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Protecting Women and Promoting Equality in the Labor Market: Theory and Evidence

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Social policies designed to protect female workers and promote workplace equality have controversial effects on labor market outcomes. Empirical evidence tends to support the prediction that protective measures will reduce women's welfare by limiting the choice set of compensation packages. This conclusion holds most strongly for measures that directly exclude women from certain types of work.

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Protecting Women and Promoting Equality in the Labor Market: Theory and Evidence

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ABSTRACT

Social policies designed to protect female workers and promote workplace equality have controversial effects on labor market outcomes. Working-hour restrictions and mandated maternity benefits help to safeguard women's family responsibilities and ensure their physical security, but these regulations can raise the cost to firms of hiring women. Equal pay and equal opportunity measures potentially increase women's relative earnings and reduce occupational segregation, but they are difficult to implement and enforce. Finally, although not explicitly designed to target women's well-being or equality, seemingly "gender-blind" policies can also yield different outcomes for men and women. This study presents a theoretical context for understanding the impact of these various labor market policies on women's employment, wages, and working hours. Existing empirical evidence of policy effects and current policy incidence are both reviewed. The study concludes by reporting new empirical evidence from three developing country case studies.

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I. INTRODUCTION

Gender-related legislation in the labor market has generally evolved from regulations that focus on safeguarding women's family responsibilities and ensuring their physical security, to more neutral provisions that promote equal pay and equal opportunities between women and men in the workplace. Legislation specifically designed to protect female workers first appeared in the early 1840s, when Great Britain prohibited women from working in mines and restricted their night-time work. Within the next five decades, other European countries followed with legislation to restrict women from underground work, night-time shifts, long working days, and jobs where their hair could get caught in moving machinery (Wikander, Kessler-Harris, and Lewis, 1995). During this period, occupational bans and working-hour restrictions for women were often supplemented by mandatory maternity leave. Both types of legislation are still widespread, and they are included among the conventions of the International Labour Organization.

Despite their prevalence, these social policies to protect women can have the unintended effect of raising the cost to firms of hiring women. Restrictions on women's night work and overtime work limit the ability of firms to run extra shifts, and mandated maternity benefits, when financed by firms, act as a tax on the employment of women. In response to these regulations, firms may lower women's wages or substitute away from female labor. Women will also adjust their labor supply depending on the degree to which the mandates constrain their working-hour options and the degree to which they value the benefits. Because the combination of supply and demand changes leads to ambiguous predictions of labor market outcomes, the impact of protective measures largely becomes an empirical issue.

By the mid-1900s, a number of industrialized countries had revoked their occupational bans and working-hour restrictions for women as opposition to the discriminatory nature of the measures grew. Critics argued that the protective policies hampered women's ability to compete with men for some high-paying occupations, thus exacerbating women's concentration in relatively low-paying jobs. As a result, legislative efforts shifted from the protection of women to the promotion of workplace equality between men and women.

Such measures include equal-pay clauses and equal- opportunity measures in employment. Although these measures are still controversial in terms of their effectiveness in raising women's relative earnings and in reducing occupational segregation, they are found in a growing number of industrialized and developing countries. Finally, although not explicitly designed to target women's well-being or equality in the labor market, seemingly "gender-blind" policies can also have labor market outcomes that differ for men and women. For example, the minimum wage and public sector retrenchment may have no gender content in their stated aims, yet in practice they can affect male and female workers differently. The minimum wage and public sector downsizing are quite prevalent among developing countries, and a growing body of evidence indicates that they have negative effects on women's relative wages and employment.

When governments enact labor laws that protect women, promote workplace equality between men and women, or even have objectives unrelated to gender, the measures may have consequences specific to women's labor market outcomes. Protective legislation can entail negative effects that are particularly severe in developing countries, such as crowding even more women into the informal sector and encouraging firms to engage in outright discriminatory hiring practices, including the requirement of sterilization certificates and pregnancy tests. This study presents a theoretical context for understanding the impact of these various labor market policies on women's employment, wages, and working hours. Existing empirical evidence of policy effects and current policy incidence are both reviewed. The study concludes by reporting new empirical evidence from three developing country case studies.

II. LABOR MARKET POLICIES AND IMPACTS

In considering the partial-equilibrium effects of various protective measures in the women's labor market, the analysis adopts a model of compensating differentials as an overall framework. In a perfectly competitive labor market with no rigidities in the adjustment of wages, workers and firms view compensation as a package of the hourly wage (w), hours worked (h), and benefits (b):

Compensation = Package (w, h, b).

Firms differ in the relative costs of these package components, and individuals differ in the relative value that they assign to the package components. In equilibrium, heterogenous firms offer an array of packages according to profit-maximization criteria, and heterogenous workers choose a variety of packages according to utility-maximization criteria. Protective labor market policies such as wage floors, working-hour restrictions, and mandated benefits will reduce welfare by causing the choice set of alternative packages to shrink. Hence some firms and workers may be forced to select a package that they would view as sub-optimal in voluntary negotiations.

The remainder of this section discusses how government policies that target the compensation package components will affect women's labor market outcomes. However, theoretical predictions from the competitive labor-market model are subject to an important caveat. Protective measures have the potential to increase women's welfare in the presence of market failures. For example, if working women's time at home to care for young children is viewed as an externality that is inadequately valued in voluntary negotiations over compensation packages, then both working-hour restrictions and maternity benefits can raise welfare by encouraging women to spend more time at home. Mandated maternity benefits could also have welfare-enhancing effects in markets with asymmetric information. In particular, without the mandate, women more likely to use maternity benefits would be attracted to firms that voluntarily offer the benefits. This sorting would place pressure on firms with benefits to lower their wage offers to female workers. A maternity leave mandate that covers all firms eliminates this adverse selection problem and potentially increases welfare (Ruhm, 1998a). Finally, positive welfare effects from protective measures may also arise if the labor market is characterized by monopsony power. A small increase in a wage floor via minimum wage legislation or an equal-pay clause can enhance welfare by raising the pay of low-wage workers without an adverse employment effect (Manning, 1996).

A. Working-Hour Restrictions

The most common types of working-hour restrictions with differential coverage across gender include night-work prohibitions and overtime limits. Night-work prohibitions constrain the time of day when workers can be employed, and overtime limits constrain the total number of hours that workers may work within a day. Both restrictions cause firms to have less flexibility in the employment of women. Firms could respond to the restrictions by increasing their demand for female labor in straight time, assuming that these working-hour types can be treated separately. Alternatively, firms could substitute away from female workers altogether towards male workers or capital, causing a reduction in women's total hours and employment. The extent of these changes depends on the substitutability between male and female workers across different working-hour types; the substitutability of capital for different types of labor; the substitutability between hours and workers; and the extent of overall production cut-backs due to negative scale effects.[1]

On the supply side, if the regulations are binding, women will most likely supply fewer working hours for a given wage. A night-work prohibition reduces women's flexibility in determining the time of day at which they work and, when binding, leads to fewer working hours. However, the change in total working hours could be small if women reallocate most of their hours to straight time. Overtime limits lower the cap on the number of hours that a worker may supply and, when binding, lead to fewer working hours. The reduction in total hours worked, though, may be dampened if some women circumvent the cap by working two jobs. The effect of both working-hour provisions on employment depends on how women value the opportunity to work at night and to work extended hours. For example, more women with family responsibilities who value shorter work days might choose to join the labor force, causing a positive employment effect. Moreover, women with jobs in exploitative working conditions may welcome the prohibition of night work and strict limits on the number of overtime hours that employers can force them to work. The net effects of working-hour restrictions on women's employment, wages, and hours worked in the new equilibrium depend on the relative magnitudes of these demand and supply changes. In principle, the more complete the translation of reduced legislated working hours into reduced actual

working hours, the more likely that employment will increase (Hunt, 1999).

Empirical evidence on the labor market impact of working hour restrictions with differential coverage across gender is mixed for industrialized countries and scant for developing countries. For example, using historical data for the United States, Landes (1980) argues that early maximum-hours legislation for female workers had a negative effect on women's working hours and their employment share in manufacturing. In a reassessment based on a different specification and new information on hours of work, Goldin (1988) finds a much smaller effect on hours worked. Also, maximum-hours legislation did not change women's employment share in manufacturing and actually increased their employment share in sales, another covered sector. Shorter workdays appear to have encouraged more women with household responsibilities to enter the labor market.

Other studies on working-hour restrictions have examined the impact of reducing the length of the standard workweek for all workers and mandating an overtime penalty. These provisions lower the benchmark number of hours beyond which firms must pay an overtime premium. Objectives behind the legislation are to eliminate excessively long workdays, promote work-sharing, and create employment. The impact of reducing standard hours on labor-market outcomes varies widely across studies, and much of this work does not emphasize gender differences. An exception is Hunt (1999), which examines Germany's move away from a 40-hour workweek and finds that each one-hour decline in standard hours causes a 0.88 to 1 hour fall in actual hours. This pass-through effect is greater for women than men, most likely reflecting women's tendency to work less overtime. Results also indicate that workers with reduced standard hours were able to bargain an increase in their straight-time hourly wage, leading to no net loss in earnings. Hunt's employment-effect estimates are generally imprecise but indicative of employment declines in the neighborhood of 2 to 4 percent depending on the specification. Hence workers who gained reduced hours and greater wages imposed a cost on others who lost employment.

B. Maternity and Parental Leaves

Mandated maternity leaves also entail complexities that lead to ambiguous predictions of labor market

outcomes.[2] Because parental leaves, if offered, are primarily taken by women, the ensuing discussion refers to both leave types as maternity benefits. When maternity benefits are financed by firms rather than the government, the mandate acts as a tax on the employment of young women. Firms respond by reducing their wage offers to women by an amount equal to the expected cost of complying with the mandate. Therefore, firms' demand for workers who are likely to use the benefits shifts leftward, relative to workers who are unlikely to use the benefits (Ruhm, 1998a). On the supply side, those workers who value the benefit will accept a lower wage for a given quantity of labor supplied (Summers, 1989). Therefore, the labor supply curve of workers likely to use the benefits shifts rightward, relative to workers less probable to use the benefits. These shifts in labor demand and supply cause women's relative wages to decline.

The change in relative employment is indeterminate and depends on the differential values that firms and workers assign to the maternity benefits. Firms consider the wage cost of the paid leave, the probability that their female workers take leave, and any costs involving temporary replacement workers. If leave benefits are financed mostly by the government, then the demand curve shifts less. The value that women place on maternity benefits depends first on the direct level of compensation and duration of the leave. Women may also assign value to the employment guarantees that generally accompany maternity benefits legislation. Job-protected maternity leaves help women to maintain favorable job matches and to avoid search costs from seeking alternative employment. Women have an additional incentive to assign value to maternity benefits when the benefits serve as a type of insurance to cover insufficient household savings for child rearing.

When workers value the benefits by less than the cost to employers, female employment will fall. When workers and employers value the maternity benefits by the same amount - in which case the equilibrium wage declines by the full cost of the benefits - the net effect on female employment will be zero. When workers value the expected benefits by more than the cost to employers, female employment will rise. The increase in employment could reflect more women entering into the labor market before having a child in order to gain qualification for maternity benefits. The employment increase also reflects those women who return to work more

quickly than they would have in the absence of coverage, and it can reflect an accounting entry in which women on leave remain classified as employed (Ruhm, 1998a, Klerman and Leibowitz, 1997). Women who are already employed may increase their working hours before the leave since the compensation package during the maternity leave is often based on total previous earnings. In some instances, women who were working part-time prior to having a child may choose to raise their working hours in order to satisfy the eligibility criteria. However, maternity leave benefits could result in a negative effect on total hours if women move to fewer working hours in order to make more time for child rearing.

Dynamic considerations may counteract the short-run restrictive effects of maternity benefits on labor demand. Waldfogel (1998) argues that maternity leave raises the probability that women will remain in the labor force and return to their former employer after childbirth. By strengthening women's attachment to the labor force and increasing their investment in firm-specific experience and training, a job-protected maternity leave can enhance the productivity of female workers. In this case one might observe higher wage offers from firms over time, possibly large enough to overcome the initial pecuniary cost of maternity benefits. On the other hand, job-protected leaves may encourage women to take more time off from work than they would have taken in the absence of leave coverage. To the degree that extended leaves disrupt women's continuous job experience and cause their skills to deteriorate, employers' wage offers will fall. Another drawback of extended leaves is an increase in firms' costs associated with scheduling replacement workers during longer work absences (Ruhm, 1998a).

Empirical evidence on the labor market effects of maternity and parental leaves is mixed for industrialized countries and sparse for developing countries. Studies have generally found positive employment effects - although not always significant - in industrialized economies. The wage effect, which has been estimated as positive, close to zero, and negative, is more controversial. Research on maternity benefits that are provided voluntarily by firms and not mandated by law tends to find a positive wage effect for women who use maternity leave to retain their employment status during the childbirth period. For example, Waldfogel (1997) finds that

young women with maternity leave coverage that allowed them to take time off and return to their previous employer after childbirth earn higher wages, relative to working mothers without such coverage. Waldfogel attributes much of the positive wage effect to premiums associated with maintaining employment continuity with the same firm over the period of childbirth - premiums that reflect the wage rewards associated with higher levels of work experience and firm-specific tenure. The wage premiums may even reflect more intangible aspects of employment continuity, such as productivity effects associated with greater job satisfaction. Waldfogel's results are consistent with Shapiro and Mott (1994), who find that young American women who returned to work within six months after having their first child receive higher wages, regardless of whether they return to their previous or a new employer. The primary explanation is greater overall work experience.

However, these and other studies that find the positive wage effect may be subject to selectivity problems.[3] With the voluntary provision of benefits, the positive wage effect might reflect a nonrandom selection of more productive and stable female workers into jobs that offer maternity leave. Also, firms that pay higher wages may be more likely to voluntarily provide maternity leave coverage. Another possible selectivity effect is that women who are better matched in a higher-paying job are more likely to return to their previous employers relative to women with less suitable matches in lower-paying jobs. Mandated leave benefits may not entail these selection issues.

Research on mandated maternity benefits generally finds that wage changes for female workers following the mandate are either inconsequential or negative. The magnitude of wage losses depends on the wage compensation rate, leave duration, and the degree to which costs are financed by the government. For example, Gruber (1994) examines the adoption of legislation in the United States that requires insurance providers to cover pregnancy and childbirth comprehensively in health insurance plans. Results indicate that the legislation causes young women's wages to fall by up to 5 percent, while their total labor supply does not change. Gruber concludes that employers' costs of providing the benefits are largely passed through to the targeted group's wages, implying that young women fully value the benefits.[4] In another study on mandated benefits in the United States,

Waldfogel (1999) finds that the 1993 Family and Medical Leave Act has a mildly positive employment effect and a negligible wage effect for women. Waldfogel attributes the lack of a wage effect to the relatively low cost imposed on employers, a result of the leave's short duration and zero compensation rate.

Unlike the United States, leave mandates in Europe specify longer duration and compensation rates that approach 100%. Empirical evidence indicates that women do absorb some of these costs through lower wages. In particular, Ruhm (1998a) examines the impact of mandated parental leave on women's labor market outcomes in nine Western European economies. Results indicate that extended parental leaves which last nine months cause women's relative wages to fall by about 3 percent while raising the fraction of women who are employed by around 4 percent. Shorter leaves of three months have a similar employment effect but very little effect on wages. The lack of a wage effect for short leaves is probably explained by the low cost of leave benefits to employers, since parental leaves in most European countries are financed by payroll taxes and general revenues.

Among developing countries, evidence indicates that changes in Costa Rican legislation to lengthen maternity leave duration had little impact on wages and employment until after a new enforcement mechanism was created in 1990 (Gindling and Crummett, 1997). With improved enforcement and stricter penalties on firms that violated the law, women's wages fell significantly while their employment did not change. Costa Rican maternity benefits are mandated and fully paid, but the government's Social Security Administration covers half of the costs. Further evidence on Malaysia's employer-financed maternity leave mandate indicates that of all cases when women employed in the covered formal sector gave birth and were eligible for a maternity leave, fewer than one half resulted in a maternity leave received (Bernasek and Gallaway, 1997). This result could reflect poor compliance among firms, but it could also signal a lack of worker awareness of leave availability. Lack of awareness is also problematic in Bangladesh, where a survey of female garment workers showed that few knew they were entitled to paid maternity leave (World Bank, 1995).

In addition to their direct labor market consequences, maternity and parental leaves can facilitate the realization of broader social objectives. In particular, advocates argue that parental leaves improve the health

and welfare of children by enabling parents to spend more time with their infants in the crucial early months. Infants can gain valuable health benefits during this time with their mothers from frequent and more extended breast-feeding. Parental leaves can also enhance the ability of parents to monitor their babies more closely, and they limit the need for outside childcare, situations in which infants are often exposed to more illnesses. Ruhm (1998b) supports these arguments with empirical evidence that increasing the duration of parental leave lowers the mortality rate in early childhood.

C. Equal Pay and Equal Opportunity

In an effort to improve women's relative earnings and labor market status, most countries have adopted policies that promote equal treatment in the workplace. The two most common types of such policies are equal-pay and equal-opportunity measures. These measures do not target women for protection or special treatment, but they do have the explicit goal of improving women's labor market outcomes by eliminating wage and employment discrimination against women. The "equal pay for equal work" clause requires employers to provide equal pay for workers performing the same job with equal efficiency, regardless of gender. The legislation is often applied to particular job cells - that is, narrow job titles within establishments. In a perfectly competitive labor market, equal-pay legislation should raise women's relative wages if women work in jobs that contain within-job-cell pay inequities, holding the productivity characteristics of workers constant. The relative pay increase for women may come at the cost of employment losses. If employment is demand-determined after a large enough shock to wages, then implementation of an equal-pay clause is predicted to cause a decrease in women's relative employment.

The equal-pay clause can change the impact that other protective measures for female workers have on the labor market. In particular, if the equal-pay clause is binding, it will limit firms' ability to lower female wages relative to male wages in response to a labor market shock, such as the imposition of firm-financed maternity benefits. If employers cannot work around the restrictions, the equal-pay clause acts as a price floor on women's relative wages. In such a scenario, the labor demand and supply curves may shift following a maternity leave

mandate, but women's wages are no longer free to fully adjust downward. In the face of such wage rigidity, the change in relative labor costs from providing maternity leave will induce firms to substitute male workers for female workers, or to substitute capital for labor. The end result is a female labor surplus at the wage floor.

In practice, equal-pay legislation has mixed success in improving women's relative wages. Equal pay tends to have more success in countries such as Australia, Britain, and Canada, where collective bargaining is common and differential pay rates by gender are legislated but relatively easy to change (Tzannatos, 1999). Equal pay has less impact in countries such as the United States, where the wage setting mechanism is more decentralized. Furthermore, enforcement has proven to be a major obstacle, particularly in developing countries that do not have sufficient resources to create viable enforcement methods. Also, legislation that requires equal pay for equal work within an occupation and enterprise will have little impact on women's relative wages if women are segregated by occupation and industry (Blau and Kahn, 1995). Numerous governments have tackled the occupational segregation problem head on by promoting employment redistribution with legislation that improves women's access to occupations in which they formerly had few opportunities. These provisions prohibit sex-based discrimination in many aspects of employment, including hiring, training, promotion, and firing. Closely-related measures that prevent discrimination on the basis of marital status or family responsibilities have similar objectives in equalizing job opportunities for men and women. While technically gender-neutral, such laws disproportionately affect women since job prohibitions for married workers or workers with families do not generally apply to men or predominantly-male occupations.

In theory, if equal-opportunity measures are effective in reducing discrimination against women in male-dominated occupations, the demand for female labor will shift rightward as firms hire more women at any given wage. On the supply side, the creation of new job opportunities will encourage some women to shift occupations and other women to join the labor force. However, there could be a negative short-run effect on female labor supply if women choose to temporarily exit the labor force in order to acquire sufficient skills and education for the new positions. Hence the short-run effect of equal-opportunity measures on equilibrium employment, and

the corresponding wage, is ambiguous. In the longer run, the employment effect should be positive as women complete the desired amount of education and training and reenter the labor market. Women's relative wages should rise if the legislation succeeds in reducing women's concentration in relatively low-paying occupations. As occupational segregation declines, an equal-pay clause may in turn become more important in boosting women's relative earnings (Blau, Ferber, and Winkler, 1998). Because men might also face discrimination in such female-dominated jobs as nursing, childcare provision, and secretarial work, equal opportunity measures could in principle be used to assist men in obtaining traditionally female occupations. This approach would help to further reduce occupational segregation, provide a broader support base for the policy, and help to combat gender stereotypes in the work force (Anker, 1998).

Some industrialized countries have responded to the equal-pay issue with comparable worth policies that contain broader definitions for work of equal value across occupational categories. Governments have also responded with affirmative action laws that require greater efforts on the part of employers to recruit and hire women for occupations in which they are under-represented. Proponents of comparable worth and affirmative action argue that such policies reduce sex-based discrimination, a major cause of persistent male-female pay differentials, and they have a bigger impact on the gender pay gap than the equal-pay clause. Comparable worth may also reduce the gender earnings gap more quickly than equal opportunity measures if the legislation calls for an immediate rise in relative wages in female-dominated jobs (Blau and Kahn, 1995). Critics counter that these policies are difficult to implement and enforce. Such policies prevent employers from responding to market signals, thus creating labor shortages and surpluses, and they may even lead to reverse discrimination against men.

Empirical evidence on the effectiveness of these various antidiscriminatory policies in industrialized countries is abundant but inconclusive, largely because of methodological difficulties in separating their effect from other concurrent changes.[5] Among developing countries, published evidence for equal pay and equal opportunity policies is much more limited but seems to point in the direction of little to no impact. For example,

Cohen and House (1993) use urban sector data from Sudan to argue that equal-pay legislation has been ineffective in closing the gender earnings gap. Rather than pay discrimination, occupational segregation appears to be the main culprit behind persistent wage differentials. Also, Behrman and Zhang (1995) point to the lackluster performance of equal opportunity legislation in Asian developing economies.

D. The Minimum Wage and Public Sector Retrenchment

Although the minimum wage is primarily used as a vehicle for lifting the incomes of poor workers, the policy may entail distortionary costs. In a perfectly competitive labor market, an increase in a binding minimum wage causes an unambiguous decline in the demand for labor. Jobs become relatively scarce, and some workers who would ordinarily work at a lower market wage are displaced. Other workers see an increase in their wage. Advocates argue that employment losses are small, and any reallocation of resources that occurs will result in a welfare-improving outcome through the reduction of poverty and improvement in productivity. Critics, however, claim that employment losses from a minimum wage-induced increase in production costs are substantial.[6]

Distortionary costs from minimum wages are more severe in developing countries with their large informal sectors (World Bank, 1995). In particular, the minimum wage primarily protects workers in the urban formal sector, whose earnings already exceed by a wide margin the earnings of workers in the rural and informal sectors. Employment losses in the regulated formal sector translate into more workers seeking jobs in the unregulated informal sector. The end result could actually be lower, not higher, wages for most poor workers. Even a small increase in the minimum wage can have sizeable disemployment effects in developing countries because the legal wage floor is often high relative to prevailing wage rates, and a large proportion of workers earn the minimum. These factors give the legislation in developing countries much "bite". To the extent that female workers are relatively concentrated in the informal sector and men in the formal sector, few women will gain from binding minimum wages in the formal sector while more women will suffer lower wages in the informal sector. If the minimum wage does discourage formal sector employment, a disproportionate number of women will experience decreased access to formal sector jobs.

For women who remain employed in the formal sector, the minimum wage can help to raise their average earnings relative to the earnings of men. Because the female earnings distribution falls to the left of the male distribution in most countries, a policy that raises the legal minimum wage irrespective of gender should help to close the male-female earnings gap (Blau and Kahn, 1995). The minimum wage will raise the pay of sub-minimum wage workers, and a larger proportion of workers in the female distribution are low-wage workers relative to the male distribution. Although the observed gender wage gap in the formal sector falls, the wage gain for women comes at the expense of more job losses for low-wage female workers. Hence disemployment effects may be larger for women than men in the formal sector if the minimum wage is effectively more binding for female workers than it is for male workers.

Cross-country evidence shows that labor force participation rates drop more for women than men when the minimum wage rises relative to income per adult (Schultz, 1990). Among individual countries, household-level data for Mexico indicate that the legal minimum wage is much closer to the median wage in the female wage distribution relative to the male wage distribution. More low-wage female workers are affected by the minimum wage, so the minimum wage has more bite and can cause greater disemployment effects for female workers (Bell, 1997).[7] In Indonesia, in 1994 the minimum wage amounted to roughly 60 percent of average wages for all workers-a figure that is already high relative to most countries-but over 80 percent of average wages for women (World Bank, 1996). Higher wage costs from Indonesia's minimum wage place particularly tight constraints on those manufacturing industries, such as textiles, clothing, and shoes, that are labor-intensive and export in competitive world markets. Because women are concentrated in these industries, they experience the brunt of employment cutbacks that firms may make in order to re-establish their international competitiveness. Evidence for Canada indicates that the minimum wage contributes substantially to a smaller gender earnings gap, especially for younger workers, but adverse employment effects are correspondingly more severe for women (Shannon, 1996).

Women and men and also affected differently by firms' noncompliance. Noncompliance with minimum

wage regulations, widespread in developing countries, is directly related to difficulty of enforcement (Squire and Suthiwart-Narueput, 1997). Because minimum wages are more costly to enforce for small firms in the informal sector, noncompliance is more problematic in this group. Compliance costs are correspondingly higher for smaller firms in the informal sector because they tend to hire more unskilled workers, young workers, and female workers, relative to larger firms in the formal sector. Given that average wages for these demographic groups are lower, the minimum wage is more binding and compliance is more costly. Noncompliance can take the form of outright evasion, legal exemptions for such categories as part-time and temporary workers, and cost-shifting through the avoidance of overtime premiums. Employers may also opt to comply with the minimum wage but reduce non-wage benefits that remain uncovered by minimum wage legislation, such as paid sick days, holidays, health insurance, and retirement benefits. Greater noncompliance for female workers has been documented for a number of countries, including the Indonesia, Morocco, the United States, and several Latin American countries. For example, in Mexico, 16 percent of full-time male workers and 66 percent of female workers in 1988 were paid a sub-minimum wage.[8]

As with the minimum wage, distortionary costs from public sector retrenchment can be quite severe in developing and transition economies. Employment retrenchment in public service and public enterprises, widespread since the 1980s, constitutes an integral part of broader economic reform strategies. Retrenchment is motivated by the need to trim government budget deficits, correct staffing and skill imbalances in public enterprises, improve efficiency of public sector operations, and refocus the priorities of national governments. Retrenchment will hurt workers in the short term as they experience earnings and welfare losses, particularly when governments are unable to support displaced workers with adequate compensation packages. Workers' adjustment costs may be larger if their public-sector jobs had garnered them above-market wages, and if their separation was involuntary rather than voluntary. In principle, workers should benefit in the future from overall productivity gains as economic activity expands and new firms are established.

Public sector retrenchment, like the minimum wage, may involve unanticipated gender-specific effects

on wages and employment. Retrenchment is more likely to involve lay-offs for those workers with lower levels of tenure, education, and other qualifications. Hence women are disproportionately affected by retrenchment if, on average, their experience and skill characteristics are lower than those of men. In the event that public sector wages are higher than elsewhere and retrenchment causes women to lose these jobs, then, all else equal, the gender wage gap will grow. Evidence for this argument has been reported for three African countries: Ethiopia, Uganda, and the Côte d'Ivoire (Appleton, Hoddinott, and Krishnan, 1999). The gender wage gap will also increase if the economy's overall wage distribution widens following employment restructuring and wage decentralization. This widening would result from changes in market returns to various skills and productivity characteristics. For example, because men tend to have more education and experience compared to women, any increase in market returns to these characteristics following restructuring will cause average male earnings to rise relative to female earnings. Empirical evidence from Russia and Ukraine show that women have been penalized by a sharp increase in overall wage inequality following the introduction of market reforms (Brainerd, 1997). Female losses from changing overall wage inequality were less pronounced in East European countries and offset by other factors, including the fact that women actually had higher levels of education than men.

Once retrenched, women may face relatively larger obstacles in finding comparable formal-sector jobs, forcing them to turn to low-pay and informal sector work, or to detach from the labor market altogether. Such obstacles include employer preferences to hire temporary and part-time workers in order to avoid labor market regulations that raise the cost of hiring female workers, as well as outright sex-based discrimination in employment. In addition, the retrenchment of male workers will put pressure on other women to join the labor force, often in informal sector jobs, in order to support household income. This increased supply of female workers in low-pay and informal sector jobs will push down women's relative wages. Although some female employment in the informal sector is temporary as countries undergo adjustment, women with low levels of education and skills may be retrenched to the informal sector for a longer period. A growing body of evidence indicates that among retrenched workers, women are more likely than men to exit the labor force or obtain jobs

in the informal sector after displacement.[9] Hence retrenchment has become an important force behind expanding informal sectors in developing and transition economies.

III. POLICY STANDARDIZATION AND INCIDENCE [10]

Provisions on women's working hours were among the first conventions adopted in 1919 by the newly-founded International Labour Office (ILO). The ILO's Night Work (Women) Convention (number 4), revised in 1934 and 1948 (numbers 41 and 89), calls for 11 consecutive hours of rest at night, with at least seven consecutive hours occurring between 10:00 pm and 7:00 am. While the ILO has no convention on special overtime limits for women, the Reduction of Hours of Work Recommendation (number 116) suggests that when implementing a statutory 40-hour work week, governments prioritize industries and occupations that consist largely of female and young workers.

Working-hour restrictions are no longer as prevalent or strictly enforced in today's industrialized countries, but they are widespread in developing countries. Night-work prohibition is most common, although the severity of the legislation varies considerably across countries. For example, Thailand deviates considerably from the ILO standard by starting the restricted hours at midnight and specifying only six consecutive hours of rest. Brazil also has a relatively short definition of night, with seven hours of rest between 10:00 pm and 5:00 am. At the other extreme, Guatemala and Indonesia require women to end work by 6:00 pm and not resume work before 6:00 am. Kenya also has a 12-hour restriction that spans 6:30 pm to 6:30 am. Many governments allow exceptions for certain occupations and activities, and coverage varies by industry and firm size. Restrictions are typically greater for pregnant women and women with newborn children. Special overtime limits for female workers are less common. For example, most Asian countries have adopted overtime limits that apply to both male and female workers, but fewer than half of the countries have overtime limits that differ across sex. Some countries, such as India and Bangladesh, ban overtime work entirely for women but not for men.

Maternity leave provisions were formalized by the ILO among its first conventions. The Maternity Protection Convention (number 3), revised in 1952 (number 103), calls for a 12-week paid maternity leave.

Stipulations include compensation of at least 67 percent of previous earnings, protection against dismissal during the leave period, paid nursing breaks, and mandatory postnatal leave of at least six weeks. Provisions in today's industrialized countries are generally consistent with the ILO standard, except that leave in Australia, New Zealand, and the United States is unpaid, and maternity leaves tend to be optional rather than required. Social insurance systems generally finance the workers' compensation during the maternity leave.

Maternity leave provisions are just as prevalent among developing countries, and compulsory prenatal or postnatal leaves are more common. In Africa, virtually all countries provide paid maternity benefits, typically with compensation rates of 50 to 100 percent. As shown in Table 1, maternity leave duration varies from 30 days (Tunisia) to 15 weeks (the Congo), and the norm is 12 to 14 weeks. The prevalence of benefits that are employer-financed is roughly comparable to that of benefits financed by social security. In Latin America and the Caribbean, maternity benefits are also widespread, with durations of 8 weeks (Bahamas) to 18 weeks (Chile, Cuba, and Venezuela). The norm for paid leave is 12 to 14 weeks with 100 percent compensation. Maternity benefits in this region are typically funded by social security and national insurance. The majority of Asian nations call for at least 12 weeks of paid maternity leave, often compensated fully and financed directly by employers. Leave benefits in the East Asian NICs are among the least generous in the region. For example, Singapore and Taiwan call for just 8 weeks of maternity leave, albeit at full pay. At the other extreme, Vietnam's legislation calls for 4 to 7 months of fully-paid leave.

Equal pay is codified in the ILO's Equal Remuneration Convention (number 100) of 1951. The convention calls for equal pay for male and female workers for work of equal value. Equal opportunity is codified in the ILO's Discrimination (Employment and Occupation) Convention (number 111) of 1958 and the Workers with Family Responsibilities Convention (number 156) of 1981. Convention 111 calls for measures to prevent sex discrimination in access to employment, occupations, vocational training, and particular terms and conditions of employment. Convention 156 calls for measures to prevent discrimination on the basis of family responsibilities, and it calls for parental leave of unspecified duration for either parent with employment

protection. In countries which have them, parental leaves usually exist alongside maternity leave requirements. By the mid-1960s, most industrialized countries had both equal-pay and equal-opportunity measures in their labor codes. Among developing nations, these measures remain the least common type of gender-specific legislation. For example, the majority of Asian nations have an equal-pay clause, but fewer than half of these countries go the next step by prohibiting sex-based employment discrimination. Employment protection for married workers and workers with families is even less common.

The ILO formalized the minimum wage in its Minimum Wage Fixing Convention (number 131) of 1970. The convention calls for protection for wage earners against unduly low wages with an established system of minimum wages. Signatory countries are to set up and maintain the institutional structure whereby minimum wages can be fixed and adjusted as needed. Most countries around the globe set minimum wages for their workers. Legislation does differ depending on whether the minimum wage is set at a national, regional, or sectoral level; the frequency with which the minimum is adjusted for cost of living increases; exemptions for part-time, probationary, or apprentice workers; whether the wage is set on a monthly, daily, or hourly basis; and the degree to which some non-wage benefits may be considered wage payments. Table 3 illustrates the extent of some of these variations across a sample of low and middle income countries. These countries universally specify the same wages for men and women and rarely allow exemptions for probationary or apprentice workers. When national legislation does specify sectoral variation, the most frequent variation occurs across agriculture and non-agriculture. Similarly, the most common regional variation occurs across rural and urban locations.

IV. CASE STUDY EVIDENCE [11]

A. Protecting Women in Taiwan

In 1984, Taiwan's government passed the Labor Standards Law, the first comprehensive labor law during Taiwan's industrialization. The Law contains provisions that restrict women's working hours and require employer-provided maternity benefits. Differential coverage across industrial sectors and demographic groups provides a unique opportunity to identify the impact of both policy types in a single natural experiment

framework. Three years after enacting the Law, Taiwan's government targeted poor compliance among firms by creating a viable enforcement structure that set the new Labor Law apart from previous regulations. This lag in enforcement permits the identification of the effect of the law itself and the enforcement mechanism.

The empirical strategy estimates the change in female labor market outcomes - wages, hours worked, and employment - due to the law reform and enforcement. First, workers are divided into four demographic groups by age (young, mature) and sex (male, female), and into two industrial sectors, covered and uncovered.[12] Next, the determinants of a labor market outcome, L_{ijt}, for demographic group i in industrial sector j at time t are denoted as follows:

$$L_{ijt} = b_i X_{ijt} + s_{ij} + t_{it} + d_{ijt} + e_{ijt} \quad ,$$

where X_{ijt} is a vector of measured productivity characteristics, σ_{ij} is a sector fixed effect, τ_{it} is a period-specific effect, δ_{ijt} is the period-sector interaction, and ε_{ijt} is an error term. The returns to measured characteristics, β_i, vary across demographic groups but not over time or between sectors.

The sector fixed effect controls for time-invariant differences between covered and uncovered industries, while the period-specific effect controls for shocks common to both sectors at a given point in time. The period-sector interaction shows the effect of all aspects of the Labor Law on a particular demographic group. To isolate the effect of the protective measures for women from other provisions contained in the Labor Law, it is necessary to calculate differences across demographic groups in these period-sector interaction terms. Working-hour restrictions will affect all women while maternity benefits will affect only young women. Hence subtracting the interaction term for mature men from that of mature women isolates the impact of working-hour restrictions on women. Furthermore, any difference between young women and young men in the interaction terms will be due to both the working-hour restrictions and the maternity benefits. Hence subtracting the interaction term for young

men from that of young women, and then controlling for the effect of the working-hour restrictions, isolates the impact of maternity benefits on women.

The model is formally estimated in a three-stage procedure for each of the four demographic groups. Then the effects of the protective measures are calculated by making the appropriate difference calculations across the interaction terms. The first stage of the analysis estimates a human-capital wage function using the sample of non-farm paid employees for each demographic group.[13] The independent variables include a dummy variable for part-time work; a set of binary variables for education and major; potential experience and its square; enterprise specific tenure and its square; percent female within an occupation; a binary variable for supervisor status; industry, location, and urban dummies; and a binary variable for marital status. For women, a binary variable for married women with pre-school age children is also included.[14]

Wages and hours are determined simultaneously, so an instrumental variables approach is used to estimate an hours-worked function. A predicted wage is calculated and added to the second-stage estimation of the hours-worked function using the sample of non-farm paid employees. The instruments to identify the wage effects on hours are the experience and tenure variables. The remaining observable productivity characteristics from the wage function, plus a variable for other household income, are included in the hours function. In the third stage, the probability of employment in each sector is estimated using a multinomial logit procedure and the entire sample of workers and nonworkers. The independent variables include the education, potential experience, location, urban, married, and preschool age children variables found in the wage equation. In addition, a dummy variable for business owner within the household is included for all demographic groups, a dummy variable for school as the major activity is included for the younger groups, and a dummy variable for housework as the major activity is included for the female groups.[15]

Estimations are based on repeated cross-sections of household survey data from Taiwan's Manpower Utilization Survey, an annual survey on earnings and employment for the month of May. Because the government enacted the Labor Law in August of 1984 and established the cabinet-level enforcement agency in 1987, data for

1982-84 are used for the period before the law change, 1985-86 for the period after the law change but before credible enforcement, and 1987-89 for the period after enforcement began. The wage and hours worked estimations include only civilian, non-farm, private sector paid employees. Furthermore, age groups are defined in such a way as to isolate the effects of maternity benefits. Based on differences in fertility rates across age groups in Taiwan, the age 35 is used as the benchmark between "young" and "mature" workers. The data are pooled across years and sectors within demographic groups, but the model is estimated separately across groups.

Results in Table 3 indicate that the working-hour restrictions, which prohibit women's night work and limit women's overtime hours, have a negative impact on women's actual hours worked and employment. Women's working hours decline by about 4.3 percent and their employment falls by almost 1 percent. These effects do not occur until after 1987, when the government began its credible enforcement efforts. Before enforcement, the legislation had virtually no bite. Working-hour restrictions have no significant impact on women's relative wages, regardless of enforcement. These results are consistent with theoretical predictions of a decrease in equilibrium female employment and hours worked.

Maternity leave provisions differ substantially in their impact on both types of labor input. After the Labor Law was enacted, women's working hours rose by almost 4 percent. After enforcement began, women's working hours increased by 7 percent and their employment rose by 2.5 percent. Again there is no significant impact on women's wages. The significant increase in women's equilibrium employment and hours worked is consistent with the theoretical prediction that the high value of maternity benefits to female workers actually leads them to increase their participation rate, hours worked, or both. Women in Taiwan apparently value not only the financial benefits but also the opportunity to return to their previous employers after childbirth. The negative but insignificant wage effect must be interpreted with caution. The point estimates of -4.6 percent after enactment and -3.6 percent after enforcement are consistent with previous studies of mandated benefits in which greater costs are imposed on firms via the mandated provision of more extensive health benefits (Gruber, 1994, Kane, 1998, and Ruhm 1998a). However, the imprecision of the estimates could reflect some countervailing forces

that lower the cost to firms of providing the benefits. Positive wage pressures arising from gains in women's firm-specific human capital and their productivity may counteract the restrictive effects of the mandated maternity benefits.

B. Equal Opportunity in South Korea

In December 1987, South Korea enacted the Gender-Equal Employment Act, which requires firms to provide equal opportunities for women in employment processes, including recruitment, hiring, job placement, pay, training, promotion, and dismissal. The Act was intended to combat sex-based discrimination by employers and the inherent occupational segregation by sex - labor market features that were extreme in Korea, even by developing country standards. Additional labor reforms occurred in 1987, the biggest of which was the government's relaxation of controls on unions and the liberalization of collective bargaining procedures. These changes led to greater union membership and strike activity, which in turn put more pressure on firms to comply with existing labor standards they previously had ignored. Other labor policy changes in 1987 include changes in overtime limits for male and female workers and the introduction of a minimum wage. The concurrent enactment of these policy changes affecting both men and women, combined with coverage across all major sectors, makes it difficult to isolate the effect of the equal-opportunity law on female workers. However, an examination of Korea's occupational structure before and after the law change provides some suggestive evidence as to the success of equal opportunity in Korea.

First, the distributions of male and female workers across seven broad occupational groups are calculated, as well as the sex composition within each occupational category. To address the question of whether men's and women's occupational distributions have converged or diverged over time, a common index of segregation - the Duncan index - is calculated for each year. The Duncan index is defined as

$$DI = 1/2 \, \Sigma_i \, |\alpha_{mi} - \alpha_{fi}| \, ,$$

where α_{mi} is the share of males in the sample employed in occupation *i*, α_{fi} is the share of females in the sample employed in the same occupation, and *i* sums across all occupations. The index yields the percent of all female workers who would have to switch jobs in order to equalize the employment distributions between men and women. Values range from zero (complete integration) to one (complete segregation).

Data come from the Occupational Wage Survey (OWS), an establishment survey conducted since 1970 by Korea's Ministry of Labor. Surveyed establishments must employ at least 10 workers, a restriction that matches the coverage of labor standards during the period of analysis. Although this size restriction causes the OWS to over represent manufacturing, the OWS can provide more detailed information about workers' occupations and earnings than published sources. The surveys further exclude the self-employed, family workers, temporary workers, and public sector workers. Data for 1980, 1983, and 1986 represent years before the equal-opportunity legislation, and data for 1989 and 1992 represent years after the law change.[16] The samples for each year are randomly drawn from the original surveys, and the sample is further limited to non-farm, paid workers aged 15 to 65.

As Table 4 indicates, the distribution of workers across occupations has shifted dramatically as both men and women have shifted out of production work into white-collar occupations. The change incorporates job switchers and, more commonly, movements into and out of the workforce. Yet throughout the period, men and women clustered in different occupations. Within the male occupational structure, almost all of the shift out of production work resulted in more professional and supervisor positions. The proportion of men in clerical, sales, and service work remained relatively stable. For women, much of the shift out of production work resulted in growth in clerical, sales, and service employment. The share of women who became professionals and technicians also increased considerably. Most of this increase occurred after the equal-opportunity legislation. Women did not gain much ground in administrative and supervisor positions.

The sex composition of different occupations has also demonstrated significant change. The share of professional workers who are female jumped sharply, from 17 percent immediately before equal opportunity to

22 percent in 1989 and 28 percent in 1992. This jump contrasts with the decline in women's overall presence among workers in larger establishments. Although the presence of women among clerical, sales, and service workers rose during the period, women continued to hold lower-level jobs while men dominated the supervisor posts in these categories. The Duncan index results show that men's and women's occupational distributions diverged in the early 1980s but converged again after 1986. Corresponding to this apparent reduction in occupational segregation, the gender-earnings ratio also showed big jumps later in the period. In closing, these stylized facts suggest that Korea's Gender-Equal Employment Act created new opportunities for women in higher-paying professional and technical jobs, while not doing much to help women break through the more formidable glass ceiling in administrative and supervising positions. Lack of enforcement could be part of the problem. Although the Act specifies fairly long imprisonments for employers that violate some of the provisions, by the mid-1990s, few, if any, employers had actually gone to jail.

C. Public Sector Retrenchment in Vietnam

Since the late 1980s, Vietnam has engaged in a massive transition from a centrally-planned economy to a more market-based economy. With transition came a surge in economic growth at rates that far exceeded many other transition economies, both overall and in terms of worker wages and productivity. Vietnam's employment structure - with its tremendous share of workers in a dynamic and productive agricultural sector at the beginning of transition - and effective stabilization policies help to explain the country's exceptional transition performance. Despite a considerable setback when cooperative-provided childcare services ended, the benefits from Vietnam's rapid structural change seem to have accrued to women as well as men. For example, by the mid-1990s, female- and male-headed households faced similar poverty rates. Not much is known about the gender-specific employment effects of Vietnam's public sector retrenchment. Since 1989, about one-third of Vietnam's public enterprise workforce (2.4 million workers in total) shifted into the private sector, mostly into agricultural and urban informal jobs.

Examining the employment history of respondents in the Vietnam Living Standards Survey (VNLSS) can shed some light as to gender-differentiated patterns in workers who shifted out of public sector jobs. This survey, conducted between September 1992 and October 1993, covers 4800 households nationwide. The VNLSS has detailed information on current employment, employment in the past 12 months, and work performed prior to the job held in the past 12 months. Although public sector retrenchment was largely over by the time the survey took place, the recall questions on employment history cover at least some of the retrenchment period. A sample of 11,927 people remain after limiting the analysis to people of working age (16-65) and people who were in the labor force (either employed or seeking work) at some point within the past 12 months.[17]

The analysis creates two sub-samples. First, 3323 people reported a job change prior to the past 12 months. Second, 2079 people reported a job change within the past 12 months. These sub-samples are divided by sex and whether or not the job switch occurred out of the public sector. For job switches prior to the past 12 months, reported in Panel A of Table 5, individuals who previously worked as legislative officials and government officials (SOC 20) or in public administration (SIC 910) are labeled as previously working in public administration. The survey does not report employment status by private/public sector for jobs prior to the job held in the previous 12 months.[18] For job switches within the past 12 months, reported in Panel B, individuals who worked for either the government, a social organization, or a state-owned enterprise are labeled as previously working in the public sector.

Table 5 suggests that a disproportionate share of women shifted from public sector work into unpaid work or they left the labor force altogether. For job switches prior to the past 12 months, 84% of women who left public administration either entered into unpaid work or were currently out of the labor force, compared to 77% of men. For job switches within the past 12 months, almost the same share of women and men entered into paid work after leaving the public sector, but a disproportionate share of women reported to be currently out of the labor force. Although sample sizes are probably too small to justify strong inferences or a more formal empirical treatment, these tabulations do point to patterns in public sector job displacement that appear to be

relatively less favorable for female workers.

V. CONCLUSION

This study has examined the effects of various protective measures on women's employment, wages, and hours worked. Although the competitive labor market model can yield somewhat ambiguous predictions regarding the direction and magnitude of changes in women's labor market outcomes, the general conclusion is that protective labor market policies will reduce women's welfare by limiting the choice set of alternative compensation packages. Evidence from previous studies and a set of case studies from East Asia tend to support this conclusion, particularly for protective measures that directly exclude women from certain types of work. For example, labor legislation in Taiwan that restricted women's nightwork and their overtime work led to a significant decline in women's employment and actual working hours. Working-hour restrictions across countries were once justified by the need to reduce the danger that women face when they travel to and from work late at night, and the need to have working women spend more time at home. As a policy priority, such restrictions ought to be removed as the measures can no longer be justified by dangerous and exploitative working conditions. Protective measures that constrain women more than men in their working-hours can hinder women's progress towards equity in the labor market. The measures contribute to the exacerbation of occupational segregation by sex as some employers become resistant to hiring women who have less flexible working-hour options.

A maternity leave mandate, also historically motivated by the need to safeguard women's family responsibilities, constitutes an alternative protective measure that does support women's efforts to remain and advance in the labor market. In fact, a growing body of evidence indicates that job-protected maternity benefits promote women's attachment to the labor force and increase their firm-specific human capital. Women appear to value not just the financial benefits but the employment guarantees that accompany their benefits. Although maternity leave legislation is widespread among developing countries, available evidence indicates that a significant number of women are either not covered by maternity leave benefits, unaware they are entitled to leave benefits, or employed in covered firms that fail to comply with the legislation. For example, the Taiwan case

study shows that it took the creation of a cabinet-level enforcement structure to see any significant impact from enacting maternity-leave legislation. As a policy priority, maternity leave benefits need to be provided to a broader range of female workers by removing exemptions, promoting awareness of leave availability, and increasing enforcement. Institutional reforms may be necessary to provide the incentive for agents to respond to legal changes that otherwise lack credibility.

Surveyed evidence indicates that the manner in which maternity leave mandates are financed is crucial. Mandates on firms without compensation from public funds tend to result in greater inequity, with women's wages falling to offset the cost imposed on firms. Also, leave mandates help only those workers in covered sectors. These drawbacks have motivated some advocates of maternity leave policies to call for the public provision of benefits, ideally through a system of national insurance. Finance through a payroll tax may cause distortions if firms avoid the risk of increased payroll taxes by hiring fewer women. Financing maternity benefits through national insurance may be particularly important for developing countries so that coverage is potentially extended to a larger number of women who work in the informal sector (Tzannatos, 1999). However, publicly-financed benefits yield greater inefficiencies arising from the deadweight loss of general taxation (Summers, 1989). The debate between employer mandate versus public provision then becomes one of efficiency versus equity.

Given that women worldwide are often more constrained than men from participating in the labor market or in higher status occupations, labor-market policies need to focus on alleviating constraints and creating new job opportunities for women. Government effects to promote equal opportunity in the workforce help women to obtain non-traditional occupations by ending discriminatory employment practices based on sex and marital status. Although this type of legislation is becoming more prevalent among developing countries, enforcement remains problematic. For example, Korean women continued to face a considerable glass ceiling in administrative and supervisory positions, despite strong gains in their education and the enactment of equal-opportunity legislation. Ensuring equal treatment for male and female workers will strengthen women's economic

status and generate efficiency gains for the entire economy. As Nobel laureate Paul Samuelson stated in 1985, "To the degree that women are getting an opportunity they didn't have in the past, the economy is tapping an important and previously wasted resource.[19] Other policies are needed to support women who work in the rural and informal sectors, and to provide greater access to formal sector jobs. These policy efforts include (but are certainly not limited to) providing girls and women with more education and job-specific training, extending labor standards and benefits to the agricultural and informal sectors, targeting agricultural extension and technologies to women, and increasing women's access to credit and financial services.

Finally, more "family-friendly" labor market policies are needed to help to address the needs of working parents and their children. Parental leave statutes alongside maternity leave legislation will support fathers in their efforts to take on more responsibility for childcare. Also, governments in many industrialized countries have increased their attempts to shift the financial burden of childcare provision away from individual families and to extend access to quality childcare services.[20] Although government involvement in childcare provision and support is not as common in developing countries, there are exceptions. For example, the Korean government provides subsidies to employers with childcare centers to help them cover operational expenses. Such measures are becoming more appropriate as family structures move away from the extended family system, as fertility rates decline, and as the share of women employed in paid jobs grows. Childcare assistance serves as a useful complement to maternity and parental leave statutes in supporting working parents.

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Table 1. Maternity Leave Duration Around the World

Duration	*Country*
Less than 12 weeks	Tunisia (30 days); Lebanon, Qatar (40 days); Papua New Guinea (6 weeks[a]); Bahrein, United Arab Emirates (45 days); Egypt, Libyan Arab Jamahiriya (50 days); Nepal (52 days); Bahamas, Singapore, Sudan, Switzerland, Taiwan, Uganda (8 weeks); Bolivia, Eritrea, Guinea-Bissau, Iceland, Iraq, Kenya, Republic of Korea, Malaysia, Mozambique, Philippines, Yemen (60 days or two months); Honduras, Hong Kong, Jordan, Kuwait, Sao Tome and Principe, Saudi Arabia (70 days or ten weeks); Syrian Arab Republic (75 days).
12 weeks	Bangladesh, Barbados, Belize, Botswana, Burundi, Colombia, Dominica, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Fiji, Gambia, Ghana, Guatemala, Haiti, India, Israel, Jamaica, Lesotho, Mauritius, Mexico, Morocco, Myanmar, Namibia, Nicaragua, Nigeria, Pakistan, Paraguay, Rwanda, Solomon Islands, South Africa, Sri Lanka, Swaziland, United Republic of Tanzania, Turkey, United States, Uruguay, Zambia.
13 weeks	Afghanistan, Angola, Antigua and Barbuda, Argentina, Cambodia, Chad, China, Ethiopia, Grenada, Guyana, Indonesia, Islamic Republic of Iran, Lao People's Democratic Republic, Peru, Saint Lucia, Thailand, Trinidad and Tobago, Zimbabwe.
14 weeks	Algeria, Benin, Burkina Faso, Cameroon, Central African Republic, Comoros, Democratic Republic of the Congo, Côte d'Ivoire, Djibouti, Gabon, Germany, Guinea, Ireland, Japan, Madagascar, Mali, Mauritania, Niger, New Zealand, Panama, Portugal, Senegal, Seychelles, Somalia, Sweden, Togo, United Kingdom.
15 weeks	Mongolia (101 days); Belgium, Congo, Finland, Slovenia.
16 weeks	Austria, Cyprus, Costa Rica, France, Greece, Luxembourg, Netherlands, Poland, Romania, Spain.
17 weeks or more	Brazil, Bulgaria, Canada (17 weeks); Vietnam (4-7 months); Azerbaijan, Belarus, Chile, Cuba, Denmark, Estonia, Ukraine, Venezuela (18 weeks); Russian Federation (20 weeks); Italy (5 months); Hungary (24 weeks); Croatia (6 months and 4 weeks); Czech Republic (28 weeks); Norway (38-48 weeks); Australia (52 weeks).

[a]Plus prenatal leave, where required.

Sources: ILO (1999b), Nataraj, Rodgers, and Zveglich (1998).

Table 2. Variation in Minimum Wage Legislation Across Low and Middle Income Countries

	Time Unit	*Coverage Differs By Sex*	*Coverage Differs By Region*	*Coverage Differs By Sector*	*Probationary Workers Exempt*
East Asia					
Indonesia	day	no	yes	yes	no
Philippines	day	no	yes	yes	no
South Korea	hour	no	no	yes	yes
Thailand	day	no	yes	yes	yes
Europe & Cental Asia					
Kazakhstan	month	no	no	no	no
Poland	month	no	no	no	no
Romania	month	no	no	no	no
Turkey	day	no	no	no	no
South America					
Brazil	month	no	no	no	no
Chile	month	no	no	no	no
Colombia	day	no	yes	yes	no
Mexico	day	no	yes	no	no
Peru	day/month	no	no	no	no
Venezuela	month	no	yes	yes	no
North Africa					
Algeria	hr/day/month	no	no	yes	yes
Tunisia	hr/day/month	no	no	yes	no
Sub-Saharan Africa					
Burkina Faso	hour	no	no	yes	no
Côte D'Ivoire	hour	no	no	no	no
Kenya	hr/day/month	no	yes	yes	no
Malawi	day	no	yes	no	no
Mali	hour	no	no	no	no
Niger	hour	no	no	no	no

Sources: Compiled from Nayar (1996) and ILO-provided minimum-wage data for individual countries.

Table 3. Effect of Protective Measures on the Female Labor Market in Taiwan

	Women's Labor Market Outcome:					
	Log Hourly Wage [a]		*Log Monthly Hours* [a]		*Employment* [b]	
Effect of Working-Hour Restrictions:						
Post-Law	1.66	(3.16)	0.21	(1.67)	-0.10	(0.37)
Post-Enforcement	-1.34	(3.10)	-4.31 ***	(1.65)	-0.90 **	(0.40)
Effect of Maternity Benefits:						
Post-Law	-4.58	(3.65)	3.88 **	(1.90)	-1.13	(1.01)
Post-Enforcement	-3.63	(3.60)	7.02 ***	(1.88)	2.54 **	(1.10)

** Statistically significant at the .05 level; *** at the .01 level (two-tailed test). Standard errors in parentheses.
[a] Log points x 100.
[b] Percent.
Source: Zveglich and Rodgers (1999).

Table 4. Korea's Nonagricultural Occupational Distribution, 1980-1992 (in percent)

Occupation	*1980*	*1983*	*1986*	*1989*	*1992*
Male Occupational Structure					
Professionals and Technicians	7.6	10.9	12.3	11.7	15.6
Administrative and Managers	4.9	4.3	4.0	3.8	5.5
Supervisors[a]	3.9	10.4	11.1	12.1	11.1
Clerical Workers	18.5	13.3	13.6	13.4	17.0
Sales Workers	0.2	1.1	0.5	0.8	1.8
Service Workers	4.2	4.0	3.9	4.1	5.5
Production Workers and Laborers	60.7	55.9	54.7	54.1	43.5
All Occupations	100.0	100.0	100.0	100.0	100.0
Female Occupational Structure					
Professionals and Technicians	2.4	2.9	4.5	5.5	11.8
Administrative and Managers	0.1	0.1	0.1	0.1	0.1
Supervisors[a]	0.1	1.5	0.9	1.2	0.7
Clerical Workers	16.6	18.9	19.1	17.5	24.8
Sales Workers	0.2	0.7	0.6	2.0	3.2
Service Workers	3.1	3.5	3.9	5.1	7.2
Production Workers and Laborers	77.7	72.4	70.9	68.6	52.3
All Occupations	100.0	100.0	100.0	100.0	100.0
Percent Female by Occupation					
Professionals and Technicians	18.0	14.6	17.4	21.5	28.2
Administrative and Managers	1.0	0.9	0.8	0.8	1.1
Supervisors[a]	1.2	8.3	4.7	5.5	3.0
Clerical Workers	38.3	47.5	45.0	43.2	43.2
Sales Workers	34.4	27.4	42.6	59.3	47.8
Service Workers	33.8	35.9	36.7	41.8	40.3
Production Workers and Laborers	47.1	45.2	42.9	42.4	38.5
All Occupations	41.0	38.9	36.7	36.7	34.2
Duncan Index	0.17	0.22	0.22	0.21	0.20
Female to Male Earnings Ratio[b]	45.7	46.0	48.2	53.9	57.6

[a] Supervisors in clerical, service, and production work
[b] Monthly earnings ratio, adjusted for gender differences in hours worked.
Source: Author's calculations.

Table 5. Public Sector Retrenchment in Vietnam

	Previous Job	*Current Activity:* [a]			
Panel A: Employment Change Prior to Last Year					
	Public Administration [b]	Unpaid Work	Paid Work	Seeking Work	Out of Labor Force
Female	100%	74%	14%	1%	10%
	(77)	(57)	(11)	(1)	(8)
Male	100%	70%	22%	0%	7%
	(838)	(587)	(188)	(3)	(60)
	Not Public Administration				
Female	100%	71%	18%	0%	10%
	(1,141)	(814)	(207)	(3)	(117)
Male	100%	64%	27%	1%	8%
	(1,267)	(809)	(346)	(9)	(103)
Panel B: Employment Change Within Last Year					
	Public Sector [c]	Unpaid Work	Paid Work	Seeking Work	Out of Labor Force
Female	100%	48%	9%	1%	43%
	(80)	(38)	(7)	(1)	(34)
Male	100%	53%	11%	0%	36%
	(53)	(28)	(6)	0	(19)
	Private Sector				
Female	100%	22%	10%	2%	66%
	(999)	(215)	(104)	(24)	(656)
Male	100%	23%	27%	3%	46%
	(947)	(219)	(260)	(32)	(436)

Number of observations in parentheses.
[a] "Current" refers to the 7 days preceding the survey date in 1992-93, and "last year" refers to the 12 months preceding the survey date.
[b] Previous industry was public administration and defense, or previous occupation was legislative officials and government administrators.
[c] Previous employer was either the government, a social organization, or a state-owned enterprise.
Source: Author's calculations.

ENDNOTES

1. Hamermesh (1993) provides a summary of studies that estimate the substitutability between different groups of workers, between workers and hours, and between capital and labor.

2. Parental leave policies allow both men and women to take a protected leave of absence from work to care for their children. Family leave policies are even more inclusive, allowing protected time off work to care for any close relatives.

3. Other research by Waldfogel for women in Britain and the United States further suggests positive wage effects. This research is reviewed in Waldfogel (1998). Dalto (1989) also argues that maternity leave policies may raise women*'s* wages.

4. Kane (1998) finds similar results for U.S. maternity leave legislation at the state level.

5. A good review of the literature evaluating equal pay, equal opportunity, comparable worth, and affirmative action in industrialized countries may be found in Blau, Ferber, and Winkler (1998).

6. This debate is carefully reviewed in Card and Krueger (1995).

7. Fortin and Lemieux (1997) provide further evidence on the placement of the minimum wage along the male and female wage distributions for the United States.

8. Rama (1996) presents evidence for Indonesia, Gindling and Terrell (1995) for Costa Rica, and Márquez and Pagés (1998) for a sample of Latin American countries (except Mexico). Evidence for the other countries is reviewed in Squire and Suthiwart-Narueput (1997).

9. See, for example, Alderman, Canagarajah, and Younger (1996); Aslanbeigui, Pressman, and

Summerfield (1994); Mills and Sahn (1997); and Rama and MacIsaac (1999).

10. Information on policy incidence draws on International Labour Office (1987, 1999a, 1999b); Nataraj, Rodgers, and Zveglich (1998); Nayar (1996); and ILO-provided minimum-wage data for individual countries.

11. This section presents new evidence based on East Asian developing country data. The Taiwan case study draws from a more detailed working paper, Zveglich and Rodgers (1999). Data used in the Korean case study are described in more detail in Rodgers (1998). Background information about Vietnam's transition to a market economy comes from World Bank (1995).

12. Taiwa*n's* uncovered sector is commerce, business services, and social and personal services. The covered sector encompasses all other industries.

13. The dependent variable is log monthly earnings. Since the observable productivity characteristics include log monthly hours worked, the final results represent the effect of the policy change on hourly wages.

14. The results are robust to performing a correction for selectivity bias using the variables mentioned for the employment equation. However, the modeling of a selectivity correction was eliminated from the final analysis due to the lack of data for more plausible identifying variables.

15. The survey asks individuals, "What was your main activity in the previous week?" The range of responses include "Attending school and working," "Attending school but not working,"

"Housework and working," and "Housework but not working." Hence, some students and housewives are participating in the labor force.

16. Data for the intermittent years are not available.

17. Although some people who were out of the labor force altogether within the past 12 months may have been retrenched earlier, these individuals are not surveyed for their employment history.

18. Only SOC 20 and SIC 910 could be clearly differentiated as exclusively public sector.

19. As quoted in Blau, Ferber, and Winkler (1998: 215).

20. For further discussion related to child-care support and other family-friendly policies, see Blau and Ehrenberg (1997), Gormley (1996), and Kamerman (1991).