GENDER DIMENSIONS OF SUSTAINABLE DEVELOPMENT

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Summary

Economic development based on gender inequality is inefficient, and therefore unsustainable in the long run. Women's economic and social progress has strong implications for the types of human capital, including the level and quality of education, in which women may choose to invest. Women's investment choices will in turn affect the future productivity of entire economies. Given the strong evidence that workers' education and skills matter a great deal for economic growth, sub-optimal investments in women's human capital could significantly impede macroeconomic growth. Besides increasing the productivity of labor, investing in women yields further benefits that have a positive impact on social welfare.

The differential ability between men and women to participate in the community and in the economy depends fundamentally on such human capital dimensions as their health status, access to education, and treatment in the labor market. This article examines each of these issues by discussing influential research, presenting trends in descriptive statistics across countries, and reflecting on policy implications.

1. Introduction

Economic development based on gender inequality is inefficient, and therefore unsustainable in the long run. This idea was expressed in a 1998 World Bank workshop on enhancing development through attention to gender, a landmark event in the growing political discourse on

women and development. The full and productive use of human resources is essential to economic growth and sustainable development. However, gender inequality can permeate many aspects of daily life, through the legal and regulatory environment and through social and cultural life within the community. Gender inequality can impact the economic life of women and men as well, by altering the access to productive resources, and by affecting the allocation of labor supply, income, and health care within the household. These and other issues related to gender and development have gained increasing attention over the past few decades among development scholars and practitioners alike.

A rich body of evidence, both qualitative and quantitative, has emerged that documents women's relative progress in a host of economic, social, and political indicators. This progress has profound implications for the types of human capital, including the level and quality of education, in which women may choose to invest. Women's investment choices will in turn affect the future productivity of entire economies. Closely related, a growing consensus has emerged that empowering women through improvements in female literacy and female employment opportunities is a major step in the direction of reducing fertility rates, another precursor to long-term, sustained economic development.

This article focuses specifically on gender differences in human capital resources. The reader is advised to see Stromquist (1998) for a more comprehensive study of gender and development. The differential ability between men and women to participate in the community and in the economy depends fundamentally on such human capital dimensions as their health status, access to education, and treatment in the labor market. This article examines each of these issues by discussing influential research, presenting trends in descriptive statistics across countries, and reflecting on policy implications. Amartya Sen, Nobel Prize winner in economics, writes regarding women's unequal access to the advantages of medical and economic progress: "We confront here what is clearly one of the more momentous—and relatively neglected—problems facing the contemporary world" (Sen, 1989: 29). This statement highlights the importance of adding a gender perspective to the United Nations; extensive knowledge source on sustainable development.

2. Gender Differences in Health Status

Health status is a critical determinant of an individual's economic well-being. Poor health status can reduce the number of hours worked, limit the productive capacity of the worker, and result in lower wages. The poor health of one family member can lead to detrimental effects for the health of other members, especially children, and can mean poverty and debt for the entire household. Despite the importance of health for the economic well-being of the individual and the household, sharp differences exist in measures of health across countries and societies, and within societies as well. Research on health status within countries and communities has found significant health differences by race, socioeconomic status, and social class. Gender inequities in health are another well-documented type of variation. This section compiles some revealing statistics on the differences in the health of men and women of both industrialized and developing countries.

2.1 Measuring Health

A variety of indicators can be used to measure the health status of individuals, ranging from subjective measures such as self-reported health status and activities of daily living, to objective measures such as life expectancy, mortality rates, and the prevalence of specific diseases (for example, cancer or diabetes). Other measures of health include lifestyle risk factors (tobacco, alcohol and drug use, obesity and prevalence of overweight), measures of overall well-being (depression, or incidence of domestic violence), and measures of access to health care through insurance coverage and the use of preventive services (prenatal care and breast examinations, for example).

To document health differences between men and women and across countries, the researcher is presented with few measures that are collected separately for men and women and available in both industrialized and developing countries. For developing countries especially, data collection methods are unable to provide regular documentation of male–female differences in health. The principal measures that can be contrasted by gender and across countries are adult and infant life expectancy and mortality rates by cause. On morbidity differences by gender, available case studies are able to provide information for a small number of countries; some will be summarized here.

2.2 Patterns and Causes of Mortality Differentials

In Table 1, life expectancies at birth for males and females in 1970 and 1996 are reported for a subset of all countries. Males and females in all countries shown here, as is the case around the globe, experienced gains in life expectancy between 1970 and 1996. In addition, women's life expectancy relative to men's has increased worldwide, and currently exceeds male life expectancy in most countries. The rise in the life expectancy of females over and above that of males is a pattern that has been observed only within the last century. Some suggested explanations for the increase in women's life expectancy are the development of medical treatments for infectious diseases, improvements in the diet and medical care of females relative to males, and shifts in occupational roles that have increased the occupational health risks for men, and decreased those for women. An additional cause of increased female life expectancy relative to that of males is the shift away from agricultural sector work and toward urban life. These explanations have not been tested empirically at great length, and their relative contributions are not known.

Table 1. Comparative statistics on life expectancy by gender, 1970 and 1996.

While women have an advantage in life expectancy over men in most countries of the world, the advantage is not present everywhere and is not uniform across countries. In 1970, females in India, Pakistan, and Bangladesh (and also in Nepal, Iran, and Papua New Guinea, not shown here) had lower life expectancies than males. By 1996, female life expectancy in India, Pakistan, Bangladesh, Iran, and Papua New Guinea exceeded that of males. In Nepal in 1996, female life expectancy continued to equal male life expectancy. Thus the advantage women have in life expectancy is not uniform across countries. Advantages in women's life expectancy in high-income countries in 1996 were on average seven years (74 years for men, 81 years for women). In low-income countries, the gap between male and female life expectancy is considerably smaller, at only two years (58 years for men, 60 years for women). This variation in the gender

gap in life expectancy is especially worth noting given the evidence that females have a biological advantage in survival over males.

Coale suggests that higher rates of female mortality are driven by traditions in South Asian countries such as India that create "discriminatory treatment sufficiently adverse to females to outweigh their normal advantage of experiencing mortality lower than that of males" (Coale, 1991: 520). He estimates that such traditions, beginning shortly after birth, are responsible for approximately 60 million "missing" women in the countries of China, India, Pakistan, Bangladesh, Nepal, and Egypt.

Data on child mortality reveal that such discriminatory behavior does indeed begin at early ages. Mortality rate ratios for females and males under age five, reported in Table 2, show that in countries where female life expectancy is only moderately greater than male life expectancy, child mortality for girls exceeds that of boys (as in the cases of Bangladesh and India). Research by Waldron in 1987 on developing countries reveals that sex differentials in mortality vary during childhood. During infancy, male mortality exceeds female mortality, most likely due to genetic differences in health present at the time of birth. However, for children aged one to four in countries with life expectancies less than 60 years, female mortality exceeds males. In countries with life expectancies greater than 60 years, male mortality exceeds females. The causes of these sex differentials are very different in the two cases. Excess female mortality in low life expectancy countries is caused by a wide range of factors, while excess male mortality in high life expectancy countries is driven by high numbers of male deaths caused by accidents and violence. Further research by Waldron indicates that excess female mortality is associated with differences in caloric intake, nutritional content, medical treatment that adversely affects female children, and with reported patterns of son preference by adults.

Table 2. Comparative statistics on child mortality by gender, 1997.

Related work by Koenig and D'Souza published in 1986 found that female children in rural Bangladesh were fed less frequently and with lower-quality food, were less likely to receive treatment in health centers, and were treated at health centers later in their illnesses than male children. Recent statistics on child nutrition for Bangladesh are consistent with these findings. In 1990, 67.8% of female children were reported to be underweight compared to 64.8% of male children (United Nations, 1994).

Using data on 35 developing countries from the Demographic and Health Surveys, Hill and Upchurch in 1995 examined differences in child mortality by gender and found evidence of a female disadvantage in under-5 mortality rates in 90% of the sample observations. Factors significantly associated with the male–female difference in mortality rates were differences in immunization and differences in the social status of women compared to men (measured by the ratio of female to male primary school enrollment). A number of health-related measures had no relationship to male–female mortality differences at the country level. Their research suggests the importance of using individual-level analysis to identify the source of persistent gender differences in child mortality.

2.3 Reproductive Health

Differences in adult life expectancy by sex are not explained entirely by excess female mortality among children. Another source of female mortality is maternal mortality. Though advances in reproductive health have been made in recent years, maternal mortality remains an important concern. According to 1988 statistics from the World Health Organization (WHO), more than 585 000 women die each year of pregnancy-related causes, and 99% of these women live in developing countries.

Statistics shown in Table 3 provide some indication of reproductive health status in various countries. In this sample, four countries (Bangladesh, Kenya, Mozambique, and Nigeria) experience rates of mortality in excess of 500 women per 100 000 live births. In contrast, maternal mortality rates in the UK and the US are 9 and 12 deaths per 100 000 live births, respectively. High rates of maternal mortality are associated with low rates of contraceptive usage, which increase the number of pregnancies, decrease birth intervals, and increase possibilities for death through pregnancy and childbirth. Obstetric complications, such as hemorrhage, hypertension, infection, and obstructed labor, also result in increased maternal deaths. Statistics on contraceptive prevalence show that in countries in South Asia where maternal mortality is high, contraceptive prevalence averages only 38%. In the sub-Saharan African countries of Mozambique and Nigeria, where maternal mortality rates are 1500 and 1000 deaths per 100 000 live births, respectively, contraceptive prevalence rates are less than 10%. Providing some indication of the inability to treat obstetric complications in many developing countries, statistics show that only 29% of births in South Asia and 38% of births in sub-Saharan Africa are attended by trained health professionals. By comparison, in industrialized countries, 99% of births are attended by health professionals.

Table 3. Indicators of women's reproductive health.

In addition to the low levels of contraceptive use and the absence of health personnel during deliveries, maternal morbidity is also attributed to poor nutrition, inadequate prenatal care, and improper hygiene. Improved prenatal care and diet, however, do not alter maternal mortality unless medical treatment is improved. Research by Greenwood et al. published in 1987 suggests that even when high quality prenatal care is provided to pregnant mothers, high levels of maternal mortality still occur when emergency treatment facilities are lacking.

While the absolute burden of deaths due to reproductive causes is great in many countries, Murray, Yang, and Qiao in their work published in 1992 calculated that in India, deaths from pregnancy and childbirth explain only 10% of all female mortality, suggesting that other causes, especially communicable diseases like tuberculosis and respiratory infections, should not be overlooked. This point suggests the importance of analyzing sex differences in deaths by cause and morbidity.

2.4 Patterns of Morbidity Differentials

Overall patterns of mortality for women are suggestive of a sex differential that actually tends to favor women in most countries. Data on deaths by cause also suggest that the favorable advantage of women exists in every major category. As shown in Table 4, age-standardized death rates for seven broadly defined causes of death are higher for men than for women, with

only one exception (deaths caused by cerebrovascular disease in Cuba). Waldron also noted in his work published in 1986 that women have lower mortality rates in deaths by almost every cause, with the exception of cancer mortality, which has been shown to be higher for women aged 25–50 in Latin American countries.

Table 4. Death by specified causes by gender, selected countries.

In depicting the true differences in health by gender, these data have some important limitations. For example, countries for which data on deaths by cause are collected are those with the financial resources to support detailed vital registrations. No data are available for South Asia, where female life expectancy is only marginally greater than that of males, and where female child mortality exceeds males. Also, the process of collecting vital registration data varies across countries, and reduces the ability to draw reliable comparisons across countries or even interpret data within some countries. In some settings the cause of death may be reported by a physician; in many situations, cause of death is given not by health professionals, but instead by family members or friends of the deceased.

Of greater consequence for women's health than the limitations of deaths-by-cause data is the fact that diseases do not necessarily result in mortality at the same rate as they result in morbidity. Data on adult mortality, even adult mortality by cause, can substantially understate the incidence of disease. Measures of morbidity are needed to fully capture the differences in the health of men and women. Unfortunately though, data describing uniform measures of morbidity across countries are not available. Murray et al. in 1992 provided an overview of the difficulties of measuring and comparing morbidity data. They noted the wide range of available measures (both self-perceived and observable) and the resulting inability to compare these measures across studies and populations.

Statistical comparisons of morbidity by gender across a wide range of countries do not exist, and instead, information on such differences can be gleaned from country-specific research. Murray et al. in 1992 provided a comprehensive literature review of morbidity surveys, and included details on gender differences in morbidity. Their review provided evidence in contrast to the mortality advantages women have over men in most countries. In a sizable number of studies, women reported higher levels of observed morbidity (sickness or disease that is diagnosed by a clinician after examination and testing) and self-perceived morbidity (illness or disease that is reported by individuals themselves).

In a Colombian study, the percentage of women aged 45 to 64 with hypertension was several points higher than men. In Egypt, a study of observed morbidity reported that a higher percentage of women than men aged 20 to 59 (84% of men, and 91% of women) reported at least one health problem. In addition, self-reported morbidity has been shown to be higher among women than men in surveys conducted in Pakistan, Thailand, Cote D'Ivoire, Ghana, Peru, Kenya, and Mexico, even when the pregnancy status of the woman is measured. While studies of self-perceived morbidity show that women report illness more often than men, studies of disability in various countries generally show higher rates of impairment among men. In Egypt, men of all ages had higher rates of disability than women. In Sri Lanka and Bahrain, male disability rates were found to exceed female disability rates for most age categories. These

differences in impairment may be exaggerated, however, since many disabilities in women go unreported (United Nations, 1986).

Recent data continue to suggest that morbidity is more prevalent among women than men. Strauss et al. (1993) analyzed measures of self-perceived and observed morbidity in four countries: Jamaica, Bangladesh, Malaysia, and the United States. In all four countries, older women reported a greater incidence of both self-perceived and observed health problems than did similarly aged men. The higher rates of morbidity among women were also observed when the authors examined women and men of various age groups, and when the authors controlled for differential mortality between men and women. Corrections for the higher mortality rates of males only made a difference in the morbidity gaps among older age groups.

2.5 Causes of Gender Differentials in Morbidity

Research on the causes of poor health among all adults points to factors such as poverty, poor nutrition, the lack of shelter, and improper sanitation. These factors are associated with higher rates of communicable disease, and lower rates of medical care. Kjellstrom et al. in their work published in 1992 discussed a set of factors that might increase health problems as economic development takes place. These include tobacco and alcohol use, dietary imbalance, reduced physical activity, risk of HIV/AIDS, deaths caused by motor vehicle fatalities, environmental factors, and occupational risks.

Seeking to identify some of the particular factors that impact male and female health differently, Strauss et al. examined data from Jamaica. They find significant effects of education levels in models of various health measures for both men and women, and conclude that since education levels are similar in both groups, gender differentials in health status are not based on education. Location effects, potential proxies for the availability of health-care resources, have a greater impact on women’s health than men’s health. The authors find that life cycle indicators are a possible explanation of differential morbidity by gender. Mild morbidity among women tends to exceed that of men beginning in the reproductive years; gaps in severe morbidity are greatest at older ages. The conclusion offered by Strauss et al. is tentative: biological factors and behavioral factors both contribute, but exactly which factors matter most and how remains unclear.

In addition to biological and behavioral determinants, recent research has offered a possible "psychosocial" pathway to ill-health. This controversial body of research suggests that in communities where socioeconomic inequality exists, higher rates of mortality are experienced, especially by those that are less well-off. Relative deprivation can lead to feelings of inadequacy or envy among the have-nots, leading them to engage in self-destructive behaviors. There are several conceptual and empirical problems associated with psychosocial stress as a cause of illness. Yet, the fact that women in many countries are often in a weaker economic position relative to men, having less education and lower earnings, and the patterns of excess morbidity of women in these same countries, are both consistent with the relative deprivation hypothesis.

2.6 Policy Attempts to Alleviate Gender Differences in Health

Since the 1970s the health needs of women have been given special priority by international agencies. The United Nations defined the period from 1975 to 1985 as the Decade for Women. A series of conferences and papers highlighted the inequities of women and described new initiatives to improve women's health and nutrition. In 1977, the WHO conceived its Health for All initiative, which declared that all people in all countries should attain some level of health that allowed them to participate economically and socially in their community. The 1978 Alma Ata conference sponsored by the WHO and the United Nations Children's Fund (UNICEF) defined primary health care as the key to attaining health for all.

Primary health care was defined as a combination of preventive and curative activities, such as immunization against disease, treatment of disease and injury, and the provision of safe water and basic sanitation services. For women in particular, primary health care included maternal and child health programs and family planning clinics. WHO's emphasis on primary health care has led to substantial increases in the immunization of infants, the availability of safe water and sanitation services, improved nutrition, the decline of infectious disease, and the eradication of smallpox.

Though the primary health care focus has benefited women in terms of relieving their burden in the household and improving their own health status, critics argue that girls between age six and motherhood are not given enough priority, and that the focus on family planning has omitted men from the contraceptive decision and from child-rearing. WHO's Safe Motherhood Initiative, begun in 1987, has been subject to the same criticism of placing the responsibility of reproductive health on women exclusive of men. Vlassoff in his work published in 1998 suggested that such "one-sided" approaches to family planning, in conjunction with a lack of understanding of the economic motives for childbearing, reduced the effectiveness of public programs aimed at improving women's health.

During the 1970s and throughout the 1980s, agencies such as the United Nations sought to recognize the rights of women and to eliminate forms of discrimination against women, but gave less attention to the *rights* to health, including reproductive health, of women. It was not until the 1990s that women's health was directly addressed, first in the International Conference on Population and Development in Cairo in 1994, and second in the Fourth World Conference on Women in Beijing in 1995.

The Beijing Conference produced a Platform for Action on women and health that begins with the recognition that women, while they have the right to health of the highest attainable level, experience unequal access to and use of health resources. The Platform identifies five strategic objectives to improve the health of women by: (1) increasing access to health care over the life cycle, (2) strengthening preventive programs, (3) undertaking gender-sensitive initiatives that address sexual and reproductive health issues, (4) promoting and disseminating research on women's health, and (5) increasing resources for women's health. The Beijing Conference's objectives are significant in their recognition of the rights of children and adolescents, the responsibilities of men in child care and household work, and the role of government in preventing unsafe abortion, to name a few.

The current focus in women's health policy has taken a decidedly gendered perspective. This is seen in the Platform for Action produced in Beijing, which calls for government actions including the enactment of legislation against societal practices contributing to HIV/AIDS among women and girls, the development of strategies to end social subordination of women and girls, and the design of programs for men of all ages recognizing their parental roles and their responsibility in sexual and reproductive behavior. An international effort toward a women-centered agenda is also at work toward developing improved women-controlled contraceptives that protect against sexually transmitted diseases, and new male contraceptive choices. Potential actions to improve nutritional deficiencies of women include raising public awareness of the nutritional needs of young girls, taking action through legislation to delay marriage, and increasing men's involvement in the household.

The World Health Organization has also incorporated a gendered perspective into its Health For All initiative as it enters the twenty-first century. WHO states:

A gender perspective is vital if equitable and effective health policies and strategies are to be developed and implemented. A gender perspective leads to a better understanding of the factors that influence the health of women and men…[it] acknowledges the effects of socially, culturally and behaviorally determined relationships, roles and responsibilities of men and women, especially on individual, family and community health (WHO, 1998c: 19).

Such a gender perspective requires that gender-related barriers to health care, including financial barriers, be removed. It requires that data-collection systems move toward the collection and analysis of sex-specific data, and that future research maintain gender balance. According to the World Health Organization, "a gender perspective in relation to health is central to development" (WHO, 1998c: 23).

3. Gender Differences in Education and Labor Market Outcomes

This section examines the importance of education to economic growth, and the prevalence of gender differences in illiteracy and school enrollment. Educational achievement, in turn, has sizable repercussions on labor market performance. Gender differences in labor market outcomes encompass a number of areas: participation rates in the formal labor market, hours of paid and unpaid work, wage differentials, and occupational segregation.

3.1 Educational Attainment: Concepts and Outcomes

A rich tradition of economic growth theory predicts that education enhances cognitive and analytical skills, which in turn make workers more productive. New growth theories also predict that investment in education enables countries to adopt a wider range of existing technologies and promotes technical advances within countries. Some of the newer theories are based on spillover effects from education that arise within and across groups of workers.

Empirical attempts to differentiate between the effects of male and female educational investment have found that the primary school enrollment rate for girls has a positive and significant effect on economic growth. The magnitude of this schooling effect does not differ

significantly between girls and boys, implying that raising female enrollments in primary school will be just as successful in promoting economic growth as raising male enrollment rates. Besides increasing the productivity of labor, educating girls yields further benefits that have a positive impact on social welfare and economic development. A strong body of evidence indicates that educated women have lower fertility rates, experience improved health and school outcomes for their children, use family health services more efficiently, and have higher labor force participation rates.

Despite growing recognition of the importance of educating girls and women, most developing countries still record a sizable gender gap in school attendance and related outcomes such as literacy. In 1990, approximately 640 million women were functionally illiterate, constituting two-thirds of the global illiterate population. The gender discrepancy in illiteracy rates will continue as long as gender differences in primary school enrollment continue.

As indicated in Table 5, women experience higher illiteracy rates than men in most developing countries. The discrepancy is particularly large in South Asia, the Middle East, and Africa, where some religions and cultural norms actively discourage female education. The discrepancy is smallest in Latin America, where the gender differential in illiteracy, already small in 1980, had virtually disappeared for many countries by 1995. In many countries, men and women have experienced substantial declines in illiteracy rates over time. For example, the illiteracy rate in Kenya dropped from 40 to 14% for males, and from 65 to 30% for females, during the 1980 to 1995 period. However, Kenya appears to be an exception for very poor countries. Low-income countries as a group actually experienced an increase in female illiteracy between 1985 and 1995, a period of severe macroeconomic imbalances that led to adverse social outcomes for some vulnerable groups. The gender discrepancy in illiteracy rates disappears with income growth. In 1995, men and women in low-income countries experienced a 24 percentage point difference in illiteracy; this gap narrowed to 5 percentage points for upper-middle-income countries and no discernable difference for high-income countries.

Table 5. Comparative statistics on adult illiteracy by gender, 1980, 1985, and 1995.

Table 6 provides information on school enrollment rates for boys and girls. These gross enrollment ratios can exceed 100 if some students are above or below the age range for the population of school-age children. The table yields several observations. First, most countries and regions record higher primary and secondary school enrollment rates for boys than for girls. The main outliers to this observation are East Asia and the Pacific, and the former socialist economies of Europe and Central Asia. Second, male and female enrollments rates are noticeably higher for primary school than secondary school. These differences across education level are particularly large in South Asia and sub-Saharan Africa. Finally, South Asian countries have generally experienced a dramatic increase in male and female enrollment rates over time, while sub-Saharan African countries saw their primary school enrollment rates drop sharply. These declines are both a result of the large macroeconomic difficulties during the 1980s and a potentially large contributor to future economic stagnation.

Table 6. Comparative statistics on school enrollment by gender, 1980 and 1993.

3.2 Labor Market Outcomes

The relationship between economic development and women's participation in the formal labor market exhibits a fairly predictable and well-documented relationship. In countries that still have relatively large agricultural sectors and an emphasis on household farm production, the female labor force participation rate is often quite high. In such economies, the distinction between paid work and home production is blurred, pushing up the number of women who are considered economically active. Women in these economies often play the primary role in collecting and managing water and firewood, and in developing and maintaining the land. When countries begin to industrialize, female labor force participation rates fall as the household farm model becomes less common and more women engage exclusively in non-market activities such as child care and housework. In more advanced economies, female participation rates begin to rise again as women combine working in the labor market with raising a family. This trend in women's labor force participation rates as countries industrialize generates a U-shaped function that fits time-series and cross-sectional data for a number of countries at different stages of development.

Table 7 generally supports this U-shaped relationship between economic development and women's participation in the labor market. The first two columns provide information on the female share of the labor force in 1980 and 1997. In both years, women's share of the labor force is fairly high in low-income and lower-middle-income countries, drops sharply in upper-middle-income countries, and then rises again in high-income countries. Among low- and middle-income countries in both years, women constitute the largest share of the labor force in Europe and Central Asia, and the smallest share in the Middle East and North Africa. Women's share of the labor force changes surprisingly little over time for most regions, with the exception of a big jump from 28% to 34% in Latin America and the Caribbean. Among individual countries, Sri Lanka stands out for its large increase in female representation in the labor force relative to neighboring countries. This change is consistent with Sri Lanka's record of strong gains in social development indicators through the aggressive use of welfare-enhancing social policies.

Table 7. Comparative statistics on the labor market by gender, 1980 and 1994–1997.

The next four columns of Table 7 report the proportion of the adult male and female population that is economically active, in 1980 and in a more recent year between 1994 and 1996. Some of the highest economic activity rates for women are found in Europe, Central Asia, East Asia, and sub-Saharan Africa. Women have low economic activity rates—relative to women in other regions and relative to men in the same region—in North Africa and South Asia. Religion and social attitudes toward women's presence in the workforce help to explain these regional differences. A number of countries exhibit large changes, both positive and negative, in female economic activity rates during the period. Particularly large drops are found in Europe and Central Asia, reflecting the transition from socialism to market economies in the early 1990s. Male economic activity rates have also fallen significantly in this region, helping to explain why the female share of the labor force remained fairly stable.

Official statistics on labor force participation, collected within the System of National Accounts (SNA) framework, differ across countries in terms of what exactly constitutes an economic

activity. Some countries ignore such activities as collecting water, gathering fuel resources, and cultivating food for the household, even though these activities are vital for family and community welfare. The international statistical standard does not take into account unpaid work within the home. Because women perform such a large share of these household and subsistence activities, official statistics based on SNA standards offer a misleading picture of time allocated toward work activities. Detailed studies of time use, which record all of an individual's paid and unpaid activities during a finite time period, have allowed researchers to depict more accurately gender differences in paid work, unpaid work, and leisure.

Time use studies have generally found that women work longer than men, and they perform more unpaid housework than men. For example, women in a small sample of South Asian countries in the early 1990s spent between 53 and 77 hours per week working in paid and unpaid activities, while men spent between 46 and 57 hours per week working. Women spent 30 to 40 hours per week performing housework, while men spent 5 to 15 hours per week engaging in household work. Time use studies also find that unpaid work generally accounts for a larger share of women's time than paid work, while the opposite is true for men. Another common finding in time use studies is that men tend to experience a fairly stable time use profile over their lifetimes, whereas women experience more variable paid and unpaid work loads as family structures change. Men's and women's time use profiles resemble each other more at the young and single stage of the life cycle. Differences are largest when caring for young children becomes a factor.

When women engage in paid work, on average, they earn less than men. As Table 8 demonstrates, gender differences in wages are an international phenomenon, and the male advantage in wages also holds up over time. The table reports female–male wage ratios in manufacturing for a sample of low-, middle-, and high-income countries, from 1980 to 1996. These figures yield surprisingly few patterns across region, time, and income group. More broadly-defined non-agricultural wage ratios also demonstrate no clear trends or spatial patterns. Non-agricultural wage ratios are frequently higher than manufacturing wage ratios, but there are a number of exceptions. Table 8 reports figures for manufacturing rather than non-agriculture because the data are more complete across countries.

Table 8. Comparative statistics on relative wages in manufacturing, 1980–1996.

Among high-income countries, women in Sweden have consistently experienced the highest relative wages throughout the period. Australia, France, and the Netherlands have also recorded fairly high wage ratios over time, ranging from about 77% to 85%. The gender wage ratio in the United States stood at 76% in the mid-1990s, a modest improvement from the 64% level in 1980. Wage ratios vary widely in the low- and middle-income countries, with very high magnitudes over time in Myanmar, El Salvador, and Sri Lanka, and fairly low magnitudes in Brazil and Malaysia. Malaysia is not alone among its neighbors in recording such low wage ratios. Among all regions, significant gender wage discrepancies are concentrated in East Asia, especially in the high-income economies. Even by the mid-1990s, women's wages in Japan, Korea, and Singapore amounted to just over half of men's wages.

A variety of decomposition techniques have been used to explain these gender wage gaps. A fairly standard approach, first developed in Oaxaca in 1973, is to decompose the gender wage gap in individual years into a portion explained by gender differences in observed skill characteristics, and a residual portion commonly attributed to wage discrimination by gender. This residual portion is surprisingly large across industrialized and developing countries. Several studies have used more elaborate decomposition techniques that exploit differences over time or across countries in order to separate characteristics related to the economy's overall wage structure, which have little to do with discrimination, from the residual gap.

Even the more detailed procedures yield an unexplained gender-specific component, leaving room for the conclusion that women have faced and continue to face wage discrimination in the labor market. In Taiwan, for example, women gained relative to men in their skills and educational attainment throughout the 1980s, yet the average gender earnings ratio remained at 65%. A trend decomposition of the earnings differential suggests that large losses for women in unobserved factors, which could reflect an increase in wage discrimination, offset women's relative gains in education and experience. Such results illustrate why rapid structural change does not necessarily entail a decline in the gender earnings gap.

Gender differences in occupational distributions also play a major role in explaining gender earnings gaps. If women are concentrated in relatively lower-paying occupations, or if pay structures within occupations are inequitable across gender, then women will have lower average earnings than men. Across countries, men and women cluster in different occupations. Using gender differences in employment shares in the formal labor market as an indicator of relative concentration, women are clustered in clerical jobs in most countries (International Labour Office, various years). Women also have a relatively strong presence among service and sales workers, and among low-skilled occupations. Men, on the other hand, dominate production work in crafts and trades, as well as plant and machine operations. More importantly, the high-paying legislative and managerial posts are male dominated across countries.

With economic development, the distribution of workers across occupations generally changes markedly, with a pronounced shift out of production work into professional and service occupations. The change incorporates job switchers and, more commonly, movements into and out of the labor force. However, even in those countries where men's and women's occupational distributions have become more similar over time, the distribution of workers across occupations is still noticeably different for men and women.

3.3 Labor Market Policies

Labor market policies that protect women date back to the mid-1800s and are still prevalent throughout the world. As countries industrialize, protective legislation evolves from regulations that focus on safeguarding women's family responsibilities and ensuring their safety, to more gender-neutral provisions that promote equal pay and equal opportunities between women and men in the workplace. Protections specifically targeting the well-being of women include special restrictions on women's working hours and prohibitions on the types of work they can perform. Because such restrictions are increasingly seen as discriminatory, they have been revoked in most of today's industrialized countries, but they are still fairly common in developing countries.

Mandated maternity benefits have a similarly long history and are widespread around the world. According to a competitive labor market model, protective measures for female workers can adversely affect female workers. Working hour restrictions have negative effects on women's employment and hours worked, and mandated maternity benefits can lead to lower female wages. Empirical evidence, although limited, tends to support these predictions.

Equal-protection measures, although still controversial in terms of their effectiveness in raising women's relative earnings and in reducing occupational segregation, are found in a growing number of industrialized and developing countries. For example, policies to reduce occupational segregation by gender typically aim to improve women's access to occupations in which they formerly had few opportunities. Such policies include offering women equal opportunities in hiring, training, and promotion. They will be effective in reducing the gender earnings gap if women are concentrated in relatively low-paying occupations. Another example of an equal-protection measure is equal pay for equal work within an establishment. This policy will potentially have a positive impact on closing the gender earnings gap if women work in jobs that contain within-occupation pay inequities. A small number of countries have adopted a third type of equal-protection legislation that encompasses parental and family leave. Parental leave policies allow both fathers and mothers to take a leave of absence from their jobs to care for a child. Family leave policies are broader, with provisions for leave time to care for any close relatives.

4. Implications for Economic Growth and Policy

A rather intriguing argument in recent economic growth research holds that greater overall income equality can actually stimulate long-term economic growth. Proponents of this view maintain that income inequality acts as a constraint on growth, and greater equality may actually be a prerequisite for sustained income growth. Such an argument counters the traditional view that greater income inequality and income growth necessarily go hand in hand. Low inequality can have a positive effect on economic growth through direct and indirect channels. The direct channel occurs through increased savings of the poor, greater political and macroeconomic stability, and higher overall efficiency in the workforce. The indirect channel occurs through a set of mutually reinforcing cycles in which economic growth and reduced income inequality lead to and result from increased education.

This research on the links between inequality and growth has done much to popularize the idea of shared growth policies, particularly investment in basic education and health, that allow the simultaneous achievement of equity and growth objectives. The multilateral institutions' emphasis during the 1990s on building human capital and raising the productivity of the poor through investments in basic education and health is a big step in the direction of alleviating poverty and stimulating growth. However, this approach must be bolstered by paying closer attention to the unequal distribution of assets. Institutional reforms in the area of property rights, legal systems, education, and universal access to credit will all provide new opportunities for those individuals at the bottom tail of the income distribution to contribute to, and benefit from, long-term economic growth.

More is known about the links between overall income inequality and macroeconomic growth than is known about gender inequality and growth. In fact, published theoretical and empirical studies on the determinants of macroeconomic growth pay virtually no attention to gender inequality. Gender inequality directly affects economic growth through its quantity and quality effects on the workforce. Gender inequality also affects broader aspects of economic development through its welfare effects on the population. If gender differences in health status, educational attainment, and labor market outcomes reflect market failures that have led to under-investment in girls and women, then this sub-optimal allocation of resources could dampen a country's growth potential.

Examples of such market failures include parents' decisions to invest more in their sons' education and health because they expect to receive more financial support from their sons in the future, and firms' decisions to offer women less on-the-job training because they expect women to be more compromised between work and family life. These distortions reduce investment in women's human capital. Empirical growth studies have consistently found investment in human capital, often measured by school enrollment rates, to be a major determinant of economic growth. Given the strong evidence that human capital accumulation matters a great deal for economic growth, sub-optimal investments in women's human capital could significantly impede macroeconomic growth.

What are the policy implications for meeting health needs? Since the 1970s, the health needs of women have been given special priority by international agencies. The World Health Organization began an emphasis on primary health care that has benefited women by relieving their burden in the household and improving their own health status. WHO's Safe Motherhood Initiative, begun in 1987, has placed a specific focus on the health of pregnant women. These types of plans, while successful, have been viewed as somewhat limited because of the lack of attention give to the role of men in contraception and household activities.

The current focus in women's health policy has taken a decidedly gendered perspective, as is seen in documents produced by Fourth World Conference on Women in Beijing in 1995, and in the current focus of the WHO. International agencies have recognized that gender equity in health requires strategies to end social subordination of women and girls, and the participation by men of all ages in parental roles and responsible sexual and reproductive behavior.

International agencies and developing country governments have taken a similar approach to reducing female illiteracy and raising enrollment rates for girls. Nonetheless, efforts to close the gender gap in educational attainment with educational policy reforms have generally experienced greater success when the approach centers on universal education requirements rather than deliberate attempts to educate girls. East Asian economies have been particularly successful in closing the gender educational gap through the implementation of universal education requirements.

Regarding labor market policies, workplace restrictions intended to protect women—such as limits on overtime hours and night-time work—have been seen increasingly as a source of discrimination. These restrictions, still common in today's developing countries, are disappearing from industrialized country labor codes. In their place now appear more neutral

measures aimed toward promoting equality between men and women. These policies may encourage more women to enter the formal labor market, invest more in their education and skills, and build firm-specific experience and tenure.

Such health, education, and labor market policies can raise the efficiency with which women's human capital resources are utilized, contributing to long-term, sustainable economic development. This view of improving women's human capital as a direct means toward sustainable development goes significantly beyond a more basic view of sustainable development that focuses on women's child-rearing capabilities. An example of the basic view is expressed by Lucy who stated that "there can be no sustainable development without development for women, because it is women who contribute most for the development of children." Sustainable development will be significantly hampered if systematic gender inequalities in health access, educational attainment, and treatment in the labor market lead to an inefficient use of the world's human resources.

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Glossary

Gender : Women's and men's roles and responsibilities that are socially determined. Gender is related to how we are perceived and expected to think and act as women and men because of the way society is organized, not because of our biological differences. (Note: The authors are aware of alternative definitions of gender, but for their purposes, tend to use gender as a synonym for sex.)

Sex : Genetic/physiological or biological characteristics of a person which indicates whether one is female or male.

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Biographical Sketches

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Table 1. Comparative Statistics on Life Expectancy by Gender, 1970 and 1996

	Life Expectancy at birth (in years)			
	Male			**Females**
	1970	**1996**	**1970**	**1996**
By Region and Selected Countries (Low and Middle Income)				
East Asia & Pacific	58	67	60	70
China	61	68	63	71
Indonesia	47	63	49	67
Malaysia	60	70	63	74
Philippines	56	64	59	68
Europe & Central Asia	64	64	71	73
Hungary	67	65	72	75
Poland	67	68	74	77
Turkey	55	66	59	71
Latin America & Caribbean	58	66	63	73
Bolivia	44	59	48	63
Brazil	57	63	61	71
Mexico	60	69	64	75
Middle East & N. Africa	52	66	54	68
Algeria	52	68	54	72
Egypt	50	64	52	67
Morocco	50	64	53	68
South Asia	50	61	48	63
Bangladesh	45	57	43	59
India	50	62	49	63
Pakistan	50	62	49	65

Sub-Saharan Africa	42	51	46	54
Kenya	48	57	52	60
Mozambique	40	44	44	46
Nigeria	41	51	45	55
By Income Group				
Low Income	53	58	54	60
Lower Middle Income	58	66	63	71
Upper Middle Income	59	66	64	73
High Income	68	74	75	81
Source: World Bank (1995, 1998a)				

Table 2. Comparative statistics on child mortality by gender, 1997.

	Under-5 mortality rate (both sexes)	**Under-5 morality rate, ratio female/male**	**Life expectancy at birth, ratio female/male**
By region and selected countries (low and middle income)			
East Asia and Pacific			
China	40	1.24	1.05
Indonesia	59	0.81	1.06
Malaysia	21	0.85	1.06
Philippines	42	0.80	1.05
Thailand	36	0.92	1.09
Europe and Central Asia			
Hungary	16	0.75	1.14
Poland	18	0.70	1.14
Turkey	58	0.79	1.08
Latin America and Caribbean			
Bolivia	84	0.90	1.06
Brazil	45	0.76	1.12
Mexico	36	0.85	1.09
Middle East and North Africa			
Algeria	52	0.83	1.04
Egypt	66	0.90	1.04
Morocco	64	0.86	1.06
South Asia			
Bangladesh	104	1.07	1.00
India	90	1.17	1.01

Pakistan	99	0.97	1.03
Sri Lanka	18	0.93	1.06
Sub-Saharan Africa			
Kenya	101	0.95	1.07
Mozambique	163	0.89	1.06
Nigeria	141	0.91	1.06
Source: World Health Organization (1998b).			

Table 3. Indicators of women's reproductive health.

	Maternal mortality rate(per 100 000 live births)[a]	**Contraceptive prevalence (%)[b]**	**Percentage of births attended by trained health personnel [b]**
	1990–1996	**1990–1997**	**1990–1996**
By region and selected countries (low and middle income)			
East Asia and Pacific	—	74	75
China	115	83	84
Indonesia	390	55	36
Malaysia	34	48*	94
Philippines	208	40	53
Europe and Central Asia	—	—	—
Hungary	14	73*	99*
Poland	10	75*	99*
Turkey	180	63	76
Latin America and Caribbean	—	64	78
Bolivia	370	45	47
Brazil	160	77	88
Mexico	110	53*	77
Middle East and North Africa	—	46	62
Algeria	140	57	77
Egypt	170	48	46
Morocco	372	50	40
South Asia	—	38	29
Bangladesh	850	49	14

India	437	41	34
Pakistan	340	12	19
Sub-Saharan Africa	—	15	37
Kenya	650	33	45
Mozambique	1500	4*	25*
Nigeria	1000	6	31
By income group			
Least developing countries	—	19	29
Developing countries	—	54	53
Industrialized countries	—	72	99
Notes: — Information unavailable.* Data refer to years or periods other than those specified in the column heading, differ from the standard definition, or refer to only part of a country.			
Sources: [a] World Bank (1998b), [b] United Nations Population Division.			

Table 4. Death by specified causes by gender, selected countries.

Country and year	Gender	Age standardized death rate per 100 000 population[a]							
		Infectious diseases	Malignant neoplasms	Circulatory system disease	Ischemicheart disease	Cerebro-vascular disease	Respiratory system disease	External causes	All causes
Mauritius, 1995	Male	20.0	78.4	449.6	187.8	137.9	107.1	77.8	1027.9
	Female	14.0	62.7	265.9	98.5	87.3	52.8	23.2	592.3
Argentina, 1993	Male	30.0	150.5	345.9	76.7	73.1	61.9	77.2	844.3
	Female	19.4	95.3	204.9	31.5	48.1	31.3	25.4	493.2
Brazil, 1992[b]	Male	37.5	118.9	303.1	98.8	98.8	97.9	125.9	946.5
	Female	22.8	79.9	202.3	56.6	71.3	56.3	27.1	566.8
Cuba, 1995	Male	14.0	127.0	247.2	138.3	49.6	61.3	100.4	640.3
	Female	9.7	91.0	197.1	99.1	50.3	47.1	45.3	476.9
Mexico, 1995	Male	32.4	85.4	191.7	84.0	43.1	82.4	114.6	795.9

	Female	23.5	78.9	159.7	56.2	39.8	56.1	25.9	554.3
China, rural areas, 1992	Male	33.8	146.6	233.3	29.2	136.1	232.0	89.0	864.2
	Female	20.2	80.5	168.1	20.5	93.2	172.6	65.1	611.7
China, urban areas, 1992	Male	17.2	163.6	270.8	66.2	153.9	133.0	48.7	752.4
	Female	8.8	89.8	200.8	47.1	108.5	95.0	32.5	532.2
Poland, 1995	Male	8.9	206.3	428.2	114.7	58.3	38.0	103.2	963.8
	Female	3.4	108.0	245.9	39.2	42.0	13.7	26.3	508.5
Russian Federation, 1995	Male	1560.6	32.6	214.4	681.9	361.6	212.8	101.8	341.2
	Female	711.1	8.4	99.5	381.1	163.5	153.6	28.5	80.9
United States, 1994	Male	9.5	160.6	241.2	132.0	30.7	54.3	76.5	669.4
	Female	6.6	109.9	144.7	68.0	26.4	33.5	25.5	402.5

Notes: [a] The standard population used is the world population.

[b] Data for Brazil are based on the population in south, southeast and central-west Brazil.

Sources: World Health Organization (1995, 1996).

Table 5. Comparative statistics on adult illiteracy by gender, 1980, 1985, and 1995 (%).

	Adult illiteracy rate[a]				
	Male				**Female**
	1980	**1995**	**1980**	**1985**	**1995**
By region and selected countries (low and middle income)					
East Asia and Pacific	—	9	—	41	24
China	21	10	49	45	27
Indonesia	23	10	42	35	22
Philippines	16	5	17	15	6
Thailand	8	4	16	12	8
Europe and Central Asia	—	—	—	—	—
Turkey	19	8	50	38	28
Latin America and Caribbean	—	12	—	19	15
Argentina	6	4	6	5	4
Brazil	24	17	27	24	17
Colombia	14	9	16	13	9
Mexico	14	8	20	12	13
Middle East and North Africa	—	28	—	51b	50
Egypt, Arab Republic	46	36	78	70	61
Morocco	56	43	83	78	69
South Asia	—	38	—	72	64
Bangladesh	60	51	82	78	74
India	45	35	74	71	62
Pakistan	64	50	85	81	76

Sri Lanka	9	7	19	17	13
Sub-Saharan Africa	—	34	—	65	53
Kenya	40	14	65	51	30
Mozambique	56	42	88	78	77
Nigeria	54	33	77	69	53
By income group					
Low income	—	35	—	58	59
Lower middle income	—	12	—	32	27
Upper middle income	—	12	—	28	17
High income	—	<5	—	—	<5

Notes: [a] The proportion of people 15 and above who cannot read and write a short statement on everyday life.

[b] The source for this year defines the regional aggregate as Europe, Middle East, and North Africa.

— Information unavailable. Male illiteracy rates for 1985 are unavailable.

Sources: United Nations (1994); World Bank (1991, 1998a).

Table 6. Comparative statistics on school enrollment by gender, 1980 and 1993 (%).

	Primary school enrollment rate[a]						**Secondary school enrollment rate[a]**	
	Male		**Female**				**Male**	**Female**
	1980	**1993**	**1980**	**1993**	**1980**	**1993**	**1980**	**1993**
By region and selected countries (low and middle income)								
East Asia and Pacific	118	120	102	116	51	60	36	51
China	121	120	103	116	54	60	37	51
Indonesia	115	116	100	112	35	48	23	39
Malaysia	93	93	92	93	50	56	46	61
Thailand	100	98	97	97	30	38	28	37
Europe and Central Asia	—	97	—	97	—	81	—	90
Poland	100	98	99	97	75	82	80	87
Russian Federation	102	107	102	107	95	84	97	91
Turkey	102	107	90	98	44	74	24	48
Latin America and Caribbean.	108	—	105	—	40	—	41	—
Chile	110	99	108	98	49	65	56	67
Colombia	123	118	126	120	40	57	41	68
Mexico	122	114	121	110	51	57	46	58
Middle East and North Africa	98	103	74	91	52	65	32	51
Egypt	84	105	61	89	61	81	39	69
Morocco	102	85	63	60	32	40	20	29
South Asia	91	110	61	87	36	—	18	35

Bangladesh	76	128	46	105		26	26	9	12
India	98	113	67	91		39	—	20	—
Pakistan	51	80	27	49		20	—	8	—
Sri Lanka	105	106	100	105		52	71	57	78
Sub-Saharan Africa	90	78	68	65		20	27	10	22
Ethiopia	44	27	23	19		11	12	6	11
Kenya	120	92	110	91		23	28	16	23
Nigeria	135	105	104	82		27	32	14	27
By income group									
Low income	104	112	81	98		42	—	26	41
Lower middle income	106	106	97	101		56	65	50	61
Upper middle income	106	—	103	—		43	—	43	—
High income	103	103	103	103		—	97	—	98

Notes: [a] Ratio of children of all ages enrolled in primary (secondary) school to the country's population of primary-school-age (secondary-school-age) children.

— Information unavailable.

Sources: World Bank (1997).

Table 7. Comparative statistics on the labor market by gender, 1980 and 1994–1997 (%).

	Female share of labor force				**Economic activity rate[a]**	
					Male	**Female**
	1980	**1997**	**1980**	**1994–1996**	**1980**	**1994–1996**
By region and selected countries (low and middle income)						
East Asia and Pacific	42	44	—	—	—	—
China	43	45	88	85	70	73
Indonesia	35	40	85	85	37	51
Malaysia	34	37	83	77	43	42
Philippines	35	37	82	83	39	49
Thailand	47	46	85	84	74	65
Europe and Central Asia	47	46	—	—	—	—
Poland	45	46	77	66	59	51
Russian Federation	49	49	79	68	57	50
Turkey	35	36	84	76	46	31
Latin America and Caribbean	28	34	—	—	—	—
Argentina	28	32	76	76	27	41
Brazil	28	35	82	84	30	54
Colombia	26	38	77	79	22	50
Mexico	27	32	83	84	30	37
Middle East and North Africa	24	26	—	—	—	—
Egypt, Arab Republic	26	29	80	73	7	22
Morocco	34	35	82	75	16	25

South Asia	34	33	—	—	—	—
India	34	32	85	80	32	34
Pakistan	23	27	87	82	11	13
Sri Lanka	27	36	81	76	31	36
Sub-Saharan Africa	42	42	—	—	—	—
Ethiopia	42	41	90	85	57	58
Kenya	46	46	91	89	63	55
Nigeria	36	36	89	78	51	37
By income group						
Low income	37	36	—	—	—	—
Lower middle income	41	43	—	—	—	—
Upper middle income	32	35	—	—	—	—
High income	38	43	—	—	—	—
Notes: [a]The proportion of the population aged 15 and above which is economically active. — Information unavailable.Most recent year available for the 1994–1996 columns.						
Sources: International Labour Office (various years); United Nations (1995); World Bank (1998a).						

Table 8. Comparative statistics on relative wages in manufacturing, 1980–1996 (%).

	Female–Male wage ratio		
	1980	**1990**	**1994–1996**
Selected low- and middle-income countries			
East Asia and Pacific			
Malaysia	—	50	58
Myanmar	86	97	95
Thailand	—	64	71
Europe and Central Asia			
Hungary	—	72	70
Turkey	—	81	99
Latin America and Caribbean			
Brazil	—	54	54
Costa Rica	70	74	72
El Salvador	81	94	95
Paraguay	79	66	77
Middle East, North Africa, and South Asia			
Egypt	62	68	71
Jordan	—	57	62
Sri Lanka	75	88	92
Sub-Saharan Africa			
Kenya	62	73	73
Swaziland	30	73	64
Selected high-income countries			
East Asia and Pacific			
Australia	79	82	85
Hong Kong	78	69	63
Japan	44	41	56[a]

Korea, Rep. of	45	50	54
Singapore	—	55	59
Europe and United States			
France	77	79	79
Germany (Federal Rep. of)	73	73	74
Greece	68	78	80
Netherlands	80	77	79
Portugal	—	69	69
Sweden	90	89	90
United Kingdom	69	68	71
United States [b]	64	72	76

Notes: [a]Structural break in original series. [b]Non-agricultural sector.

— Information unavailable.Most recent year available for the 1994–1996 column.

Sources: Blau, Ferber, and Winkler (1998); International Labour Office (various years); United Nations (1995).