Gender Equality Indicators

Submitted by the U.S. Census Bureau[1]

INVITED PAPER

INTRODUCTION

Why are gender indicators important?
The contributions of both women and men are essential for social and economic development. While this may seem obvious, often the contributions of women are not recognized. In part, this lack of recognition is because statistics may not capture all of the work done by women. To promote equality between the sexes and improve the status of both women and men in a society, there need to be statistics that reflect the differing realities of women's and men's lives. These statistics need to be collected, analyzed, *disseminated, and used.* The use of these data can help policymakers decide on and carry out activities that are effective, equitable, and beneficial for women and men, as well as their economies, and gain the most benefit from their work.

Sex-disaggregated data are essential inputs for gender analysis and for understanding the different socioeconomic contributions and circumstances of women and men. Moreover, sex-disaggregated data can be used to develop indicators that can provide information about women and men on a wide range of issues. This paper will examine some commonly used gender indicators utilized to both evaluate the status of women and men and to guide and evaluate policies. In particular, it will focus on three areas that are critical to women's and men's well-being; health, education, and economic status.

Past work on sex-disaggregated data
Several national and international organizations recognize the need for better collection and use of sex-disaggregated data in the analysis of gender-related issues. The United Nations has been promoting the collection and use of sex-disaggregated data for many years. In the Platform for Action from the Beijing Conference on Women, the United Nations highlighted the importance of sex-disaggregated data for assisting policymakers. Under Section H., *Institutional mechanisms for the advancement of women*, one of the strategic objectives was "the generation and dissemination of gender-disaggregated data and information for planning and evaluation" (H.3). To reach this strategic objective, the Platform recommended that national, regional, and international statistical agencies ensure that:

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> "...statistics related to individuals are collected, compiled, analyzed, and presented by sex and age and reflect problems, issues and questions related to women and men in society" (United Nations, 1995, p. 90).

Since Beijing, the United Nations has produced several reports that include recommended sex-disaggregated indicators. The United Nations' report *The World's Women 2000: Trends and Statistics* (2000) and the United Nations Economic Commission for Europe's report *Women and Men in Europe and North America: 2000* (2000), both present numerous gender indicators that can be used to evaluate the status of women and men cross-nationally.

In addition to the United Nations' work, other national and regional organizations have been active in this area. Statistics Sweden's *Engendering Statistics: A Tool for Change* (1996) gives examples of indicators that can be used to evaluate the situation of women and men. The Asia-Pacific Economic Cooperation (APEC) is another international organization that has recognized the need for better collection and use of sex-disaggregated data, with a particular focus on economic statistics. APEC developed a *Framework for the Integration of Women in APEC* (1999) that lists gender analysis and the collection and use of sex-disaggregated data as essential elements needed to reinforce and promote the important role of women in economic development.

To help facilitate the analysis, dissemination, and use of sex-disaggregated data, the U.S. Census Bureau's International Programs Center developed a workshop "Analysis and Evaluation of Gender Statistics." This workshop provides training on how to evaluate the quality and relevance of sex-disaggregated data and how to produce a brief report using these data. The skills learned in the workshop enable the participants to better use sex-disaggregated data to aid in the policy development process, to assess the economic and social impact of programs, and to identify problems and future priorities. Part of this training includes discussing key gender indicators that can be used to evaluate the status of women and men.

The above are just a few examples of recent work on sex-disaggregated data. There are many other national and international organizations that are working on this issue (e.g., the Organisation for Economic Co-operation and Development, and the World Bank, etc.).

Given that many organizations now recognize the important need for sex-disaggregated data, what are the best indicators to use to evaluate the status of women and men both within a country and across countries? As mentioned above, there are indicators that are commonly used when evaluating the status of women and men. These indicators typically rely on data sources that are readily available or routinely collected. Are these traditional gender indicators adequate to evaluate and guide policies and programs, or does the field of gender statistics need to create new indicators? In the next three sections, traditional gender indicators are used to assess the situation of women and men in selected countries; as this is done, different ways of presenting data will be considered.

GENDER AND HEALTH

Health plays a critical role in women's and men's ability to fully participate in and contribute to their economy and to their family. Collecting and evaluating sex-disaggregated measures on health can be key to assessing the status of women and men in a country. Mortality measures such as life expectancy at birth and infant mortality rates are often used not only as health indicators but also as measures of overall living conditions. These measures are used because they are usually available in many countries where other measures of living standards are not. Although the quality of mortality statistics varies across countries, demographers can evaluate data and make adjustments, if necessary.

Sex differentials in life expectancy
Figure 1 presents life expectancy at birth by sex for selected countries. It is evident that developed countries tend to have higher life expectancies than do developing countries.[2] Life expectancies range from 84 years for women in Japan to just under 39 years for men in Botswana. The low life expectancy for both women and men in Botswana is caused by excess mortality due to HIV/AIDS. In most countries, women live longer than men and this differential reflects the fact that in most countries, women have lower mortality rates than men in every age group and for most causes of death. For all the countries in Figure 1 except Bhutan and Bangladesh women have higher life expectancies than men.

Figure 1 presents life expectancy data in a way that makes the differentials in levels among the countries easy to see. The sex differentials in life expectancy can be seen as well, but these differentials can be more clearly seen in Figure 2, which shows the female advantage in life expectancy. The female advantage in life expectancy is the number of years longer (or shorter) than men that women can expect to live. This graph focuses on the differences between men and women and not on the overall level of life expectancy. Presenting the data in this format makes it easier to see the differences in life expectancies between women and men.

As stated above, the female advantage in life expectancy is nearly universal. In Figure 2, Russia has by far the largest sex differential in life expectancy, over 10 years. This huge differential is related to very high adult male mortality rates in Russia. A differential this large suggests poor male health is a gender issue in Russia and health programs may want to focus on men's health issues. The sex differential in life expectancy is typically smaller in developing countries than developed countries and is even reversed in some countries (e.g., Bhutan and Bangladesh). The fact that women in Bhutan and Bangladesh have a lower life expectancy than men may indicate that women in these countries have poor access to health care and/or low social status.

Trends in life expectancy
Although data are often presented for one point in time, when deciding where to make interventions or when evaluating the impact of programs, it is essential to have data over time. Figure 3 presents trends in life expectancy for four countries. If life expectancy at birth is being used as a measure of the overall health of a population, clearly both Russia and Zimbabwe are experiencing problems as they both exhibit atypical trends in life expectancy. In Russia, for both men and women, there was a sharp decrease in life expectancy at birth starting in the late 1980s. For men, life expectancy fell from
64.9 years in 1987 to 57.6 years in 1994, a drop of 7.3 years in 7 years. Women in Russia also experienced a decrease in life expectancy but it was much smaller. The decrease in male life expectancy is attributed to a combination of factors including increased homicide and accident rates, excessive alcohol consumption, poor diet, and environmental/workplace degradation (Virganskaya and Dmitriev, 1992; Murray and Bobadilla, 1997).

In Zimbabwe the decline in life expectancy is much more dramatic, dropping 24 years for men and over 30 years for women since 1985. This large decrease in life expectancy is mainly due to the devastating impact that the HIV/AIDS epidemic has had on mortality in Zimbabwe. In Sub-Saharan Africa, women

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[2] The *developed* and *developing* country categories used in this paper correspond directly to the *more developed* and *less developed* classification employed by the United Nations. Developed countries comprise all countries in Europe (including some nations that formerly were part of the Soviet Union) and North America, plus Japan, Australia, and New Zealand. The remaining countries of the world are classified as developing countries. While these categories commonly are used for comparative purposes, it is increasingly evident that they no longer accurately reflect developmental differences between countries.

are more likely to be infected with HIV/AIDS than men, and this translates into a larger decrease in life expectancy for women than men.

Effects of policy change
Although health indicators can be used to evaluate the situation of women and men, they can also be used to assess the effects of policy changes. Figure 4 presents maternal mortality ratios for Romania for 1985 through 1993. The sharp decline in maternal mortality ratios between 1989 and 1990 coincides with the change in the abortion law in Romania; in December 1989 abortion was legalized. The subsequent drop in maternal mortality ratios from 1990 onward is most likely due to fewer women having unsafe illegal abortions.

GENDER AND EDUCATIONAL ATTAINMENT

Educational attainment is linked to many aspects of well-being. Research has shown that higher levels of education usually translate into better health status, higher incomes, and consequently higher standards of living (Guralnik, et al., 1993; Preston and Taubman, 1994; Smith and Kington, 1997; Liu, Hermalin and Chuang, 1998). People with higher educational levels tend to have lower mortality rates and better overall health than their less-educated counterparts (Elo and Preston, 1996; Zimmer, et al., 1998). Part of the reason for this finding is that more-educated people tend to have higher incomes throughout their lifetime, which means they can afford better health care than people with lower levels of education. Higher working-life income also translates into higher levels of retirement savings and income. Hence, people with higher educational levels may be less dependent on their family or the government for financial assistance in later years. Given the above information, it makes sense to examine the educational attainment of women and men in a country.

Literacy rates
Literacy is the most basic measure of education. The traditional definition of literacy is the percentage of persons aged 15 and over who can, with understanding, both read and write a short simple statement of their everyday life (UNESCO, 2000).[3] This indicator is most meaningful in countries that have not yet achieved high levels of education. For countries that have nearly universal education, as most of the developed countries do, this measure is not as useful.

Illiteracy rates for developing countries are shown in the top two bars of Figure 5. Women in developing countries have higher rates of illiteracy (33 percent) than do men (18 percent). While in most countries women are more likely to be illiterate than are men, the difference is sometimes quite striking. In relative terms, women in Peru have an illiteracy rate more than two times that of their male counterparts (16.7 percent versus
6.0 percent, respectively). Bangladesh displays high rates of illiteracy for both men and women, with nearly three-quarters of females being illiterate, compared to half of the males in Bangladesh. Levels of literacy and sex differentials in literacy need to be explicitly recognized and considered when developing programs designed to reach or assist women and men.

Educational attainment
When examining the sex differentials in educational attainment[4] in developed countries and some developing countries, an indicator of completed years of schooling is a more appropriate measure of

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[3] It is important to note that every country has its own definition of literacy that may or may not correspond to the United Nations definition.
[4] Data on educational attainment in this paper refer to completion of a particular educational level. Data have been derived from primary national sources as well as from figures reported to international organizations. Educational systems vary by country, and countries have different concepts, definitions, and methods of data collection for

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education than literacy rates. Figure 6 presents data on the percent of women and men with a completed secondary education or more for two age groups, those aged 25 to 44 and those aged 65 and older. Educational attainment varies among the countries. Developed countries tend to have higher proportions with this level of education than do developing countries. For both women and men, over 80 percent of the younger cohorts in Russia and the United States have completed secondary education or higher compared with around 20 percent for the younger cohorts in China and Brazil. However, for all of the countries there has been an improvement in educational attainment over time; younger cohorts are much more likely to have completed secondary education or higher than older cohorts. For the older cohorts, men are more likely than women to have completed secondary education. At the younger ages the sex differential in educational attainment is much smaller or even reversed.

Types of degrees
While the above data give information about general levels of education in those countries, it does not tell us about specific areas of study. In many countries, there is sex segregation in fields of study, particularly at the university or postgraduate level.
Figure 7 shows the percent of professional degrees (i.e., degrees in law, medicine, or dentistry) that were earned by women in the United States from 1970 through 1998. Clearly, there has been an improvement in the proportion of women earning professional degrees over time. In 1970, women earned only 5 percent of law degrees, just over
8 percent of medical degrees, and less than 1 percent of degrees in dentistry. While women have not achieved parity in any of these fields, they do earn nearly 40 percent of dentistry degrees and over 40 percent of degrees in law and medicine. Having access to more detailed education data enables us to see the improvement in women's education in the United States in specific fields.

GENDER AND ECONOMIC STATUS

A critical area of concern for both women and men is their economic status. Several indicators can be used to evaluate a person's economic status. However, these indicators may not be comparable across countries or they may not capture the information needed for policymakers. In many countries, women are more economically vulnerable than men. Women are less likely to be involved in the formal labor market than are men, and when they are involved they typically earn less money than men.

Men more likely to be counted as economically active
Figure 8 presents data on the percent economically active for three countries disaggregated by sex and select age groups. In all three countries, men are more likely to be economically active than women. Over 90 percent of men aged 25 to 34 were economically active compared with smaller proportions of women. Economic activity rates of older men and women also differ among the countries. In Peru and the United States, participation rates for both sexes decrease with age. Just over 40 percent of men aged 65 and over in Peru and less than 20 percent of men aged 65 and older in the United States were economically active compared with over 90 percent for those aged 25 to 34. Although economic activity rates decrease with age, in both Peru and the United States older men were nearly twice as likely to be economically active as were older women. In contrast, the majority of older men and women were economically active in Zimbabwe. This difference in participation rates of the older population likely is related to societal wealth and the gross domestic product.

A problem with data on economic activity such as those shown in Figure 8 is that much of the work that women engage in, particularly in developing countries, is not counted or captured in typical labor force surveys, or is not considered "economic." Activities such as housework, childcare, and subsistence

educational attainment. We have attempted to make the data on educational attainment presented in this paper as comparable as possible across countries.

agriculture often are not well documented by conventional data collection methods. Thus, women may be thought to be inactive when they may actually be producing food for household consumption or caring for their children or other family members. These activities may not be considered "economic" but are essential to the survival of the family. When there are data available on the informal sector, they help illustrate the vital contributions women make.   However, these data are often not available. The lack of data can make it difficult to identify areas where women are not well represented or are disproportionately represented. Data gaps of this type and significance allow distortions in policy and business environments and make policy interventions difficult. If policymakers have information only on women's activities in the formal sector, they may make poor decisions about how to help women. For instance, they may erroneously conclude that the women who are not active in the formal sector are available for work when they are not.   Or they may overlook women that are involved in a sector but not represented in official statistics. For instance, in some developing countries women assist in agricultural production. Much of this work, however, is "unpaid" work in family enterprises that may not be captured in official statistics. These invisible women are left out of agricultural development projects because the implementers of the projects do not realize that women are involved in agriculture.

Barriers to economic activity
Better integration of women and men into the national economy will strengthen their economic productivity and earnings and, therefore, improve their economic status.   However, there are differing constraints to integrating women and men into the economy. As mentioned above, in some countries, particularly developing countries, women may be less educated than men and, thus, may lack the skills needed to participate in the economy. Also, women traditionally have more family responsibilities than men. In most countries, women are primarily responsible for caring for children or older relatives, preparing meals, and household upkeep. All of these responsibilities are crucial to the functioning of the family; however, they also place considerable constraints on women in terms of time available to participate in the paid economy. The differing constraints of women and men need to be considered when planning a development project.

Figure 9 presents the percent economically active for men and women aged 20 to 29 by the presence of a preschool child. For the three countries shown, if there is a preschool child in the home, men are *more* likely to be economically active while women are *less* likely to be so. Using an indicator such as this helps to illustrate the different impact that small children have on women's and men's labor force participation. Although this is a relatively simple indicator, it can help policymakers understand why women may have lower economic activity rates than men and it also provides policymakers with information that can help guide them in developing programs to increase women's economic activity (e.g., providing high-quality childcare) if that is a goal.

Sex segregation of the economy
In all countries of the world, the labor market is segregated by sex with men and women dominating different professions. This segregation has consequences for development and for the economic status of women and men. For example, the sex distribution of occupations in Malaysia shows that men dominate certain occupations and women dominate others (Figure 10). Nearly 80 percent of administrative and managerial workers are men in Malaysia. In contrast, women account for over half of clerical workers. This sex segregation is not unusual. In many countries, men dominate higher-paying occupations while women account for larger shares of lower-paying occupations.

Although Figure 10 gives the proportional distribution of women and men by occupation, it is also useful to know the absolute numbers of women and men in each category. Figure 11 presents the number of women and men by occupation. Presenting absolute numbers can help guide policymakers target the appropriate group. For instance, although women account for only 24 percent of all workers in production (as can be seen in Figure 10), this occupation has the largest number of women in it (as can be

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seen in Figure 11). If a policy goal is to improve the economic situation of women in Malaysia, then projects need to be implemented that will reach women and absolute numbers can help guide policymakers in this endeavor.

Women earn less than men
Another nearly universal aspect of the economic situation of women and men is that women, on average, earn less than men. Figure 12 presents women's earnings as a percent of men's. In countries shown, women tend to make between 70 to 80 percent of what men make. There are a variety of reasons for this discrepancy, including lower levels of educational attainment for women, less labor force experience for women, and sex segregation of the labor market. Regardless of the reason for the differential in wages, this differential has consequences for the well-being of the family. Many studies show that increases in women's incomes are more strongly associated with improved family well-being than are increases in men's incomes. Thus, the impact of increasing a woman's income will have a wider effect than increasing a man's income, as a woman is more likely to spend her increase on family welfare.

Disaggregating sex-disaggregated data
Although it is important to highlight the differences or similarities between the sexes, it is equally important to recognize the differences among women and among men. Neither women nor men are homogenous groups. There are educated women and illiterate women, poor women and rich women, young women and old women.   All of these differences among women and among men need to be considered when planning and implementing development projects. The best way to see the differences is to disaggregate the data not just by sex, but also by age, ethnic group, place of residence, and any other relevant characteristics.   There are often important differences among groups that are masked if data are not disaggregated.

Figure 13 presents sex-disaggregated data on poverty for people aged 25 and over in the United States. The data are further disaggregated by race and ethnicity. For every race and ethnic group, women are more likely to live in poverty than are men. Although there are sex differences in the poverty rate, the differences in poverty rates by race and ethnicity are larger. Black and Hispanic women and men have poverty rates that are twice those of White non-Hispanics. In 2000, around 20 percent of Black and Hispanic women lived in poverty compared with 7.6 percent of White non-Hispanic women. Detailed data such as these can assist in targeting the appropriate population when designing programs.

CONCLUSION

Gender indicators can be used to both evaluate the situation of women and men and to guide policy development and assessment. Many organizations recognize the need for the use of sex-disaggregated indicators, and many commonly used indicators are available. However, it is essential that statisticians who develop gender indicators consider how these indicators will be used. One goal of using gender indicators is to evaluate the status of women and men, and many indicators are readily available for this purpose. However, often more detailed data are useful. A second (and perhaps more important) goal of using gender indicators is to assist policymakers to design, implement, and evaluate programs to improve the lives of women and men. To achieve this goal, statisticians and policymakers need to communicate with each other about what types of indicators are available and what types of indicators are needed.

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