foreign companies, contributed to the economy’s antiexport bias, and provided an unfair advantage to foreign firms in relation to domestic firms and SOEs.

In response to these types of problems, other countries in the region have reformed their policies to limit both the range and duration of customs exemptions. The Czech Republic has revoked all custom exemptions. In Hungary and Poland, only in-kind contributions of imported capital goods remain exempt; however, special incentives promised to existing investors were not withdrawn.

Romania also provides all new firms with an automatic two- to five-year holiday from taxation on profits. It appears that this incentive has also done little to promote foreign investment and has contributed to additional distortions. The differing lengths of tax holidays tend to distort the allocation of capital. Investors have taken advantage of the tax holiday by registering as a new joint venture when the firm’s tax holiday expires. This problem of multiple registrations for the purpose of tax evasion is particularly acute because the government is deprived of the fastest growing component of the tax base. This is likely to lead the government to raise taxes elsewhere or adopt inflationary finance to bridge the revenue gap. In response to these problems, countries elsewhere in the region, including the Czech Republic, Hungary, Poland, and the Slovak Republic, have now taken steps to eliminate or restrict tax holidays.

Romania’s restriction on the repatriation of profits earned in I E I acted to offset the incentives to foreign investors provided by the tax holidays and customs duty exemptions. Limits on profit repatriation have served as a major deterrent to foreign investment in many countries. Another TEP country, Zimbabwe, experienced significant declines in foreign investment inflows when repatriation of profits was eliminated in 1984 (see figure 8.7). Foreign investment inflows increased with a relaxation of the law in 1986, but subsequently declined in 1987 when profit repatriation was again restricted (see figure 8.7). Romania, however, removed its restriction on profit repatriation in 1993. In removing the restriction on repatriation of profits, Romania joins the rest of the region in moving toward a policy that allows full, unrestricted repatriation of profits, dividends, and proceeds from the liquidation of assets, after the payment of taxes and at the official rate of exchange.

Easing the Transition under Trade Reform: The Role of Foreign Investment

Foreign capital is an important component of domestic accumulation, accounting for as much as one-third of the capital stock in countries such as Mozambique. In Mauritius, foreign investors played an important role in the development of textile exports. Nevertheless, the fraction of foreign investment as a share of GDP, as indicated by figure 8.7, remains low. Most of the foreign investment in
developing countries is concentrated in a few high-performing countries such as China. Although FDI currently accounts for the largest single source of capital inflows to developing countries, only a small fraction of global foreign investment flows are attracted to industrializing countries.

In light of the recent peso crisis in Mexico, one question that arises is the extent to which these flows are a sustainable source of capital for promoting growth, rising wages, and a better work force. Although FDI is a more stable source of capital than portfolio investment, many foreign firms are in footloose industries such as garments, where exit costs are low.

Although foreign investment may be more unstable than domestic sources of capital, the alternative route is even more unattractive: foregoing the new job opportunities created by the entrance of multinational firms. The Mexican case is more a lesson in managing exchange rates than in the costs of financing a trade reform with foreign investment. The government’s delay in adjusting the exchange rate magnified the inevitable devaluation and exacerbated the effects of the policy failure. A more realistic exchange rate policy could have prevented the current crisis.

**Formulating Policy Guidelines**

Country experience suggests the following policy guidelines for maximizing both the magnitude of foreign investment inflows and the benefits derived from foreign investors:

- **Promote policies for a stable macroeconomic environment and long-run growth.** Empirical evidence on the determinants of foreign investment suggest that the most important factors in attracting FDI are large markets, high growth, and a stable political and macroeconomic climate. Consequently, adjustment policies (including trade reforms) are likely to be the most powerful tools for attracting foreign investment in the longer term, as countries resume higher growth and attain macroeconomic stability.

- **Avoid targeting sectors in the approval process.** Screening for the financial soundness of investment proposals (Romania, Vietnam) is not warranted. In general it is unlikely to be successful because government staff often do not have the time, expertise, or access to accurate data for the task. Recognizing this, the Czech Republic and Hungary recently dismantled their mandatory screening and approval process for investment. If government officials wish to control investment in some sensitive sectors, such as defense, a short negative list should be used (as in Poland).

- **Eliminate restrictions on profit repatriation.** Evidence drawn from country case studies in Romania, Zimbabwe, and elsewhere suggests that imposing limits on profit repatriation is likely to act as a major deterrent to foreign investment.

- **Eliminate special incentives for foreign investors.** Providing attractive packages for foreign investors in the form of tax holidays, duty-free inputs, and subsidies for infrastructure should be eliminated. Evidence suggests that such incentives are not effective in attracting foreign investors. In addition, it is not clear why regulations should favor the foreign investor over the domestic firm, as in Vietnam, or formerly in Czechoslovakia, where profits were taxed at a higher rate for state enterprises (50 percent) than joint ventures (40 percent).

Recent experience suggests that countries are sometimes forced to give higher concessions to outside investors in order to compete with other countries that are doing the same thing. These kinds of bidding wars (see, for example, the CMEA experience) suggest the need for a more coordinated policy toward foreign investors across countries. One possibility would be for multilateral institutions such as the World Bank, the IMF, or the World Trade Organization to take a more active role, in an effort to both minimize destructive bidding and to encourage foreign investment inflows to developing countries through more uniform, transparent, and stable policies.

Tax and tariff concessions disrupt the uniformity of trade reform packages and lead to an erosion in the tax base. The need to minimize special treatment for foreign investors is particularly important because there is no clear rationale for subsidizing these investors. There is no evidence to date that foreign investment per se generates externalities in the form of technology transfer to domestic competitors.

**Bibliography**


Trade Policy Reform and Agriculture

Alberto Valdés

The purpose of the United Nations Development Programme (UNDP)/World Bank Trade Expansion Program (TEP) country studies for seventeen developing countries was to evaluate their trade reform programs at an early stage, and make recommendations as to further policy adjustments to ensure that trade policies were kept on track. In order to make this early assessment, the UNDP/World Bank studies for most countries were done only two or three years after the initiation of the reform process (see Table 5.1). Overall, it seems that the TEP missions arrived at an opportune time and contributed to the trade reform process. However, conclusions as to how far trade policy reforms have progressed and how successful they have been cannot be derived from the country reports. However, a brief ex post analysis of the effect of these reforms on agricultural growth and overall growth is presented in the section Sectoral and Overall Growth.

Based on the TEP reports, which cover 1988 to 1993, this commentary examines the implications of this early phase of the trade reforms for agriculture in ten of the TEP countries. Was the reform package conducive to promoting an efficient and dynamic agricultural sector? Were there issues regarding the mix and sequencing of reforms that could jeopardize the effectiveness of reform efforts? What can we learn from this experience for future reform efforts?

Having a larger tradable component than most sectors in most of these countries, the structure of incentives for agriculture is strongly affected by developments in trade and exchange rate policies. The evidence for eighteen developing countries during the period from 1965 to 1985 clearly shows that the trade and exchange rate regime discriminated heavily against agriculture, directly, by taxation of the sector, and indirectly, by protecting industry and real exchange rate (REI) misalignment (Schiff and Valdés 1992). Moreover, the study showed that indirect taxation of the sector was twice as important as direct taxation. As agriculture was a relatively large sector of the economy in several of the countries sampled, the consequence of

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1. These ten were the TEP countries in which agriculture issues were most important.