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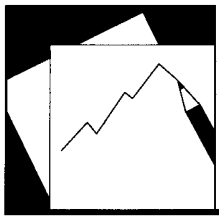

IMF Working Paper

Gender and Its Relevance to Macroeconomic Policy: A Survey

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Abstract

This survey examines the implications of gender differences in economic behavior for macroeconomic policy. It finds that reducing gender inequality and improving the status of women may contribute to higher rates of economic growth and greater macroeconomic stability. Women's relative lack of opportunities in developing countries inhibits economic growth, while, at the same time, economic growth leads to a reduction in their disadvantaged condition. Equality of opportunity in labor and financial markets is critical to enabling women to take full advantage of improved macroeconomic conditions. Macroeconomic policies should take into account the benefits of reducing gender inequalities, especially in the lowest-income countries where these differences are most pronounced, and should consider the potentially harsher short-term effects of economic austerity measures on women to avoid exacerbating gender inequalities.

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I. INTRODUCTION

The purpose of this review is to assess the relevance of gender differences to macroeconomic policy. It covers several topics where differences between men and women in economic markets are potentially relevant to macroeconomic modeling, examining both insights from theoretical models and results from empirical studies. Some of the empirical literature draws upon the experience of developing countries, but in some areas of research, the empirical research has hardly extended beyond developed countries and thus a comprehensive survey needs to rely upon studies from a range of countries. It concludes by suggesting the implications of the research surveyed here for the work of the International Monetary Fund (IMF).

While discussion of the impact of gender issues on macroeconomic issues is relatively recent, gender differences have long been incorporated into economic analysis at the microeconomic level.[1] In this respect, economists have examined a wide range of issues to find out whether men's and women's economic behavior differs and, if so, what the effects of these differences are and how these differences might influence public policies. For example, in studying the economic behavior of the household, economists have found that a household's spending patterns depend on the share of the household's resources controlled by women or men. Women in control of their household's resources spend more on basic necessities for the household and on the development of their children's potential than men do in similar circumstances. In view of this empirical finding, in countries where women's opportunities to earn a living are limited by cultural and economic factors, public policies could be geared to enhancing women's employment possibilities, yielding benefits to their homes and their children, and ultimately their societies. In this context, taking account of gender differences in economic behavior and in the effects of public policies already enriches economic modeling and influences public policy decisions ranging from the structure of the tax system, spending programs, and social insurance programs as well as regulatory policies and structural reforms.

Against this backdrop, gender differences in behavior that are the outcome of private decisions or reflect the influence of public policies may also lead to different outcomes in the macroeconomy for major components of the economy, such as aggregate consumption or investment, and hence for broader economic aggregates such as national output. To date, however, fiscal and monetary policies have rarely been formulated with gender differences in mind.

In the past two decades, a literature has emerged that considers how gender differences in economic behavior and in the effects of public policy decisions might usefully qualify the findings of macroeconomic analyses and affect the design of fiscal policies and, to a more limited extent, monetary policies. While much of this work is innovative and well done, the

[1] "Gender" refers to socially constituted roles and socially learned behaviors and expectations associated with females and males as opposed to the biological differences between them. See World Bank (2001) p. 34.

existing literature is incomplete in two areas. First, while it draws upon the microeconomic evidence on gender differences, it does not always make full use of the results in drawing out macroeconomic implications. Second, this literature is sufficiently disjointed from the broader macroeconomics literature that neither literature fully recognizes the contributions of the other.

For example, a number of studies have examined the impact of IMF- and World Bank-supported structural adjustment programs to strengthen macroeconomic fundamentals and improve prospects for growth.[2] However, these studies have generally focused on the impact on the population as a whole, without considering any differential effect of these programs on men and women over the short, medium, or long term through changes in the level of inflation or economic growth. A number of studies, which emphasize the differential effect of structural adjustment programs on men and women, have focused on the disproportionately harmful effects on women of the short-term budget austerity that frequently accompanies these programs, but have neglected the medium- or long-term effects of these programs, which may be more positive overall.[3] Greater recognition of each of these possibilities in each literature would lead to a fuller and more balanced understanding of the effects of structural adjustment programs on an economy and offer guidance to policy and program formulation.

Results from a more balanced assessment could be useful in a variety of ways. Recent changes in the design of IMF and World Bank structural adjustment programs have given greater emphasis to social concerns during the adjustment process. Some recent studies show that structural adjustment programs are contributing to a narrowing of differences in education, health care, and employment between men and women. The evidence has not been fully examined as yet, and there is clearly scope for additional research in this area.

One of the motivating forces behind research on gender differences has focused on the need to ensure that the benefits of economic growth are equitably shared among the population. One important aspect is the disadvantaged status of women, especially in the developing world, where opportunities for educational, social, and economic advancement are usually markedly inferior to those of men. Women often face barriers in gaining access to a good education and health care for economic and cultural reasons. The end result is a lower level of educational attainment, a higher rate of infant mortality for girls than boys in many countries, and markedly lower wages and fewer job opportunities for women than men. Women also face discrimination in labor and financial markets, limiting their opportunities to improve their standard of living. The disadvantaged status of women is equally evident in their relative lack of opportunities to participate in public decision-making.

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[2] In the context of economies experiencing economic instability, structural adjustment most often refers to economic programs undertaken to stabilize and restore growth to economies, supported by IMF and World Bank facilities. The programs typically aim to reduce aggregate demand so as to restore internal and external balance. Often these programs entail reducing the fiscal deficit and devaluing the currency. Structural reforms support these programs by improving conditions for sustained economic growth (Corbo and Fischer, 1995).

[3] These include studies found in Afshar and Dennis (1992) and similar such studies in the late 1980s and 1990s.

One critical and well-studied issue in economics, of particular relevance to multilateral financial institutions, concerns the sources of economic growth. An important part of this literature has studied the relationship between economic growth and women's inferior status, which cuts across both microeconomic and macroeconomic analysis. This literature and other studies that have examined the importance of women's role in the development process are reviewed in World Bank (2001).

The United Nations' Millennium Development Goals explicitly link economic progress to the equalization of opportunities for women (discussed further in Appendix I). These goals thus recognize the importance not only of raising the status of women, but also of narrowing disparities between women and men. These gender disparities are often greatest in the poorest families within a country, and across countries, in the poorest countries.

Although the evidence on the relationship of women's inferior status to growth is not fully conclusive—and even measurement of the degree of inequality or disadvantage in relation to men is a complex topic—the evidence from the World Bank review and other recent studies suggests that societies that increase women's access to education, health care, employment, and credit and that narrow differences between men and women in economic opportunities increase the pace of economic development and reduce poverty. While tentative, these results regarding the nature and strength of the relationship between growth and women's status merit additional study with alternative methodologies and even better data as they become available.

A number of key findings emerge from this review:

- First, gender-based differences in behavior that are systematic and widespread can influence macroeconomic variables, such as aggregate consumption, savings, investment, and risk-taking behavior. These differences may also influence public choice and the scope of government, which has macroeconomic feedbacks.

    - Gender influences consumption behavior in part through differences in behavior within the household. Women tend to devote a larger share of household resources to meeting the household's basic requirements and to fostering their children's potential.

    - Gender influences savings and investment and risk-taking behavior. Women tend to have a higher propensity to save and to invest in productive ways. They also show greater caution in their savings and investment behavior, which may often be good for poor households, though it can have mixed effects in the aggregate.

    - Women's political empowerment may lead to a greater demand for public forms of social insurance and may also lead to a larger overall role for government.

- Second, there is a simultaneous relationship between women's economic and social status and economic growth. The evidence shows that women's lack of education, health care, and economic and social opportunities—both absolutely and relative to men—inhibits economic growth while, at the same time, economic growth leads to a reduction in women's subordinated condition. In countries with the lowest average income and where agriculture remains the main source of economic activity, women's lack of education, health care, and employment opportunities prevents them from being able to benefit fully from improved macroeconomic environments, hindering economic growth.

    - One component of this relationship is that growth of export-oriented industries in many developing countries, supported by trade and financial liberalization, has stimulated economic growth and increased employment of women. This has generally created a beneficial relationship between export orientation, improved opportunities for women, and stronger growth.

- Finally, despite the findings in a number of studies that IMF and World Bank structural adjustment programs have ignored the greater hardships that women face during periods of economic austerity, these findings are mostly based on an examination of the effects of structural adjustment programs in the 1980s. Moreover, the methodologies underpinning these findings tend to rely on case studies rather than formal statistical analysis. Recent changes in the design of adjustment programs have given greater emphasis to social concerns and some recent studies show that structural adjustment programs are contributing to a narrowing of differences in key social and economic indicators between men and women. There is thus scope for reexamination of this issue with particular emphasis on the least developed countries and among the poorest families, where gender disparities are greatest.

There are several main implications of this research to guide the work of the IMF. First, gender differences in economic behavior may influence optimal fiscal policies. In determining the pace and composition of fiscal adjustment, it is important to consider the potentially harsher short-term effects of economic austerity and structural adjustment measures on women to avoid exacerbating gender inequalities. Over the medium term and long term, fiscal and structural policy measures, including those that are part of IMF-supported programs, should be designed to further reduce gender inequalities and ensure that women are able to take full advantage of the beneficial effects of improvements in macroeconomic conditions. The IMF may also be able to contribute to reducing gender inequalities by advocating greater gender neutrality in fiscal—especially tax—legislation and financial sector legislation.

II. Gender Differences in Behavior and Macroeconomic Outcomes

This section examines how gender-based differences in behavior may influence key macroeconomic outcomes, thus suggesting the importance of incorporating these behavioral differences into macroeconomic modeling. It also examines how gender-based differences in behavior interact with public policies, especially fiscal policies. It finds that gender

differences influence aggregate consumption, savings, investment, and risk-taking behavior, and the role of government.

The literature that focuses on how gender-based differences in behavior influence macroeconomic outcomes is relatively small compared to a much larger literature in economic development, for which gender-based differences in economic behavior and policy outcomes have long been integrated into models of development.[4] In analytical models in the fields of development and labor economics, to give a few examples, gender has been integrated into models that incorporate men and women as separate factor inputs. Similarly, in demand analysis, analytical models capture differences in the composition of households on demand behavior. More recently, an evolving body of work has extended standard neoclassical models of the household under utility-maximization from a single decision maker to multiple decision makers.

Given the more highly aggregative nature of macroeconomic analysis, it is less obvious how gender differences in economic behavior and policy outcomes fit into macroeconomic modeling and policy making. There are, however, several areas where incorporating gender can be shown to influence macroeconomic outcomes, providing an important rationale for taking differences in gender-based behavior into account in policy design. Cagatay, Elson, and Grown (1995) suggest distinguishing explicitly the effect of gender on individual decisions, including consumption and saving and investment. They also suggest distinguishing explicitly the effect of gender on labor and credit markets, and the implications for key parameters such as capital output ratios, savings rates, and import ratios.[5] We now turn to an examination of these issues.

The analytical underpinnings in microeconomic theory

The conceptual rationale for incorporating gender differences into macroeconomic models relies on modern microeconomic theory. In the early neoclassical paradigm, household production was ignored and households were represented as a single decision-making entity, ignoring any sources of heterogeneity within the household. Acknowledging the limitations of this analytical simplification, a considerable body of work has emerged extending the neoclassical paradigm to account for the way in which households—and individual members thereof—contribute to the formation of human capital (Schultz, 1961, 1974; and Becker, 1964, 1965). The essence of this approach is that individuals invest in human wealth (their children and themselves) in the same way that they would invest in nonhuman wealth. Individual decisions can be seen as emerging from a household production function, which contains time and other inputs, to allocate resources to the production of household outputs.

[4] An extensive theoretical and empirical literature examines the linkages between gender differences and development, including Boserup's (1970) seminal work on women and development. Beneria (1995) provides a brief history on the evolution of perspectives on integrating gender issues into economics. See also the collection of papers in Beneria and Savitri Bisnath (2001) and Gutierrez (2003).

[5] See also Grown, Elson, and Cagatay (2000).

Within this model of the household, strong conditions are needed to justify treating a household composed of multiple persons as behaving as a single decision-making entity through the household production function. A considerable body of work has modeled individual preferences within a household and examined the implications of diverse preferences for household behavior and economic policy (Strauss and Thomas, 1995; Behrman, 1997; Hoddinott, Alderman, and Haddad, 1997; Vermeulen, 2002; and Quisumbing, 2003). This body of work shows that household behavior does reflect the outcome of the interactions between household members with diverse preferences and resource endowments. For policy analysis, the main results of this line of analysis are that (i) the members of a household may respond differently to the economic environment; and (ii) economic policies may have different effects on members of the household. Thus, in assessing the effect of the economic environment and policies on a household, it is important to explicitly consider these differences.

While recognizing the additional complexity of the household may add to the modeling burden—and may lead to more uncertainty with regard to the outcome of a particular policy—it also may create greater flexibility with regard to the structure of policies needed to achieve any particular outcome. As an example, a program of subsidies may have different effects on men and women in a household. In a country where women's labor market participation is highly circumscribed, a subsidy to employers to hire the unemployed might have little benefit to households headed by single women if they are unable to find suitable jobs. Or, a subsidy (or tax preference) primarily oriented toward women in the household might have a greater benefit for the household than one oriented toward men.

At a disaggregate level, there is evidence to suggest that household composition may influence the full range of economic variables of choice to the household, including consumption, savings, investment, risk-taking behavior, and labor supply. Household composition may also influence the household's response to public policies and other economic incentives. To the extent that gender-based differences in behavior and household composition affects behavior in a systematic and pervasive manner, these differences may well emerge at the macroeconomic level. Although much of the evidence we survey below is microeconomic in nature, Deaton (1992) emphasizes the importance of relying on aggregated data derived from microeconomic contexts as a basis for forming macroeconomic conclusions. We can thus draw some conclusions of relevance for macroeconomic policy from studies that are derived primarily from microeconomic modeling and data.

Consumption behavior

Private consumption represents the largest component of aggregate demand and understanding consumption behavior is critical to formulating meaningful macroeconomic models (Agenor and Montiel, 1996). Moreover, the main theory of consumption behavior, derived from the permanent income, life-cycle hypothesis, explicitly links the effects of fiscal policy to consumption behavior.[6]

[6] The permanent income life-cycle hypothesis posits that individuals make consumption decisions within a utility maximization context based on a notion of their permanent income, and attempt to smooth consumption

(continued…)

Domestic investment is a critical contributor to growth and stability. Domestic investment is financed by foreign and domestic savings. From the perspective of external balance, the current account balance (equal to the difference between national investment and domestic savings) explicitly links savings and investment behavior—and by extension, consumption behavior—to the process of external adjustment.

Consumption behavior

A considerable body of evidence that relies on both microeconomic and more aggregate level spending data examines the effects of gender on consumption behavior. This literature has two important strands.

- One strand presents evidence that women may have a stronger preference than men for spending on goods and services that contribute to the human capital of their children, implying that within a household, women might gear spending more toward education, food, or health care for children.[7]

- Another strand presents evidence that women and men may have different preferences for spending on male and female children within the household. Here the differences seem to vary widely across cultures. In some cases, women may have a preference for spending relatively more on male children, while in others this tendency may be less pronounced or even reversed. As a result, price and income elasticities of demand may vary depending on the decision-making process in the household as well as the gender of the children involved.

Blumberg (1988), World Bank (2001), and Quisumbing (2003) summarize research that has examined gender differences in consumption behavior by men and women within a household. Blumberg surveys a number of studies, including her own, that have examined the implications for household behavior of differences in the share of men and women's control of resources in the home. Her study reviews evidence to show that women spend less on themselves and more on child nutrition and the family's "basic human needs." Importantly, she also presents evidence that development efforts that rely on women's labor but do not provide a return to that labor are more likely to suffer because women will try to allocate their efforts to tasks yielding income under their own control. This survey draws evidence from a broad range of developing countries, including those in Latin America, sub-Saharan Africa and North Africa, and South Asia.

Bruce (1989) also cites evidence from a number of studies that women are more likely to spend household resources in ways to benefit their children, and that when they have greater

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over their life cycle in response to short-term fluctuations in income (Friedman, 1957; Ando and Modigliani, 1963, 1964; Deaton, 1992).

[7] Appendix II presents a brief overview of the economic issues surrounding the demand for and supply of education and health care.

influence over household spending, they devote a larger share of spending toward purchases of food and medical necessities, education, and clothing. Evidence from a study on families in Kerala, India, found that the nutritional status of children was directly related to the size of the mother's income, while there was no direct proportionality to increases in the father's income.[8] Similarly, Thomas (1997) found in a study on families in Brazil that additional income in the household benefits children regardless of whether it is controlled by women or men, but that additional income to women is more beneficial to child survival and nutrition than additional income to men in the household, and that this difference is highly significant.

Quisumbing and Maluccio (2003) also test theories of household behavior. Using four countries, Bangladesh, Ethiopia, Indonesia, and South Africa, they investigate the influence of bargaining power in the household on expenditures on food, education, health, children's clothing, and alcohol and/or tobacco. They reject the unitary model of the household in all four countries, but do not reject the Pareto efficient collective model in any of them. The evidence suggests that resources brought to marriage by men and women have different effects on shares spent on education in all four countries. However, they find that whether boys or girls benefit within the household varies by country.

Related to these findings, a number of studies have found that price and income elasticities of demand differ systematically by gender in developing countries, but that these differences tend to narrow as average income rises. Using data from almost ninety countries over several decades, Schultz (1987) obtains price elasticities of demand for primary and secondary enrollment and for total years of schooling that are higher (in absolute value terms) for females than for males. Income elasticities are also higher for females than for males.

Kingdon (2005) examines gender bias in the allocation of spending for education of boys and girls. Using data on India disaggregated by gender, she finds evidence of gender bias against girls. She provides an important innovation in that she separates the gender difference in spending into two parts, the decision to spend anything at all and then how much to spend, conditional on spending taking place. In her study, she finds that the main source of bias against girls is due to a greater incidence of not spending anything on girls' education rather than on a difference in spending levels conditional on the household spending on both girls and boys' education.

Alderman and Gertler (1997) find similar evidence for the demand for medical care for children, using data from Pakistan. With respect to education and health care for male and female children, Deaton (1989) finds, using data from Cote d'Ivoire and Thailand, no evidence of discrimination between boys and girls in the former and a small and insignificant bias in favor of boys in the latter. However, Glick, Saha, and Younger (2004) find no significant differences in responses for girls and boys in demand for education or health care, using data from several developing countries.

[8] The nutritional status of children in the study was directly related to the size of the mother's income, food inputs from subsistence farming, and the quality of family-based child care.

To sum up this section, we find that theoretical models suggest that multiple decision makers in the household affect household decisions. The evidence further suggests that women tend to have systematically different preferences for household spending and in particular prefer spending on human capital of their children, along with spending on what might be considered "necessities," such as food, education, and health care. In this context, differences among countries with regard to the extent to which women control the allocation of household resources may well be reflected in the composition of consumption spending.

The greater propensity of women to spend on necessities would have implications at the macroeconomic level as well. First, greater spending on goods and services that would increase human capital will ultimately affect economic growth (a topic we will examine in the next section). Second, it would imply that spending patterns for economies in which women have a greater degree of control over household purchases would tend to be more stable overall since spending on necessities is less responsive to variations in income (Bils and Klenow, 1998). Thus, incorporating gender differences in behavior as a determinant of consumption at the aggregate level suggests that policies that improve the control that women have over household spending should strengthen macroeconomic growth and stability, two of the principal goals of macroeconomic policy.

Evidence on gender-based differences in the price and income elasticity of demand for education and health care for females and males has important implications for policy. It suggests that relative price increases for education would have a disproportionately large impact on reducing the access of females to education and conversely, price decreases would have a disproportionately beneficial effect on females. Given the underinvestment in female education in developing countries, an increase in the relative price of education for females produces a loss to society that is more than proportionate to the private loss. An overvalued exchange rate could, ceteris paribus, produce a similar effect by raising the relative price of domestic goods and services, including education.

The finding that there is a higher income elasticity of demand for female education and health care implies that economic prosperity would disproportionately benefit females by expanding their access to these services, while recessions would have a disproportionately harmful impact. Appropriate relative prices and sustained income growth contribute to socially beneficial investments in female education and health and are achieved in part through sound macroeconomic policies, including an appropriately valued exchange rate.

Savings and investment behavior and preferences toward risk

Saving and investment is another area where the incorporation of gender differences in behavior may be important. The influence of gender-based differences in behavior on domestic saving is substantial, reflecting the linkage between saving, investment, and economic growth. Gender differences may also influence investment through other channels as well, such as the propensity to import or export. To the extent that preferences toward risk have a significant gender component, gender would influence savings and investment behavior through yet another channel.

Domestic savings and investment

Theories on the determinants of aggregate saving suggest a number of reasons for saving, which include smoothing consumption over the life cycle, bequest and investment motives, and precautionary purposes. Agenor and Montiel (1996, p. 76) and Gersovitz (1989) note that saving behavior in developing countries might be expected to differ systematically from that in developed countries for several reasons. First, households in developing countries tend to include an extended family, sharing resources among themselves, which could induce several changes in saving behavior. This may reduce the incentive to save for retirement, since the next generation will be able to provide income to the household. In addition, there may be less of a precautionary motive for savings as the pooling of resources provides insurance against certain risks for which insurance is not available. It might also increase overall saving because of the closer relationship between different generations in a household and potentially greater concern regarding intergenerational well-being.

Savings behavior in developing countries may also reflect a greater degree of uncertainty or variation in household income over time. The greater share of such income derived from agriculture and macroeconomic instability arising from both external and domestic macroeconomic policy shocks might support a greater precautionary saving because it cannot be diversified away by household risk pooling. Third, many households in developing countries are near a subsistence level of income, with less scope for consumption smoothing. Finally, consumption behavior in developing countries may be altered by financial repression, which changes saving as well. Households may face stringent limitations on the ability to borrow and may be able to earn only low or negative real returns on current saving. Limitations on the ability to borrow might increase saving, but would at the same time limit economic opportunities. Low real returns would have income and substitution effects that imply opposite effects on saving and therefore would be ambiguous in their overall effect.

While none of these theories implies any necessary differentiation in saving and investment behavior by gender, evidence that gender does systematically affect consumption would indicate that gender influences may well extend to saving and investment. Moreover, even with the same preferences, differences in the economic and social environments facing men and women could produce measurable differences in savings and investment behavior. Macroeconomic policies that alter, for instance, the cost of credit, might have different effects on men and women.

Against this backdrop, Seguino and Floro (2003) explore the differences in savings behavior among men and women in developing countries. They suggest that women may have greater incentives to save than men for several reasons, largely reflecting women's role as the principal "home builders." Moreover, men typically have greater recourse to social insurance, reducing the need to save for consumption smoothing purposes. Women also tend on average to have a longer life expectancy, thus heightening the need for saving for life-cycle purposes. In addition, women may have stronger bequest motives and greater intergenerational altruism and thus have greater incentive to save for their heirs. The evidence on consumption suggests that increasing women's share of household income has

an influence on the composition of household spending, consistent with the view of women as "home builders," with possible differences in the composition of saving and investment.

Differential access to financial markets and financial instruments may contribute to gender-based differences in savings. To the extent that women face greater constraints in participating in formal financial markets, they are more likely to save outside of formal markets, with ambiguous effects on saving, as the price and income effects would offset each other. The higher price of saving would reduce saving, but the income effects might increase it. Evidence suggests that cultural values, and related differences in women's access to and control of their income, may influence saving behavior. Goetz and Gupta (1996) show that in Bangladesh, women may be discouraged from saving large amounts because, in this male-dominated culture, women may lose control over these assets to male household members.

Several empirical studies have shown that there are systematic differences in savings and investment behavior by gender. Most of this work has focused on developed countries owing to an absence of appropriate savings data in developing countries. Using macroeconomic data, Seguino and Floro (2003) examine differences in aggregate savings ratios, using panel data on a group of semi-industrialized countries over the period of 1975-1995.[9] They find that women's wage share relative to men is positive and significantly related to savings.[10] In one specification they find that raising women's share of employment by one percentage point increases aggregate saving by roughly a quarter percentage point. Floro (2001) cites some evidence that, particularly with respect to informal savings groups, poor women may have a general propensity to save that is stronger than men's propensity. In contrast, Razavi (1996) cites findings from Vietnam that shows that, independent of income, women have lower saving ratios than men.

Risk preferences and investment

Several studies have also examined how gender influences preferences toward risk. Jianakoplos and Bernasek (1998) find, based on the 1989 United States Survey of Consumer Finances data, that single women exhibit more risk aversion than single men. As wealth increases, the proportion of wealth held in risky assets increases by a smaller amount for single women than for single men. Further evidence on gender differences in investment behavior with respect to retirement assets is found in Bajtelsmit and VanDerhei (1997), who find that women tend to invest retirement funds in less risky assets than men. Unfortunately,

[9] They specify the dependent variable as gross domestic saving as a share of GDP, owing to an absence of data on household saving in this group of countries. They model the determinants of household saving and gender differences by including regressors that measure female income and bargaining power and control for public and corporate saving and other macroeconomic and microeconomic determinants of saving.

[10] Differences between men and women in the relationship between wage share and saving vary, depending on the specification. The educational gap variable is generally insignificant, which they attribute to multicollinearity among the regressors. In such studies, it may be difficult to separate the independent effects of income in general from women's share of income, though limiting the sample to countries at roughly the same level of income may help avoid confounding these two effects. Other evidence is ambiguous.

such research in the developing country context is limited by the lack of good data on wealth holdings and investment decisions.

Gender differences may also influence the way households deal with risk and economic shocks. Goldstein (1999) hypothesizes that households pool risks and that gender differences lead to different responses to consumption and production shocks. Using Ghanaian data, he examines household responses to illness and agricultural production shocks. He finds that women tend to pool their risk with other women in the village, while men appear to pool their risk with a wider group that includes members of their clan and people outside their village. Thus social networks differed between men and women, with women relying more on friends and men on relatives to provide a form of insurance against shocks.

Gender differences may also exist in the ability to get access to and use credit. In recent decades, there has been a rapid growth in micro credit targeted to women, who have traditionally been limited in their access to credit due to a lack of appropriate collateral, excessively complicated requirements, or other institutional factors. Grameen Bank in Bangladesh is one well-known example of an institution that has specifically targeted its lending portfolio mainly to women, an initiative that has also been undertaken elsewhere including in Latin America, sub-Saharan Africa, and India. The research on micro credit initiatives targeted to women shows that improving the access of women in developing countries to credit enables them to improve their standard of living, that women tend to have superior credit repayment records than men, and that lending to women has a greater effect on household welfare than credit directed toward male borrowers (Holt and Ribe, 1991; Khandker, Khalily, and Khan, 1995; Pitt and Khandker, 1998; and Kevane and Wydick, 2001). These results reinforce the earlier observation that increasing women's control over resources may strengthen economic growth by redirecting consumption, saving, and investment in more productive ways.

As with consumption, theoretical considerations suggest that women in developing countries may have systematically different saving and investment behavior as well as attitudes toward risk. Empirical work on saving, investment, and risk taking that differentiates behavior by gender is limited. Nonetheless, the evidence suggests that increasing women's wage share increases the savings rate. Evidence with micro data suggests that women have some greater degree of risk aversion in their asset allocation decisions, but none of this evidence is derived from developing countries owing to a lack of data. Evidence from developing countries suggests that women and men may engage in somewhat different risk pooling arrangements, where men have wider groups to draw upon for risk sharing. Finally, some evidence suggests that women use their savings for activities of higher productive value and have stronger repayment records. An interesting research question is what effect changing levels of women's participation in labor markets and earnings capacity would have on aggregate saving rates and whether this could account for any substantial fraction of savings differences across countries.

The macroeconomic implications of these findings are in some ways similar to those we found for consumption behavior. Greater gender equality in earnings seems to raise the aggregate savings rate and is valuable in facilitating investment. The tendency for women to

allocate their savings in more productive ways and maintain better repayment records is beneficial to macroeconomic growth and stability. With regard to preferences toward risk, gender differences in behavior are more ambiguous in their implications. Women's relatively greater aversion to risk and superior repayment record on credit would tend to impart stability to savings and investment, but on the other hand might lead to lower returns overall. For the aggregate economy, there might be some resulting tradeoff between greater stability and greater growth. Altogether, these considerations suggest a somewhat ambiguous effect of gender differences in behavior in saving, investment, and risk taking for macroeconomic growth, though they do more unambiguously suggest these differences should lead to greater stability.

Public choice

The theory of public choice also examines systematic differences in public choice by gender.[11] In this literature, gender is viewed as an important influence on public policies and an organizing principle of political and social institutions.[12]

Several studies examine the influence on government of giving women the right to vote. Lott and Kenny (1999) examine the growth of government using cross-sectional time-series data over the period 1870-1940, focusing on both fiscal decision making at the state level as well as voting by U.S. House and Senate state delegations and on a wide range of state laws. They find that suffrage coincided with immediate increases in state government expenditures and revenues and more liberal voting patterns for federal representatives, and that these effects expanded over time as more women began to vote. They suggest that some of the reasons may lie in women's relatively greater risk aversion and the insurance characteristics of many government programs, though this does not answer why women would prefer government to an alternative provider of insurance. Women's lower average income might also predispose them toward government programs with a progressive redistributive element.

Lott and Kenny (1997) find that women that have to raise children on their own are more likely to classify themselves as liberal and support Democratic and progressive redistributive taxation. They find little evidence that employment by the government is a factor in voting preferences. Abrams and Settle (1999) find, using Swiss data, that extending the franchise to women stimulated growth in government redistributive spending and spending overall, and had a negative effect on government consumption spending.

Saidel and Loscocco (2005) find, using data from a national survey of heads of departments in government agencies at the state level (these would be top-ranking gubernatorial political appointees), that working in a redistributive (as opposed to distributive or regulatory) agency affects whether the head pursues a women-centered policy agenda, but interestingly, this

[11] Mueller (1979) surveys the theory of public choice.

[12] One of the main hypotheses in this literature is that women are more likely than men to take a liberal stance on political issues (which is taken to mean that women are more favorable to a larger role for government).

result holds regardless of the gender of the head. Since women are more likely to work in a redistributive agency, they argue that gender does matter and is masked by the choice of agency. This suggests that an econometric model that accounts both for the decision to work in a particular agency and then the position taken, given that the individual works in that agency, would be instructive.

This evidence suggests that women tend to have a somewhat stronger preference for public insurance and redistributive spending, if not for a larger role for government altogether. The merits of increasing the role of government and its share in economic output have been hotly debated in recent years, with ambiguous conclusions (Tanzi and Schuknecht, 1997). There may be linkages from women's political empowerment to the size of government to macroeconomic growth and stability. If larger governments are not conducive to growth, then women's empowerment might have a detrimental affect on growth, though perhaps a beneficial effect on stability. If larger governments are conducive to growth, then the opposite results would be obtained.

Summary of macroeconomic implications of gender differences in consumption, savings, investment, and risk taking and public choice

The discussion above suggests gender influences on behavior may lead to systematic differences in consumption, savings, investment, and risk-taking behavior and public choice. Much of the evidence is microeconomic in nature, though a limited number of studies have examined these issues in a macroeconomic context. Macroeconomic conclusions can be drawn from microeconomic modeling as long as the behaviors are systematic and pervasive and therefore have an impact at the aggregate level.

We can summarize the evidence as follows. A well-established theoretical basis arising in microeconomic theory exists for looking at gender as influencing decisions with regard to spending, saving, investment, and risk taking. Although macroeconomic models are typically framed in an aggregate context, it is still possible at some level to incorporate gender differences into models, in particular, through aggregate ratios that may reflect systematic and pervasive differences in behavior by gender. Gender-based differences in behavior give rise to differences in macroeconomic behavior with implications for policy formulation, especially with regard to fiscal policies. Furthermore, these differences in policies feed back into different macroeconomic outcomes.

Improving women's economic control of household resources may improve the quality of spending in a way that is conducive to economic growth and also impart some greater stability to aggregate demand. At the same time, the differences in attitudes toward saving, investment, and risk taking lead to somewhat ambiguous results. Women tend to have systematically differences preferences over saving and investment, and in particular appear to direct saving and investment in more productive ways, which should enhance growth. Some evidence also suggests women have a greater tendency to save overall. However, women's lower preference for risk taking may impart some downward bias to growth but may also impart greater stability to investment and financial markets. Their tendency to maintain a superior record of repayment of debt reinforces the financially stabilizing behavior. Women's

preference for a stronger role for public insurance may impart an upward bias to the size of government, with ambiguous effects for growth, though it makes a contribution to stability.

III. GENDER INEQUALITIES AND ECONOMIC GROWTH: A SIMULTANEOUS RELATIONSHIP

In this section we examine the relationship between gender inequalities and economic growth at the level of aggregate data, shedding further light on some of the findings discussed in Section II, using mainly microeconomic data. This analysis is put in the context of aggregate growth models of the economy rather than models of the household and individual decision-making. In this context, growth theory provides a framework for analyzing the relationship between gender inequalities and economic growth.[13] We find that gender disparities lead to weaker economic growth and that stronger economic growth leads to reduced gender disparities.

Blackden and Bhanu (1999) observe that gender inequalities, in the context of growth theory, may limit women's ability to accumulate capital and thus hinder growth. They develop a framework that takes a broad view of the concept of capital that includes not only the accumulation of human capital (education and wealth) but also the accumulation of directly productive assets (labor, land, and financial services), and social capital assets (participation in social outlets at various levels), consistent with modern growth theories.

Growth theory and evidence

Neoclassical growth theory relates economic growth to capital accumulation and savings. The endogenous growth formulation extends this framework to allow for endogenous steady-state growth that depends on a larger set of variables (Lucas, 1988; Romer, 1986). In this formulation, the production function with capital and labor inputs does not exhibit diminishing marginal returns to capital. The main implication that differs from the neoclassical growth model is that in endogenous growth models, an increase in the saving rate raises the growth rate per capita. Unlike the neoclassical growth model, the endogenous model does not predict that poor and rich countries should converge in income. In the endogenous growth framework, there are different approaches to generating endogenous steady-state growth. In one approach, if some part of capital goods can be produced without nonreproducible factors, this generates constant returns to scale in the production function. Another approach is to introduce externalities so that as one firm increases its inputs, other firms' productivity also grows. Externalities can take a general form of knowledge that is available to all firms or increases in the stock of human capital, which affects the productivity of factors of production. These models thus have the important feature of showing that education and other sources of human capital accumulation are determinants of growth rates. A number of studies also introduce financial intermediation into endogenous

[13] See Agenor and Montiel (1996); Aghion and Howitt (1998); and Barro and Sala-i-Martin (2004) for surveys of the literature on growth theory and empirical work in this area.

growth models. Levine and Renelt (1992) and Sala-i-Martin (1997) examine cross-country evidence on the endogenous growth model.

Gender considerations in growth theory and empirical work

Endogenous growth models can also incorporate gender considerations. In a theoretical vein, Walters (1995) critiques the neoclassical theoretical framework on the grounds that by equating population and labor force growth, it fails to account for the process by which labor is reproduced and maintained. He argues that endogenous growth theory addresses this issue in part by incorporating human capital and notes that this (i) opens the way for time to be incorporated into the production of labor inputs; (ii) recognizes education and other influences on human capital accumulation and their relationship to growth; (iii) allows for the possibility of tradeoffs between government fiscal policies, including spending programs, and growth; and (iv) introduces scope for income distribution via its affect on human capital investment to influence growth. Given the different propensity of women than men to invest in children, the gender distribution of income could affect growth. He concludes that an enriched growth theory should explain labor as a produced input, and in particular recognize that women's labor must be released from the reproductive sector.

Galor and Weil (1996) develop a theoretical model that incorporates considerations of fertility and its link to growth. In their model, a household's fertility and labor supply choices are embedded in a growth model in which wages are endogenously determined. Increases in capital per worker raise women's relative wages, which reduces fertility, and thus raise further capital per worker. This virtuous circle leads to a rapid transition to lower fertility and higher output growth. Lagerlof (2003) also employs a modified version of this framework to model European economic development and fertility over the past millennium.

At the same time that gender inequalities are seen as affecting economic growth, economic development and growth also alter gender inequalities. Growth may affect gender inequalities by breaking down barriers to women's work participation, by reducing the time spent in the home on nonmarket labor, and by changing institutional mores. There is thus a simultaneous relationship between economic growth and gender equality.

Within the debate over the interaction of gender and growth, there are a number of distinct viewpoints, aptly summarized in Forsythe, Korzeniewicz, and Durrant (2000). The neoclassical approach examines the simultaneous interaction of economic development and the reduction of gender inequalities. It sees the process of economic development leading to the reduction of these inequalities and also inequalities hindering economic development.

In the feminist literature, there are two main frameworks. The Women in Development (WID) approach, of which Boserup's study is a good example, looked at ways to integrate women into the development process. It relies on the notion that there is a nonlinear relationship between economic growth and the status of women. At early levels of development, there is little difference in productivity between men and women, but that development leads to greater differentiation, which becomes embedded in discriminatory practices shaping labor markets and property relations. However, development eventually

leads to the closing of these gaps (similar to the neoclassical approach), though the pace of change is related to "cultural" traditions. Boserup's work has been greatly influential, fitting in with prevailing views on social inequality and development, and emphasizing the importance of women's contributions to development and nonmarket activities.

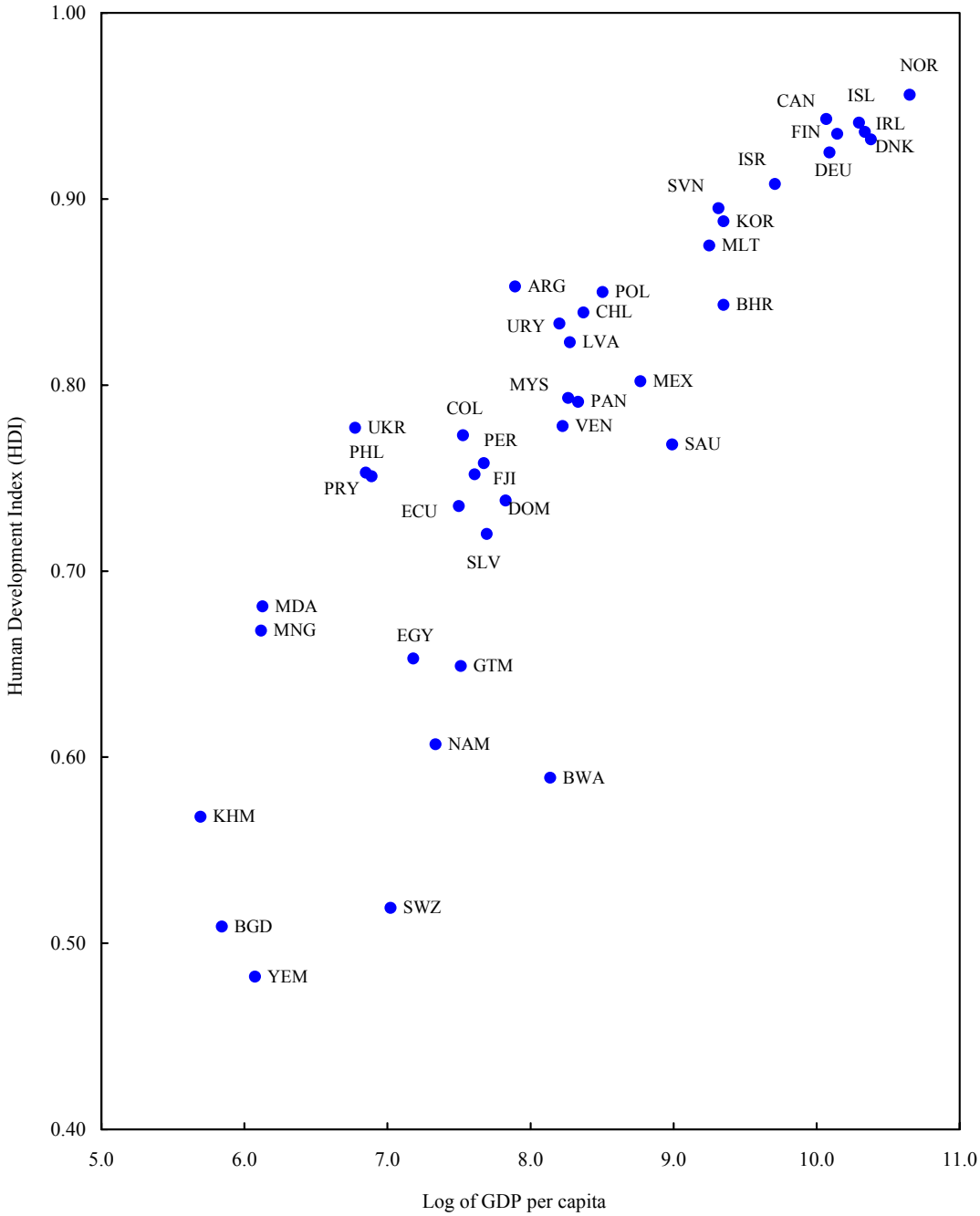
This approach has, however, been criticized by some scholars who argue that inequalities persist, despite economic development, and may even be exacerbated by development. The Gender and Development (GAD) approach emphasizes the need to take integral account of the norms, practices, and social institutions governing gender inequality. It distinguishes between improvements in women's status and gender equality, and suggests that improvements in gender equality cannot rest on improvements in economic and social development alone but must also rely on the "empowerment" of women relative to men. This perspective has led to criticism of structural adjustment programs of the international financial institutions on the grounds that even while promoting economic development, they have worsened gender inequalities by ignoring vulnerable populations, including a disproportionate number of women (a topic to which we return later).

Some simple plots are illustrative of the relationship between gender equality and the level of economic development, measured by per capita income (in logarithmic form), for a cross-section of countries in the world.[14] No causality is implied because, as discussed above, there may be a simultaneous relationship between these variables. Figure 1 presents a plot of the UN Human Development Index (HDI) against the (natural) log of per capita income, and shows a clear positive and slightly nonlinear relationship between the two.[15] This suggests that as per capita income rises, human development also rises but at a decreasing rate. This result accords well with intuition and is supported by comparisons based on single indicators of well-being such as longevity, where increases in income also produce large initial gains that then diminish as income continues to rise. However, some component of this relationship may also reflect the method of construction of the index, as noted earlier.

[14] The sample is drawn as every third country in the world (adjusted for missing data) for illustrative purposes.

[15] The HDI is an index, constructed by the United Nations, which can be used to compare levels of human development across countries. See Stotsky (2006) and reference therein for further discussion of the HDI.

Figure 1. Selected Fund Member Countries: Human Development Index (HDI) and Nominal GDP per capita, 2002 [1]



Sources: IMF, World Economic Outlook (WEO), UN, Human Development Report 2004; and IMF staff calculations.

[1] A random sample of IMF member countries was chosen for the purpose of this figure (every third country, in alphabetical order, unless the third was missing and then the following one was used). The same sample is used in each figure. These countries are found in Table 1.

Table 1. List of Countries Used in the Figures

1	Argentina	ARG
2	Bahrain	BHR
3	Bangladesh	BGD
4	Botswana	BWA
5	Cambodia	KHM
6	Canada	CAN
7	Chile	CHL
8	Colombia	COL
9	Denmark	DNK
10	Dominican Republic	DOM
11	Ecuador	ECU
12	Egypt	EGY
13	El Salvador	SLV
14	Fiji	FJI
15	Finland	FIN
16	Germany	DEU
17	Guatemala	GTM
18	Iceland	ISL
19	Ireland	IRL
20	Israel	ISR
21	Korea, Rep. of	KOR
22	Latvia	LVA
23	Malaysia	MYS
24	Malta	MLT
25	Mexico	MEX
26	Moldova, Rep. of	MDA
27	Mongolia	MNG
28	Namibia	NAM
29	Norway	NOR
30	Panama	PAN
31	Paraguay	PRY
32	Peru	PER
33	Philippines	PHL
34	Poland	POL
35	Saudi Arabia	SAU
36	Slovenia	SVN
37	Swaziland	SWZ
38	Ukraine	UKR
39	Uruguay	URY
40	Venezuela	VEN
41	Yemen	YEM

Figures 2 and 3 plot gender equality against the log of per capita income. Gender equality is measured using the UN's Gender Development Index (GDI), which measures gender equality in economic development, and Gender Equality Measure (GEM), which measures political equality. A clear positive and somewhat nonlinear relationship between these indexes and income is also observed. These relationships thus suggest that increasing income stimulates gender equality in both the economic and political dimensions, though this relationship may also reflect methodological factors in the construction of the indexes as well.[16]

To abstract from these methodological issues, Figures 4-6 plot alternative measures of gender equality based on a single critical indicator against the log of per capita income. These critical indicators are the ratio of females to males in primary education, the ratio in secondary education, and the ratio in life expectancy. The figures that plot education against income show that for primary education the relationship is relatively flat, though there are a number of clear outliers. For secondary education, there is a slightly negative relationship, suggesting some catch-up of low-income countries in female education, thus giving rise to higher ratios in the lower-income countries, which might go against intuition. Figure 6 that plots life expectancy against income shows a positive though somewhat scattered relationship between life expectancy and income.[17] Figure 7 presents a plot of fertility against per capita income. Higher fertility is usually associated with lower gender equality, which was linked to lower income, and indeed the plot shows a negative though also somewhat scattered relationship between higher fertility and per capita income. We can thus see the conclusions are less clear when single variable indicators of economic and social well-being are used with regard to income and gender equality, though they are not in contradiction with the findings obtained using the UN indexes.[18]

The effect of gender inequalities in education, health, and social capital on economic growth

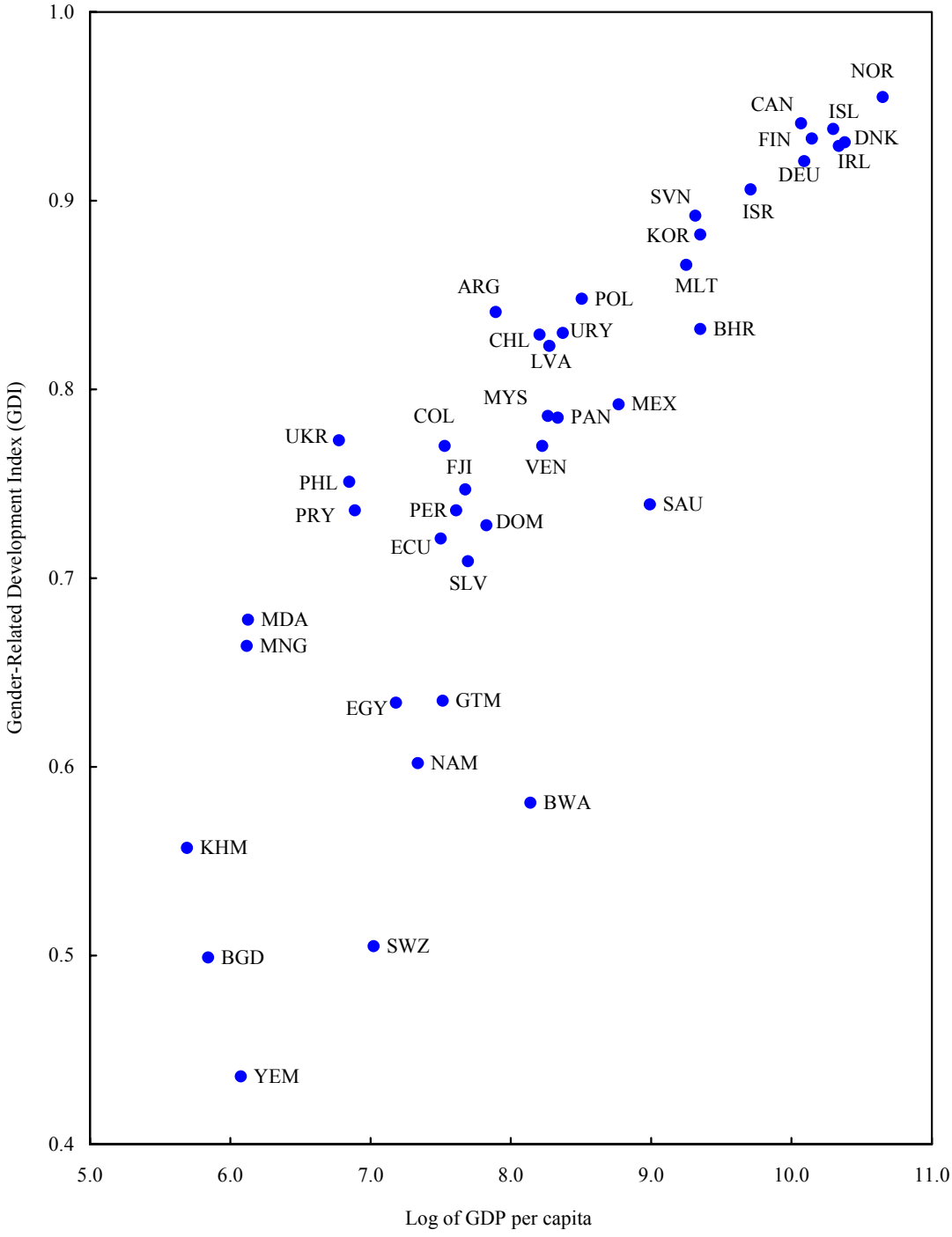
A number of empirical studies have examined whether gender inequalities in education and in health alter economic growth rates. These studies generally rely on a common framework which examines the more general issue of the relationship between education and health and growth, without accounting specifically for gender differences. In this literature, some measure of output or changes in output (generally specified as per capita income) is regressed

[16] See Stotsky (2006) and references therein for further discussion.

[17] Women live on average five years longer than men, in developed nations. Hence a positive correlation for the ratio implies as income rises, women are more likely to achieve the biological norm in relative life expectancy.

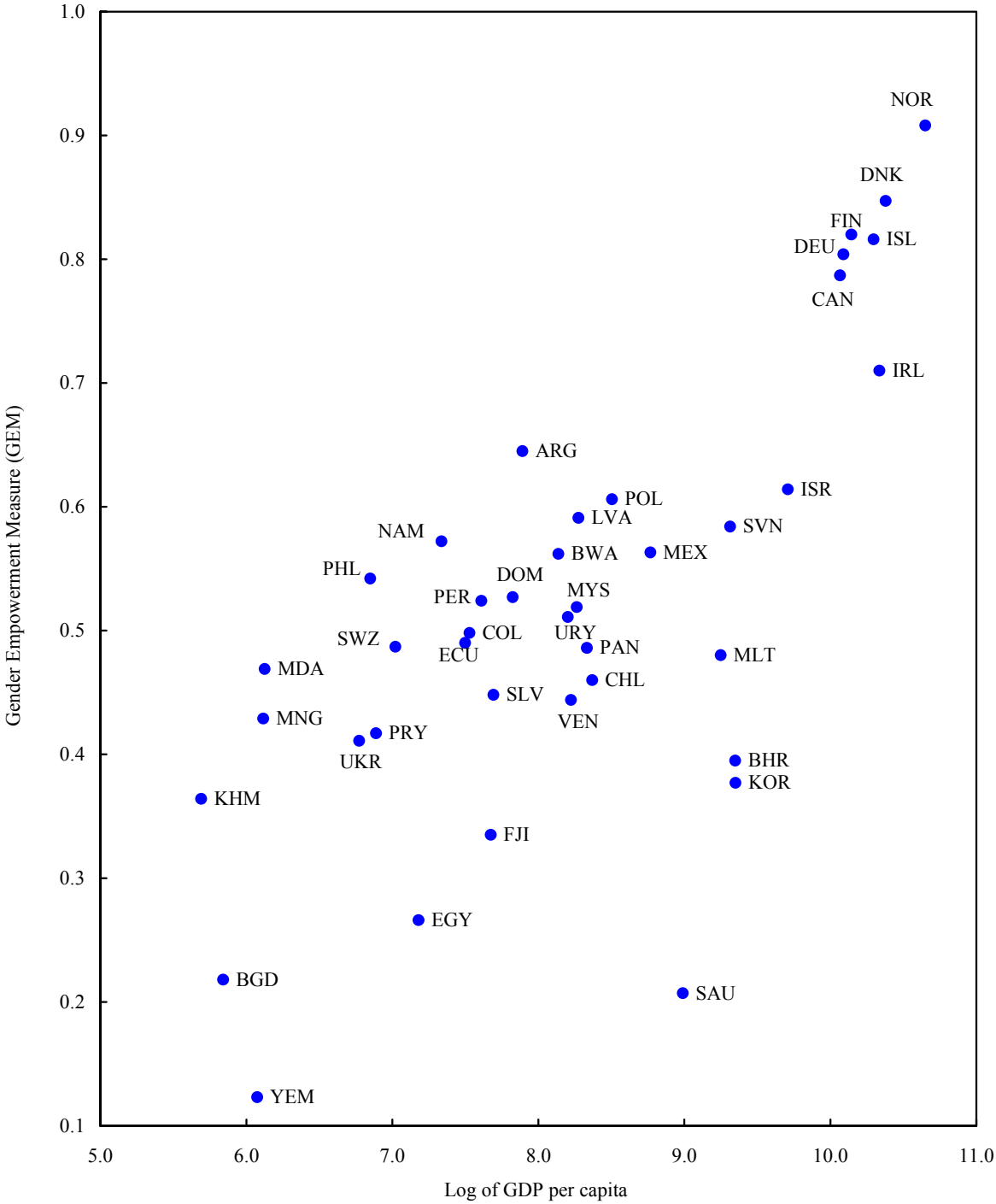
[18] Although these plots are interesting, it would be more revealing to use a fully specified econometric model to examine the relationship between gender inequalities and economic growth. This examination is not, however, undertaken here. A number of critical issues would need to be dealt with in specifying an appropriate econometric model.

Figure 2. Selected Fund Member Countries: Gender-Related Development Index (GDI) and GDP per capita, 2002[1]



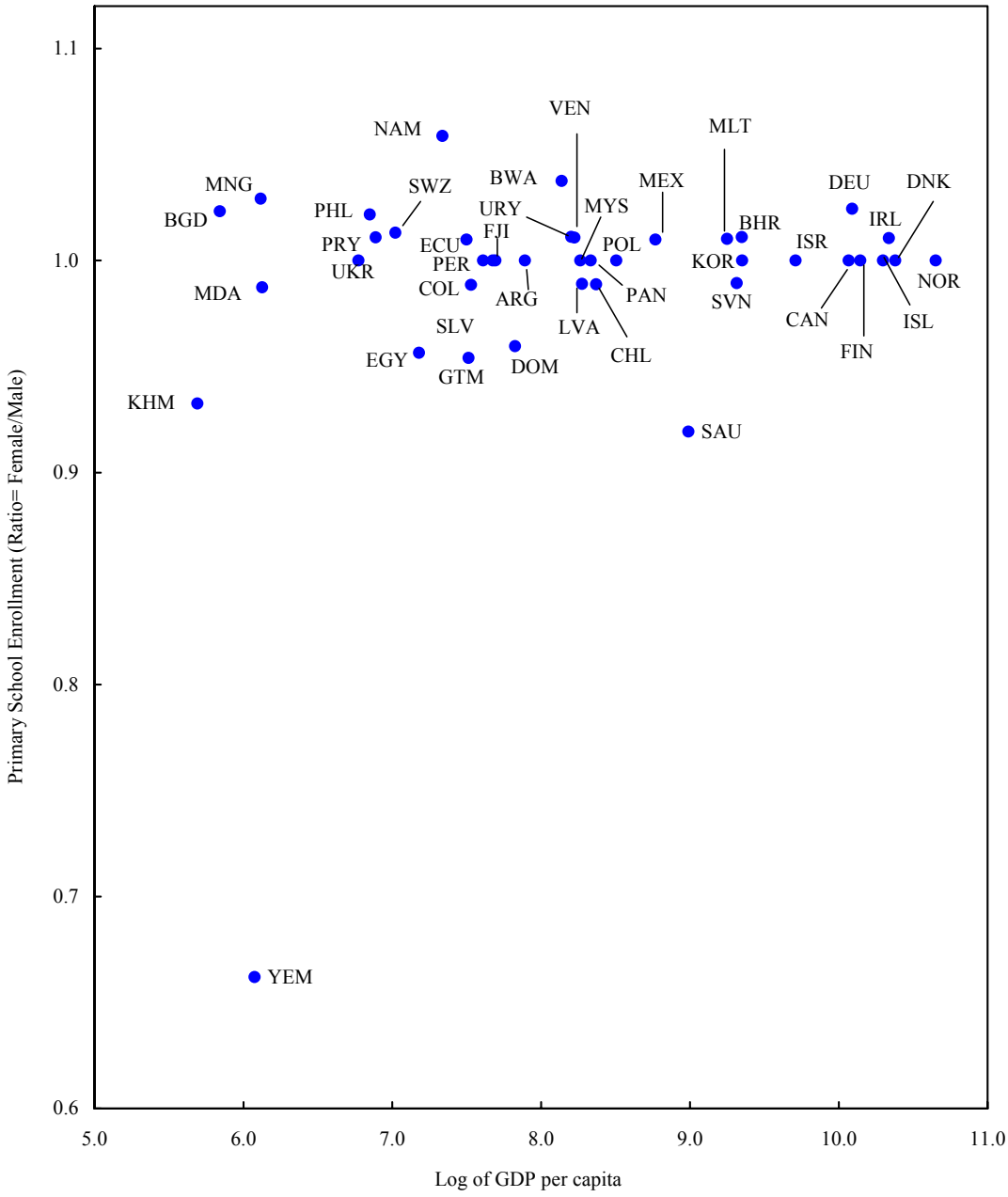
Sources: IMF, World Economic Outlook (WEO), UN, Human Development Report 2004; and IMF staff calculations.

Figure 3. Selected Fund Member Countries: Gender Empowerment Measure (GEM) and GDP per capita, 2002[1]



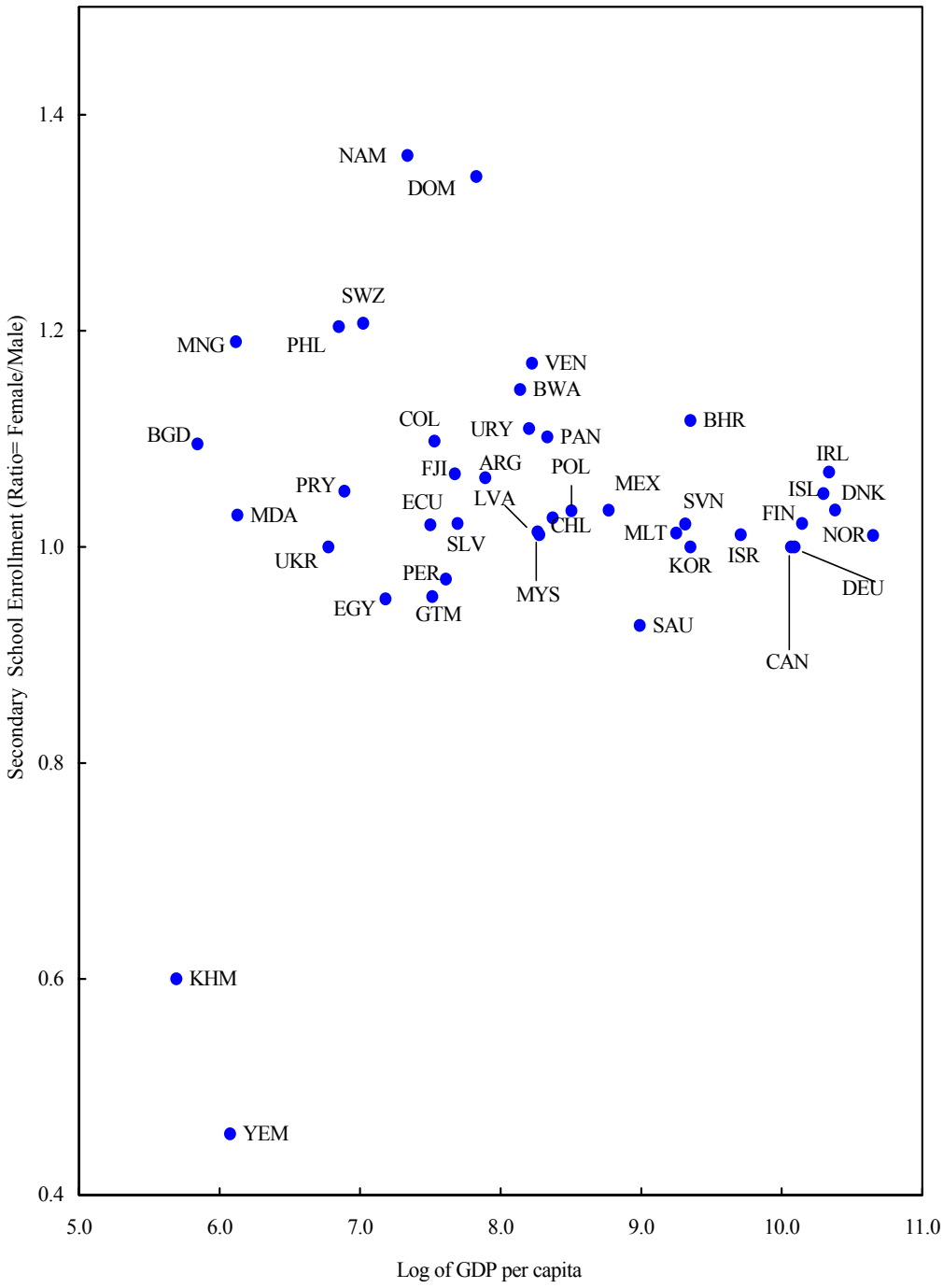
Sources: IMF, World Economic Outlook (WEO), UN, Human Development Report 2004; and IMF staff calculations.

Figure 4. Selected Fund Member Countries: Primary School Enrollment and GDP per capita, 2001/02[1]



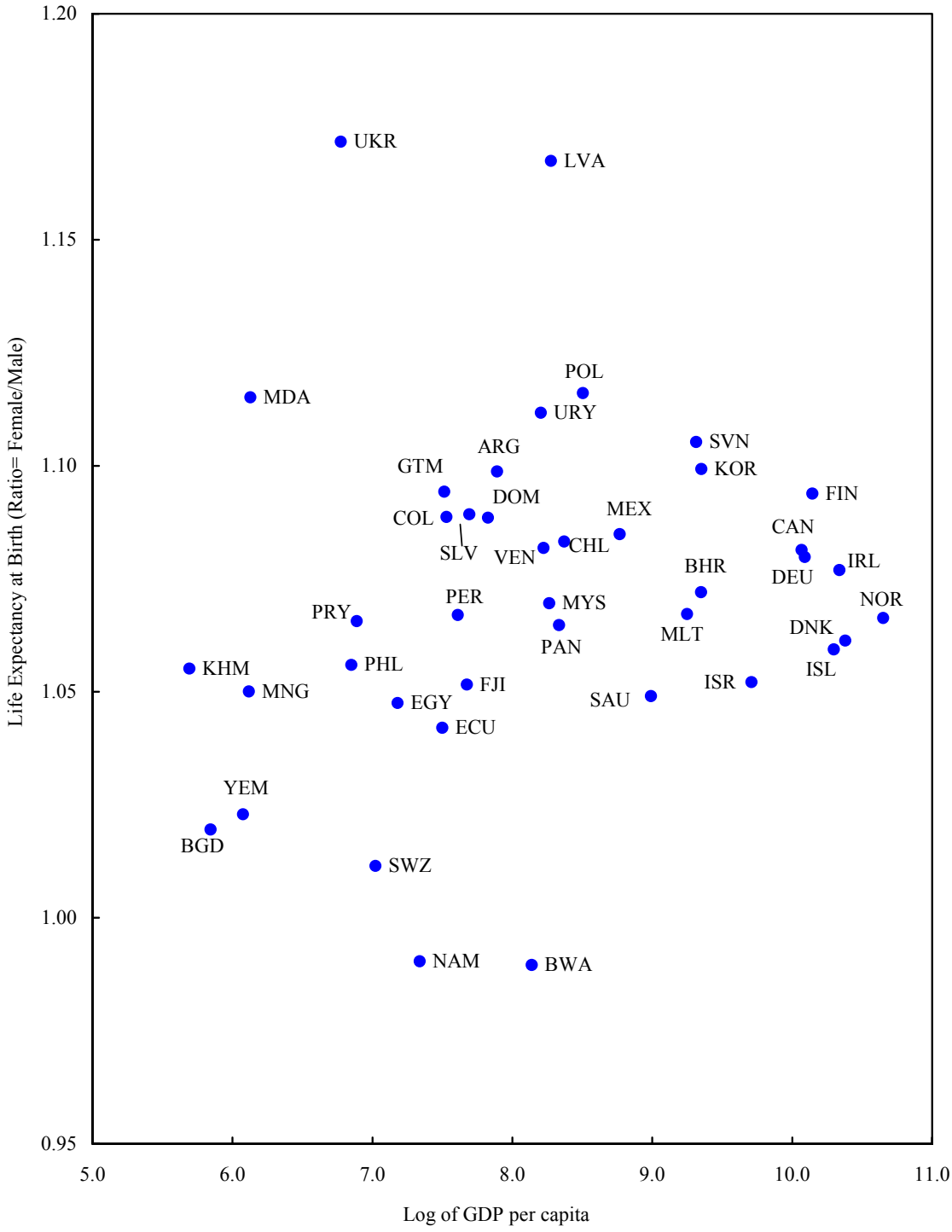
Sources: IMF, World Economic Outlook (WEO), WB, World Development Indicators (WDI); and IMF staff calculations.

Figure 5. Selected Fund Member Countries: Secondary School Enrollment and GDP per capita, 2001/02[1]



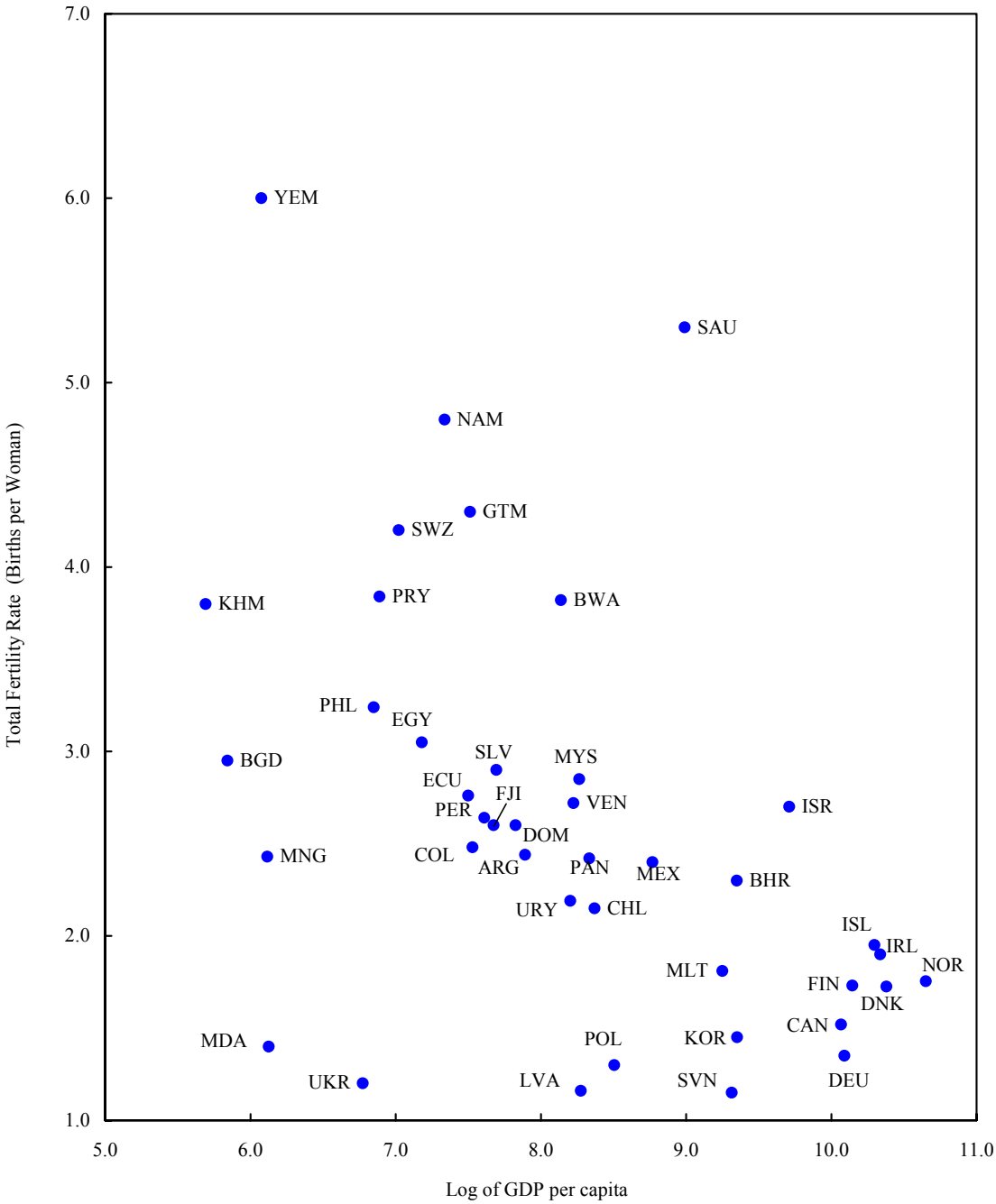
Sources: IMF, World Economic Outlook (WEO), WB, World Development Indicators (WDI); and IMF staff calculations.

Figure 6. Selected Fund Member Countries: Life Expectancy at Birth and GDP per capita, 2001/02[1]



Sources: IMF, World Economic Outlook (WEO), WB, World Development Indicators (WDI); and IMF staff calculations.

Figure 7. Selected Fund Member Countries: Total Fertility Rate (Births per Woman) and GDP per capita, 2002



Sources: IMF, World Economic Outlook (WEO), WB, World Development Indicators (WDI); and IMF staff calculations.

against a set of explanatory variables that include measures of educational attainment and health status.[19] They find that the quality of the labor force has a consistent, stable, and strong relationship with economic growth. They do not find that growth causes higher quality through investment in schools. Bils and Klenow (2000) find, in contrast, that the relationship between schooling and growth also reflects the impact of growth on schooling and may also reflect omitted factors that are related both to schooling and growth rates.

Several studies examining the schooling and growth link focus specifically on how gender differences influence the relationship. Dollar and Gatti (1999) examine the relationship between gender inequalities in education and growth. They explain five-year growth intervals and control for possible endogeneity between education and growth. They obtain differing results, depending on the sample, which suggest either a positive association of female education with growth or an insignificant effect. Knowles, Lorgelly, and Owen (2002) estimates, in a framework based on Solow's approach, the effect of male and female education on long-run or steady-state income. They find that female education has a positive effect on GDP and that a 1 percent increase in female education increases average GDP by 0.37 percent. In contrast, the education elasticity for males is insignificant. The positive correlation echoes an earlier result obtained by Hill and King (1995).

Klasen (2002) also examines this relationship. He uses total years of schooling and the ratio of female to male education as explanatory variables, in a panel data framework. He finds that reducing gender inequalities leads to higher growth. Abu-Ghaida and Klasen (2004) posit a similar framework and use the statistical results to construct an estimate of the costs in terms of growth of missing the Millennium Development Goals with regard to education. They observe that starting from low levels of equality, South Asia, sub-Saharan Africa, and the Middle East and North Africa all experienced a decline in gender inequalities in the 1975-1999 period, but the gains have been slow and uneven, with the inequalities remaining greatest in South Asia. They estimate that countries that miss the Millennium Development Goals for education are likely to have 0.1-0.3 percentage points lower per capita growth rates, more children per woman, higher mortality of children, and higher prevalence of underweight children in the under-five group.

A few studies have also looked at the impact on growth of gender differences in social capital (voice and political participation) through its link to the quality of governance. The degree of gender disadvantage in social capital varies, from almost none in the Scandinavian countries to almost complete in some countries in the Middle East where women still do not have the right to vote. Several studies have examined differences in women and men's levels of corruption and concluded that women tend to be less corrupt than men (Dollar, Fisman, and Gatti, 2001; World Bank, 2001). Thus, women's relative lack of voice in policy making may

[19] These models vary in how they treat the possible endogeneity of the explanatory variables, such that growth may also influence the quality or quantity of educational or health inputs. They also vary in how the explanatory variables are measured, either as stock variables (for instance, the stock of educated workers) but also as flow variables (for instance, spending on schooling in a given time period). Hanushek and Kimko (2000) examine the relationship among schooling, labor-force quality, and growth.

be correlated with higher levels of corruption., which in turn produces poorer quality of institutions, lower levels of investment or lower quality investment, and weaker growth (Aron, 2000; Abed and Gupta, 2002, LaFramboise and Trumbic, 2003).

Blackden and Bhanu (1999) present empirical research on growth in sub-Saharan Africa that shows that gender inequalities affect supply responses, resource allocation within the household, and labor productivity, and therefore ultimately economic growth. They estimate that gender inequalities lead to a significant loss of growth in agricultural productivity, and that this loss reduces food security and well-being and contributes to greater vulnerability and risk aversion. They demonstrate that in sub-Saharan Africa, one of the major factors limiting women's productivity is the time burden of household activities, and suggest that giving women greater voice in policy making would lead to investment in labor-saving infrastructure, which would ease women's time burden of household activities and enhance their productivity. Greater voice would thus rebound to the benefit of society not only through better governance but also through policies that enhance women's productive labor. Udry (1996) also finds, using African data, that gender inequalities in access to productive resources significantly reduce agricultural productivity and growth.

Baldacci and others (2004) examine the effect of investments in education and health capital and governance on growth. Using panel data on 120 developing countries from 1975-2000, averaged over five years, within a system of simultaneous equations, they investigate the determinants of per capita income growth, total investment, educational attainment, and health status.[20] Gender equality, measured as the share of female students in primary and secondary schools, is positively and significantly associated with education capital and negatively and significantly associated with child mortality. There is, however, no direct estimate of the effect of gender inequalities on growth in this study.

The empirical literature offers evidence that gender inequalities in general but especially in education and health and social capital reduce economic growth and that reducing these gender disparities strengthens growth. One major limitation of this research is that gender inequalities are often poorly measured, but efforts to improve the availability of gender disaggregated data should facilitate more refined modeling of these relationships over time. Another limitation that future modeling would need to continue addressing is the simultaneity between decisions to invest in human capital and economic growth.

[20] Their main findings are that both education and health capital contribute positively to growth. For education, both the stock and flow variables are significant, while for health, only the flow variable is significant, though the stock of health has indirect effects through increasing investment. Education and health spending have a contemporaneous affect on their respective stocks, while education spending also has a lagged effect. Education and health capital are strongly linked to each other. Governance has a significant effect on the connection between spending on health and education and indicators of health and education. Income levels are positively related to education and health capital, and poor governance reduces growth through its impact on human capital and investment.

The effect of economic growth on gender inequalities

Several studies have reversed the usual empirical causality and used summary measures of gender inequality as the dependent variable to be explained by economic growth or development. Forsythe, Korzeniewicz, and Durrant (2000) use cross-national and longitudinal data to investigate the effect of economic growth on the status of women and gender equality. Their model allows them to assess whether the political empowerment of women and the persistence of patriarchal institutions have an effect on this relationship and the change over time, and finally, on the effect of debt restructuring and IMF structural adjustment programs on the status of women and gender equality.[21] Using a measure of gender inequality as the dependent variable, in a cross-section which contains both income and its quadratic to measure the level of economic development, they find that the Muslim variable is positively related and the Latin American variable negatively related to inequality, but that the level of economic development is not significant. In the longitudinal model, they find a curvilinear relationship between the level of economic development and gender inequality and that the countries with the highest levels of inequality were likely to experience the greatest relative decline in inequality, but that Muslim majority countries were less likely to experience a decline in inequality. Structural adjustment was not significant.

Their results shed light on the different approaches to linking economic development and gender equality. Consistent with the neoclassical and WID approaches, they show that economic development is linked to an improvement in the relative status of women. The curvilinear relation is also consistent with the WID notion. The results for the measure of inequality are more ambiguous with only a significant relationship found in the longitudinal study, suggesting that the factors leading to a reduction in inequality are more complex, lending some support to the GAD notions. The lack of significance of the structural adjustment variable is noteworthy. This analysis could usefully consider the possible endogeneity of income, given that the alternative causality is well established in the empirical literature.

Morrisson and Jutting (2005) suggest that the UN indexes fail to account for institutional frameworks that constrain the economic role of women, and that taking into account the influence of traditions, customs, and explicit and implicit laws regarding the role of women is important to ensuring the usefulness of policy actions designed to improve their standing. They develop an alternative measure of gender equality that assumes that the economic role

[21] To distinguish their hypotheses, they include dependent variables for the (relative) status of women and gender inequality. To measure the status of women, they use the UN's GDI, which is based on relative measures of life expectancy, education, and access to income. To capture the longitudinal aspects of the data, they also measure the variables in terms of their change from 1970 to 1992. To measure inequality, they use the proportionate gap between HDI and GDI. The independent variables include the level of economic development measured by the log of per capita income, an index of gender empowerment (the UN's GEM, available only for 1995), dummy variables for whether the country has a Muslim majority and if the country is in Latin America to capture the degree to which institutions are patriarchal, and an index to capture the importance of debt restructuring and IMF program lending.

of women is influenced by three major factors: social institutions, access to resources, and level of development.[22]

They find for social institutions there are considerable differences when comparing Southeast Asia and Latin America, for which measures of gender are broadly comparable to developed countries, to sub-Saharan Africa, the Indian subcontinent, and the Middle East and North Africa region, where social institutions show a marked gender inequality. Similar results are obtained for other measures of inequality. The economic role of women also reflects these differences, though Africa, despite its measures of institutional disadvantage, tends to have a relatively high economic participation rate of women, reflecting the influence of small commerce and independent farming. Evaluations of labor market participation by the authors find that the institutional indicators suggest a clear correlation between an unfavorable institutional environment and a low rate of female participation in economic life. They find a mixed effect of the income variables on gender inequality.

The results above provide ample evidence that gender-based differences in behavior can be usefully incorporated into theoretical models of growth theory to enrich the modeling, particularly by focusing on human capital and its time input dimension. The results support the premise that gender inequalities in human capital—as well as other productive inputs—lead to slower growth. Because growth can reduce the disadvantaged condition of women, there is merit to the idea of a virtuous circle of growth and reduction in gender inequalities.

IV. Gender Inequalities in Labor and Financial Markets

This section builds upon Section III in examining in more detail the impact of gender inequalities on the accumulation and use of directly productive assets (labor, land, and finance). Labor supply is an important component of household choice, and research in the area of labor economics has long recognized differences in the behavior of women and men in labor markets. Men and women tend to have different average unemployment, labor participation, and wage rates, and to cluster in different occupations. The participation rate for women has typically been lower than that for men, mainly because women have been largely responsible for care in the homes, as part of the unpaid or reproductive sector. Over time, these and other labor market differences have been narrowing. A considerable literature has examined the evolution of women's participation in the labor force and other important labor market outcomes (Behrman, 1999; Blundell and MaCurdy, 1999).

Cagatay, Elson, and Grown (1995) emphasize the importance for policy discussions and economic analysis of recognizing the interconnections between the paid and unpaid economies, particularly women's unpaid work in the home. Unpaid work, particularly in

[22] They use labor market participation of women as an indicator of the economic role of women and assess this indicator against variables representing social institutions, divided into two groups, those that are purely social and those that have an economic component; variables representing access to resources, drawn from indicators for education, health care, and the labor market access; and the level of development.

developing economies, encompasses a wide range of activities such as subsistence farming, child care and other domestic maintenance work, informal activities, and voluntary activities. Frequently, unpaid work comprises a significant part of time as these activities are critical to the household and to the community at large. Time-use studies indicate that women have higher total work hours than men, largely as a result of the higher burden of housework for women, and that this is especially pronounced in the least developed economies (Floro, 1995; World Bank, 2001).

In aggregate, the unpaid economy is an important component of the overall economy. Some estimates suggest that if it were properly measured, it could add as much as one-quarter to measures of national output (Tzannatos, 1998). National income aggregates invariably omit a proper accounting for the unpaid economy, but its size and its connection to the paid labor market underscore the importance of incorporating unpaid work into national income accounts. Many countries have recognized that their official measures of national output are incomplete. But even in countries that recognize that this gap undermines coverage of national output, the difficulties in measuring this component of output have led to continuing gaps. Although there are important methodological issues that need to be dealt with in measuring this work, these difficulties are not insurmountable (Beneria, 1995, 1999; Floro, 1995).

The omission of this component of the labor market hinders a full assessment of economic changes. The inability to account for the substitutability of paid and unpaid labor based on the opportunity cost of such labor may hinder an analysis of unemployment, labor supply behavior, and household decision-making. For instance, at times, when the economy is strong, there is both an increase in employment and the unemployment rate, if people move from leisure, unpaid labor, or the informal sector to searching for jobs in the formal sector. It is thus important in assessing developments in labor markets to have an understanding of the nature of the formal and informal labor market and of gender relations within the household that constrain the ability of women and men to choose their labor supply decisions.[23]

Fontana and van der Meulen Rodgers (2005) offer a way to incorporate differences in the paid and unpaid economies into computable general equilibrium models to assess gender differences in the effects of economic policies. They suggest, among other extensions, disaggregating the market sector of the economy into male-intensive and female-intensive sectors and including a monetary valuation of caring and other household activities in the reproductive economy. They also suggest the importance of examining intra-household allocations of resources and time, and treating labor as a produced input.

[23] Himmelweit (2002) urges the incorporation of considerations of both the paid and the unpaid economy and on the structural differences between men and women across the two economies. She uses the example of the United Kingdom's Working Families' Tax Credit, which is designed to encourage employment and reduce child poverty, and notes the importance of household needs (the unpaid economy) in determining labor market participation.

With relevance to developing countries, a number of studies examine the impact of gender inequalities in subsistence agriculture and in the informal and formal labor markets mediated by women's role in household production. In the lowest-income countries, most women are concentrated in subsistence labor and the informal labor market. Women's labor supply in the household and outside of it contributes directly to growth through its role as a factor of production, while women's participation in labor markets has an indirect effect on growth as well, as we saw in Section II. Higher levels of participation in labor markets increase women's contribution to household resources and hence increase their control over the allocation of household resources, potentially affecting consumption, savings, and investment decisions. These effects are negated, however, when household commitments severely limit labor market participation. Blackden and Bhanu (1999) show that with greater voice, women would support policies and projects to reduce their household time commitments, thus strengthening their ability to participate in paid labor.[24]

Women's labor market participation is circumscribed not only by unpaid labor requirements in the household but also, discrimination, which remains a pervasive feature of many labor markets, especially in the poorest regions of the world. Following Becker (1971), various theoretical models have tried to explain the persistence of discrimination and how it can be consistent with competitive markets. Altonji and Blank (1999) examine various aspects of discrimination, including wage gaps between men and women that cannot be fully explained by human capital and other differences in the characteristics of men and women in the labor market. Tzannatos (1999) estimates that for selected countries in Latin America and the Caribbean, occupational segregation that channels women into certain areas of the labor force leads to a loss of productivity and output.

Labor markets in subsistence economies

For labor markets in lower-income countries, a number of studies have examined women's participation in subsistence agriculture or informal services, typically viewed as nontradable sectors of the economy. Collier (1988) lays out a framework for incorporating gender considerations into such a context, exploring the interaction of labor markets, real exchange rate changes (which he links to structural adjustment programs supported by the international financial institutions), and growth. He observes that in sub-Saharan Africa, export industries are dominated by cash crops, which tend to exclude women, and that the import-substituting sector is predominantly male. Hence women are largely limited to the nontradable sectors and this may lead to an inefficient allocation of women's labor, diminishing productivity and economic growth rates.

He argues that an increase in tradable prices tends to redistribute income away from women. He links increases in tradable prices to monetary and exchange rate policies associated with structural adjustment programs that lead to real depreciation of the exchange rate. Even though depreciated exchange rates may improve export incentives, he argues that this strengthening of export markets at the expense of subsistence agriculture may be

[24] In some developing countries, these can be as simple as ensuring a more proximate source of potable water.

accompanied by a shift in the control over household resources by diminishing women's share of household income. This shift in household resources could in turn shift household spending patterns away from expenditure that benefits women and children. He specifically encourages the incorporation of women into the tradable sector to ensure that women share fully in the benefits of economic reform and that their productive potential is realized.

Along the same lines, Haddad and others (1995) also examine the gender dimensions of structural adjustment on labor markets. They suggest that given women's role in the "unrecognized" economy, women are most sensitive to indirect effects of adjustment felt through changes in household resource allocation, some of which may be beneficial and others not. For instance, if a male worker loses a job, female labor force participation may increase. While greater labor force participation may increase the time burden on women, it also raises their share of household earnings and hence their influence in the household. However, in some cases, for instance the production of cash crops, women may be required to provide unremunerated labor to household production and may be induced to provide more such labor, in the context of structural adjustment, with the increased earning of the household accruing to men rather than women, with a potentially negative impact on women and children in the household. Hence the outcome depends on whether formal sector employment is available to women.

Haddad and others (1995) also examine indirect effects resulting from structural adjustment. Higher real prices resulting from devaluation of the exchange rate can have an indirect effect on the time cost of household activities. Women would need to travel longer hours to obtain lower prices, to produce more goods in the household, and to purchase less prepared and more time-intensive foods, all of which would add to the burden on their time and limit their opportunities for other productive labor. They also see labor mobility as key to the efficient allocation of resources and thus emphasize the importance of removing barriers to women's labor market participation.

In both these studies, the time dimension is focused on the short-term effects of exchange rate devaluation. However, over the longer term, economies that successfully adjust and achieve a sustainable economic growth path tend to experience real appreciation of their exchange rate and sustained economic growth. Hence the short-term increase in relative prices as a consequence of exchange rate changes may work to the disadvantage of women. But if they are given the opportunities to compete in the labor market and take advantage of economic opportunities, some of the more dire predictions may be mitigated.

Labor markets and export-oriented manufacturing

The globalization of the world's economy through trade liberalization is one of the foremost economic changes of recent times and has supported rapid economic growth in countries that have embraced it (Krueger, 1995). Trade liberalization has had an important effect on markets and in particular on labor markets. By breaking down developing countries' barriers to imports, trade liberalization supports a more efficient and competitive economic structure. Gender differences also influence the effects of trade liberalization on labor markets.

For many countries, especially those in the lower- middle to middle-income part of the income spectrum and transition economies, economic development, spurred in part by trade liberalization, has often been geared to the development of export-oriented manufacturing. Although these export-oriented enterprises encompass a wide range of economic activities, in the past they have often been concentrated in labor-intensive activities, such as textiles or clothing. Unlike traditional economic activities in these countries, export-oriented manufacturing has tended to provide a big impetus to the employment of women, who constitute the majority of workers in many such enterprises. The World Bank (2001) documents the importance of these activities in generating employment opportunities for women and helping to break down occupational segregation. While trade liberalization may also lead to a decline in import-substituting manufacturing in liberalizing countries, potentially offsetting to some extent the benefits of export-oriented employment, these industries have rarely employed women in the same numbers as export-oriented activities.

In a theoretical context, using a dynamic model, Erturk and Darity (2000) demonstrate that changes in the gender composition of the work force can undo the beneficial effects of trade liberalization on economic growth. They hypothesize that increasing the share of female labor as a result of trade liberalization has two effects: female participation in the formal sector reduces inputs of unpaid labor and so has a constraining effect on growth, while increased women's labor force participation has a positive effect on output through lower wages. The relative weight would vary from one country to the next. For developing countries, they argue that the first effect would be relatively more important, and in developed countries, the second effect. The analysis fails to take into account the fact that in developing countries rampant underemployment extends to women, and the additional labor input in formal markets is not likely to present much of a constraint to growth.

Kucera and Milberg (2000) present some empirical evidence on how trade liberalization alters relative employment of men and women. They find that in a number of developed countries, trade liberalization, leading to an expansion of trade with countries that are not part of the Organization of Economic Cooperation and Development, has led to declines in employment that have had a disproportionate effect on women. These results were mainly associated with changes in employment in textiles, apparel, leather and leather goods, where there is a high concentration of female employment. They observe, however, that trade liberalization has led to an offsetting increase in employment in developing countries, thus highlighting the positive influence of trade liberalization on women's employment in developing countries.

Similarly, Fontana and van der Meulen Rodgers (2005) observe that women tend to be clustered in industries in middle- and higher-income economies that have ultimately moved abroad to lower-wage countries. In developing countries, trade liberalization has thus led to an increase in the proportion of paid workers who are female. However, they argue that this change has also been accompanied by a growth in informal jobs.

Ozler (2000) examines the effect of trade liberalization on women's employment in Turkey in the early 1980s, during a period of trade liberalization in Turkey, using plant-level data. Her main finding is that the share of women in total employment in a plant rises with the

export to total output ratio of its sector, after controlling for other relevant determinants, including wages. She also finds that investments in machinery and equipment lead to a decline in women's share, suggesting that the employment gains may not be permanent but could be reversed as a consequence of technological development. Clustering of women in lower-skill labor intensive positions reflecting lower levels of investment in human capital and labor market discrimination relegating women to lower paid jobs.

Fontana and Wood (2000) incorporate gender into a computable general equilibrium model of Bangladesh and Zambia, in which they incorporate separate labor inputs for male and female labor, and extend the usual framework to incorporate home activities and leisure. They simulate the effect of changes in trade-related variables, and specifically tariff liberalization. The additional richness of the model facilitates an assessment of the differentiated effect of trade policy measures on women and men, including on wages and time allocation. They find that trade liberalization is more beneficial in Bangladesh than Zambia because of the higher female share of labor in export-oriented jobs.

Overall, these studies indicate that trade liberalization tends to have a beneficial effect on women's employment in developing countries where it leads to manufacturing. There are, however, several qualifications. The gains in formal labor must be offset against the loss of women's unpaid household labor and its potential effect on growth. In addition, these changes may not be permanent if rising wages reduce the incentive over the medium term to employ additional labor.

In addition to these studies focusing on employment, a number of studies also examine the impact of trade liberalization on wages, including the relative effects on the wages of skilled and unskilled workers (Mishra and Kumar, 2005). Relatively less research has examined the effect of trade liberalization on wage gaps between male and female workers. But a few studies have found a reduction in wage gaps as a result of trade liberalization. Black and Brainerd (2002) test whether the gender wage gap has declined in the United States as a result of greater openness by comparing wage gaps in competitive and in concentrated industries. They assume that changes in wage gaps in competitive industries are a control for changes unrelated to competitiveness pressure. They find that increased competition through trade contributes to the relative improvement in female wage in concentrated compared to competitive industries.[25]

Berik, Rodgers, and Zveglich (2004) examine how competition from international trade affects gender wage gaps. In contrast to Black and Brainerd (2002), however, they find that there is an increase in the gender wage gap in Taiwan, Province of China, in industries opening up to international trade. They attribute this outcome to competitiveness pressures from openness leading to a loss of jobs for women in industries that have traditionally had a high share of female employees, such as textiles and apparel, and this translates into less

[25] Razavi (1996) cites research findings that in Morocco and Bangladesh the wage gap between men and women is smaller in export-oriented sectors than in other sectors of the economy.

bargaining power over wages. Seguino (2000) finds that there may even be some offsetting benefit to wage inequalities in manufacturing in that it contributes to investment and to economic growth, which has benefits to women overall.

For economies in transition from central planning to market structures, Rama (2002) hypothesizes that market liberalization and the downsizing of state-owned industries would have an ambiguous effect on the gender gap in wages and employment growth for men and women. For centrally planned economies, capital-intensive industries might have biased employment toward men, and downsizing and a shift toward more labor-intensive industries could improve women's employment and wages. However, the introduction of market-based reforms would decompress wages, potentially increasing the wages of men, who tend to have better education. Rama (2002) examines the effect of public sector downsizing on women's employment in Vietnam during its transition. He finds that downsizing of the state-owned enterprise sector during the transition led to slow growth of women's salaried employment relative to men, which he attribute to downsizing in the public sphere, rather than to a decline in women's participation. However, over time, growth in the private sector in labor-intensive industries and those financed by foreign investment, were filling this gap. This period also showed a significant decline in the gender gap in earnings.

The results of a study by Jolliffe and Campos (2005) of changes in the Hungarian labor market between 1992 and 1998 are quite different, indicating that women benefited from a reduction in discrimination as a result of market liberalization. Specifically, they find that gender gaps in wages declined significantly during the period of transition in both the private and public sectors (including both public enterprises and the public administration). The differential was initially greater in the public sphere, narrowing over the transition period.

Thus we see that for countries in which trade liberalization in countries leads to a stronger manufacturing sector, there is a tendency for women's share of employment to increase through their concentration in export-oriented industries. In these cases there also appears to be a decline in the wage gap, although evidence for this is more tenuous.

In recent years, for the poorest economies, increased aid has emphasized the achievement of the Millennium Development Goals in a variety of ways. Aid inflows are seen as adding to the growth prospects of the economy by facilitating productive investment in the public sector, under the assumption that both men and women should benefit from these developments. However, it is difficult to manage successfully macroeconomic policies in the context of large increases in aid because the inflows may outstrip absorption capacity, potentially increasing inflation and /or appreciating the real exchange rate. These macroeconomic changes may have differential effects by gender.

In assessing the gender-differentiated effects of these aid inflows, it is important to distinguish the lowest-income economies, where subsistence agriculture and informal activities remains the norm for women, from more advanced economies. In subsistence economies, aid inflows, by putting upward pressure on exchange rates, would have opposite effects to the structural adjustment programs, discussed earlier. Real appreciation might thus disproportionately benefit women. In more advanced economies, where women may be

prominent in export industries, employment could decline and thus they would be disproportionately harmed.

Going beyond the labor market, however, if aid inflows contribute to domestic price inflation, more vulnerable households, particularly those more dependent on relatively fixed pensions or public transfers, would be disproportionately harmed. Typically, these households tend to be disproportionately headed by women. For those who cannot benefit from aid-induced changes in the labor market, aid-induced changes in price may have a detrimental affect on household well-being. In this context, it is essential when assessing the effects of aid inflows and the differentiated effect by gender, to consider the macroeconomic changes in growth and inflation, as well as the impact on labor markets.

Capital markets and financial liberalization

Gender inequality also has implications for the ability of women to benefit from financial liberalization. In recent decades, domestic and international financial liberalization has changed financial markets. The association of financial liberalization, and in particular, capital account liberalization, with several prominent financial crises highlights the potential costs and benefits of financial liberalization. Eichengreen and others (1998) suggests that capital account liberalization—and financial liberalization, more generally—is inevitable for all countries that wish to benefit from the global economy. However, they caution that financial liberalization has dangers, which can be limited through sound macroeconomic policies to contain aggregate financial imbalances and reduce financial disturbances, and through policies that ensure proper private incentives for risk management. The evidence linking financial liberalization to growth and to economic volatility is mixed (Bekaert, Harvey, and Lundblad, 2005).

Going beyond the microcredit initiatives, discussed earlier, several studies have looked at the effect of financial liberalization through the prism of gender, focusing on its effects on overall growth, labor markets, and access to credit. In an African context, Evers and Walters (2000) emphasize the importance of several important features outside of the household that interact with household patterns of behavior that constrain the response of African women to economic incentives. They observe that these factors include poorly defined property rights for women, which contribute to a lack of access to credit and other productive resources, poor transport facilities, and an organization of markets that is not conducive for women to reap the benefits of economic growth. They suggest that any strategy to improve the ability of women to respond to economic incentives should consider the role of these factors as well.

Floro and Dymski (2000) develop a model to capture some of the salient aspects of financial liberalization on households. In their model, financial liberalization leads to increased employment of women through economic growth and in some cases, a changing composition of the workforce. It also permits increased lending to households. These changes may lead to the acquisition of household time-saving assets but may also make households more vulnerable to a downturn. Hence they argue that financial liberalization has both direct and indirect effects and needs to be seen in the context of the potential for greater stress at times of economic downturns.

Braunstein (2000) develops a theoretical model to analyze the relationship between foreign direct investment, international capital mobility, and gender in developing economies. Her model shows how the relative burden of the costs of social reproduction in the household is a central determinant of women's labor supply and how alteration in the reservation wage for women can alter the profitability of investment, which influences capital flows.

Singh and Zammit (2000) also examine the gender dimension of international capital flows. They argue that instability induced by variability in capital flows may have differential effects by gender, depending on patterns of employment and the concentration of men or women in industries that are more cyclical or responsive to capital flow volatility. They suggest that women may be more vulnerable to losing jobs at times of economic downturn because of cultural attitudes that regard them as more marginal members of the work force. However, their evidence in this regard in developing countries is somewhat inconclusive. They observe that liberalization may have some beneficial affects for women including improved access to credit and the ability to repatriate funds from overseas.

Balakrishnan (2002) demonstrates another route through which foreign direct investment affects women's employment opportunities, focusing on the role of subcontractors in economic activity. She argues that foreign direct investment has led to an increase in subcontracting by final-goods producers, which in turn has led to greater use of smaller-scale, producers, often based in the home. Since these smaller-scale enterprises tend to use a larger proportion of female workers because they pay lower wages and are more poorly covered by labor regulations, one outcome of higher investment is an increase in women's employment.

These studies thus suggest that financial liberalization improves women's access to capital and has beneficial effects on economic and job growth, from which women as well as men can benefit. However, it also creates conditions for greater stress during economic downturns because the expansion of women's access to capital may also lead to higher levels of household debt.

Summary of the macroeconomic implications of gender inequalities in labor and financial markets

The forgoing discussion suggests that gender-based differences in behavior and in characteristics of the economy, such as labor market participation and access to capital, are important in the formulation of macroeconomic and microeconomic policies in developing countries. The removal of impediments to participation in the labor force—particularly in developing countries—is clearly important for improvements in economic growth. Moreover, attention should be paid to measures that might mitigate or offset gender specific disproportionate effects of exchange rate movements. The evidence suggests that overall, trade liberalization has improved employment prospects for women—consistent with improved prospects for growth overall—but that the effect on the wage gap is less clear.

The implications of financial liberalization are less clear-cut. Financial liberalization tends to lead to improved growth prospects and thus to job growth in the formal sector and also tends to promote greater access to credit and ease of repatriation of funds from overseas workers, all of which benefit women. But offsetting these beneficial changes, financial liberalization may make households more vulnerable to financial instability because of increased borrowing.

This analysis suggests the importance of assessing the gender-differentiated effects of macroeconomic changes, particularly in the context of economies where women cannot fully benefit from participation in the labor market. Trade and financial liberalization have direct effects that seem to benefit women, but indirect effects may mitigate some of these benefits.

V. Gender, Economic Instability, and Adjustment

Macroeconomic fluctuations are a pervasive feature of all economies but may impose greater hardship in developing economies, especially since external shocks may be more severe. Instability, often accompanied by fiscal and financial distress, may impose high social costs through high inflation that distorts or reduces asset values, reduced real wages, loss of employment and income, and cutbacks in government services. The costs imposed by economic instability, particularly through budgetary austerity, tend to fall most heavily on the poor, which as we have noted may often include a disproportionate number of women. We thus turn in this section to a broader focus on the gender-differentiated effects of economic instability and adjustment than in Section IV.

Fiscal austerity

Countercyclical fiscal policy is one means to cushion the impact of economic downturns and mitigate business cycles. Despite these benefits, Talvi and Vegh (2005) find that fiscal policy tends to be procyclical in developing countries, which they attribute mainly to political economy reasons that limit budget surpluses during good times because of pressure to increase spending. Developing countries have generally less scope for countercyclical policy owing to more limited ability to borrow in capital markets to offset declining revenues and support increased social safety net expenditures. In some cases, countries impose statutory limits on debt issuance that are inflexible to cyclical conditions. In addition, most countries limit government borrowing from the central bank to avoid inflationary pressures resulting from excessive monetary expansion.

Fiscal austerity measures, typically aimed at reducing a growing deficit, can take different forms. On the spending side of the budget, fiscal austerity often entails a reduction or elimination of consumer subsidies, often leading to an increase in the price of consumer goods and services. Exchange rate devaluations also generally pass through into an increase in the price of imported consumer items. To the extent that women take responsibility for ensuring that their households are supplied with food and other necessities, they and children in the household may be disproportionately adversely affected by cutbacks in subsidies on essential items. This is particularly likely in cases in which broad-based subsidies are simply

eliminated, without implementing generally advocated offsetting measures for the most vulnerable in the form of more narrowly targeted assistance.

Fiscal retrenchment also may entail the imposition of higher fees on government services, including education and health care, or else reductions in means-tested transfers to help poorer households cover these costs. Since, as noted earlier, female demand for education and health services appears to be more responsive to price and income shocks, females may be disproportionately affected by policy changes that increase prices or reduce incomes.

Fiscal retrenchment also may entail tax increases. In the short run, these increases are usually targeted to parts of the tax system where governments have the greatest flexibility, such as excises or tariffs on imports. In the longer run, these increases may also target broad-based taxes, such as the value-added tax or income tax. Although it is hard to generalize abstractly about the incidence of tax measures, a few generalizations are possible. An increase in excises or the value-added tax usually leads to an increase in consumer prices. For excises, these price increases would tend to fall most heavily on alcohol, tobacco, and petroleum products, which usually face the heaviest excises. For the value-added tax, the price increases would be more broad-based, and might not fall heavily on necessities, which are frequently exempted under this tax. Income tax changes generally have a complex incidence.

Relative to our discussion in Section II, the ultimate incidence of any of these changes—in subsidies, fees, or taxes—would depend also on the nature of household decision-making. For instance, increases in excise taxes on alcohol could have harmful effects on members of the household that do not consume it if demand for alcohol is completely insensitive to price increases, so that the price increase is shifted back to other purchases of the household. For alcohol and tobacco, this assumption is not especially unreasonable (Stotsky, 1997).

Fiscal retrenchment may also lead to a reduction in spending for government programs. Cutbacks in critical education and health services could have potentially significant effects on well-being, and ultimately growth, as discussed in the previous section. Cutbacks in a number of vital social services would have a disproportionate effect on women, who are its main beneficiaries, including maternal health care, and so on. Cutbacks in some areas, such as national defense, would have less direct implications.

A reduction in government services could also have secondary effects on the labor market. Fiscal retrenchment may lead to a substitution of unpaid (or non-market) work for now unavailable government services, and thus reduce the time available for other purposes, either leisure or paid employment. For instance, cutbacks in schooling may induce mothers to spend more time teaching their own children. Cutbacks in health care services may require women to devote greater time and effort to caring for the sick. The substitution effect of time use may be one of the most important—and largely unmeasured—implications of fiscal retrenchment.

Elson (2002) provides several examples of how certain kinds of spending cutbacks have in some instances fallen disproportionately on women. In Sri Lanka, reductions in the value of food stamps during the decade of the 1980s led to a decline in the real incomes of poor

households and, within those households, females bore the brunt of the food reduction, with relatively higher rates of malnutrition and declining birth weights. In Zambia, real per capita expenditure on health fall by 16 percent between 1983 and 1985, increasing travel distances and waiting time for health care treatment. As a result, Zambian women interviewed reported having to spend more time caring for sick family members, including time spent with them in hospital providing meals and nursing care, and had less time to spend on farming. The reduction in government services had a direct effect on accessibility to health care and an indirect effect on the level of income and allocation of time by Zambian women.

While instructive, these examples need to be supplemented by more research on the overall effect of spending cutbacks and not just the effect of specific cutbacks, as the impact of specific cuts may be offset by alternative fiscal policies. In addition, consideration needs to be given to the incidence of spending. If spending is regressive in its incidence and thus largely benefiting higher-income groups, cutbacks may not necessarily be as damaging to the most vulnerable households as might otherwise be expected.

The difficulties in separating welfare effects resulting from changes in fiscal policy and budgets from those resulting from changes in the economic environment limits the ability to draw firm conclusions about the gender-differentiated effects of fiscal austerity. Nevertheless, the available evidence suggests fiscal austerity programs should include an element of protection for the most vulnerable—a group that is generally disproportionately female. This is an area for which better data would allow for more systematic investigation.

Labor market fluctuations

While cyclical fluctuations are a pervasive feature of labor markets (Lilien and Hall, 1986), evidence from labor markets suggests that business cycles have a differential effect on women and men's employment and wages.[26] Unemployment rates for women and men tend to differ, with the gap between the rates of unemployment varying over the business cycle. In the United States, Jacobsen (1994, pp. 63-64) observes that unemployment among women was higher relative to that among men before the 1980s, while the gap narrowed in subsequent years. In general, during recessions men's unemployment rose faster than women's unemployment, thus reducing the gender gap in unemployment, and in economic upturns, men's unemployment dropped faster than women's, thus increasing the gap.

With regard to wages, Park and Shin (2005) find, using U.S. data, that men's wages exhibit greater procyclicality, which they attribute to men's disproportionate representation in occupations that experience greater wage procyclicality. Accordingly, wage gaps between men and women also tend to be procyclical. Further support for these results comes from Solon, Barsky, and Parker (1994) using longitudinal data, who find that men's wages and hours are more cyclical than women's. In this case, however, they attribute their results to women's more elastic supply of labor in combination with nongender neutral shifts in labor demand through the business cycle. There is less evidence from developing country labor

[26]See Humphries (1995), Ferber (1998), and Loutfi (2001) for collections of studies on women's role in the labor market.

markets. McIntyre and Pencavel (2004) make use of Brazil's annual household survey to examine the effect of macroeconomic turbulence on real wage levels and the wage structure in Brazil during the period 1981-1999. They find that when comparing real wage levels and gender wage differentials, changes in wage levels dominate year-to-year changes in wage differentials, which are relatively stable but show a declining trend.

Fiscal retrenchment associated with cyclical downturns may lead to transitory cuts in public sector employment and the privatization of public sector jobs. However, public sector employment, in general, tends to be less cyclical than private sector employment and may show a countercyclical, rather than procyclical, pattern.[27] Since the public sector is often a major employer of women in the formal sector, these features of public sector labor markets may insulate women to some extent from cyclical labor market fluctuations.

The World Bank (2001) examines the differential effect on men and women's labor market experience of the economic crisis in several major Asian countries in the 1990s. In Thailand, men's employment declined more than women's, because construction, which is dominated by men, was hit hardest, while the impact on wages was about the same. But unemployment rates remained higher for women before and after the crisis. In Indonesia, the labor market experienced somewhat different outcomes. The fall in real wages induced younger men and women to enter the paid sector of the labor force, while older men left. The result of these changes was an increase in the share of women in the labor force. The decline in average hours worked and wages was somewhat larger for women than men. In Korea, both men and women lost regular jobs but women's employment increased as daily workers (Chinery-Hesse and others, 1989, pp. 211-12). Wage effects were more similar for men and women in these countries during downturns, with wages declining in real terms. Lim (2000) finds that in the Philippines, the economic decline during the economic crisis in the 1990s increased men's unemployment more than women's.

The evidence suggests that in many countries, women's employment is more resilient than men's during a downturn in the economy. This outcome appears to result from several factors. Occupations that predominantly hire men may often be more cyclical and thus more severely affected by downturns, a good example being the construction industry. In addition, women tend to be more heavily represented in faster-growing industries that may be more resilient to business downturns, such as in the service sector. These differences may also reflect divergences in women and men's labor force participation rates, particularly if women are more likely to leave and re-enter the labor force as working conditions evolve. The evidence on the wage gap is more ambiguous, though some evidence suggests that it is procyclical and some that there is relatively little effect.

Economic instability may thus impose different effects on men and women, working primarily through the budget and the labor market. These effects do not necessarily imply a disadvantage for women. While the evidence would suggest that women may often be more greatly affected by budget austerity, this really depends on where spending cutbacks are

[27] See Freeman (1987); Kraay and Van Rijckeghem (1995); and Rodrik (2000).

concentrated and how revenue increases are obtained and the nature of household decision-making. In terms of labor market effects, women do not necessarily appear at a disadvantage in terms of employment and may be relatively more insulated from labor market changes. Few generalizations are possible and the empirical evidence scant in developing countries. The absence of good data that would enable some necessary disaggregation unfortunately limits these investigations.

Structural adjustment

Over the years, there have been a wide variety of critical assessments of IMF- and World Bank-supported structural adjustment programs. One strand of this literature examines these programs from the perspective of their differential effects by gender, typically finding that these programs have had a disproportionately harsh impact on women due largely to fiscal austerity measures and labor market contraction.[28] Although the topic itself is provocative and important, one shortcoming of much of this literature is that it generally fails to distinguish carefully the dislocations caused by the economic crisis that precipitated the program and the dislocations caused by the program itself. This distinction is not an easy one, in practice. Nevertheless, it is essential to providing a fair evaluation. Joekes (1989) notes the difficulty in obtaining the necessary gender-disaggregated data.

Some research explicitly considers the potential trade-off between the short-term effects of achieving stabilization and the longer-term effects of macroeconomic stability. This research recognizes that the harsh effects of short-term austerity may be counterbalanced over the longer term by stronger economic growth, which may lead to greater opportunities in education and other important areas of human capital development and in labor market participation for women. In this context, Chinery-Hesse and others (1989) suggest placing greater emphasis in structural adjustment on longer-term adjustment rather than short-term stabilization to mitigate the harshest effects of austerity on women. They also argue for incorporating measures to ensure that the most vulnerable people are protected against the full brunt of short-term austerity measures and that they are able to benefit from enhanced longer-term growth, an integral recommendation in IMF and World Bank programs.

The discussion by Collier (1998) and Haddad and others (1995) of structural adjustment programs suggested that when these programs lead to exchange rate depreciation and change the relative profitability of export-oriented versus subsistence agriculture, their effects work through several channels. These include changing the share of resources in the household that women control through the relative strength of different sectors in the economy. Their main conclusion is that limitations on women's ability to participate fully in the economy may limit the productivity gains from structural reform, an important conclusion that remains true, even as the form of adjustment programs evolves over time.

[28] See Cornia, Jolly, and Stewart (1987); Chinery-Hesse and others (1989); Joekes (1989); Afshar and Dennis (1992); Beneria and Feldman (1992); Aslanbeigui, Pressman, and Summerfield (1994); and Elson (1995).

Further to this point, Haddad and others (1995) note that some of the early structural adjustment programs included measures to impose or increase fees for education and to commercialize agriculture, both of which they see as serving to lower the private rate of return to education relative to the private rate of return to child labor and may have led to the withdrawal of girls from school, particularly if female labor is in high demand to increase cash crop production thereby requiring older girls to care for younger siblings. They thus emphasize the importance of ensuring that structural adjustment not lead to a reduction in the accumulation of human capital, especially by girls. Indeed, this recommendation seems to have found resonance in latter programs, which have avoided prescriptions to raise school fees.

In one of the few systematic studies of the effect of structural adjustment programs that examine the gender-differentiated effects, the World Bank (2001) examines how gender equality evolved in countries undergoing structural adjustment programs in the 1980s and early 1990s. This study uses a sample of sub-Saharan African countries, defined as "adjusting" and "nonadjusting," depending on whether the country ever took a structural adjustment loan in the 1980s from the World Bank. It finds that the trends in gender equality are largely the same between these two groups of countries. Both educational and life expectancy indicators improved. However, it concludes that structural adjustment programs did not appear to have outcomes that differed significantly by gender, independent of the effect on indicators of well-being that resulted from changes in the overall level of income. Similarly, Forsythe, Korzeniewicz, and Durrant (2000) do not find a significant effect of a composite variable representing debt restructuring and IMF program funding on gender equality.

A few studies have also examined the effect of structural adjustment programs on women's education. Rose (1995) finds that in countries with World Bank-supported adjustment programs, a slowdown in the increase in average female combined first- and second-level gross school enrollment rates is observed between the preadjustment and adjustment phase. A number of countries experienced an absolute decline in female enrollment rates in this period. For adjusting countries, a reduction in the average male enrollment rate led to a closing of the gender gap in enrollment, while for nonadjusting countries, an increase in both male and female enrollment rates led to narrowing of the gap.

Similarly, Buchmann (1996) finds that IMF-supported structural adjustment programs led to a reduction in female secondary school enrollment but had no significant effect on male enrollment, using a cross-section of countries in 1987. She measures the effect of structural adjustment and conditionality using a similar index as in Forsythe, Korzeniewicz, and Durrant (2000), where some longitudinal aspects are captured through the use of 1975 data for some variables and changes from 1975 to 1985 for other variables.

The IMF has not conducted any comparable study, though several studies shed light on the relationship of fiscal policy and social indicators. The IMF initiated the Poverty Reduction and Growth Facility (PRGF) in 1999 to increase the emphasis in low-income countries on pro-poor and pro-growth policies, fiscal flexibility, and better economic governance. A major review, undertaken in 2002, of PRGF-supported programs, summarized in Gupta and others

(2002a) finds that, in contrast to the criticisms of structural adjustment, the composition of budgeted and actual public spending is becoming more pro-poor and pro-growth, and education and health allocations as a share of total government spending are rising. In addition, spending shares for rural development and road construction as well as primary health care and education also rose. Many programs incorporate measures to improve the efficiency or targeting of spending. Programs incorporate flexibility in fiscal goals to accommodate higher spending on targeted areas as well as increase in public expenditure and budget deficits for countries that have stabilized the fiscal situation, and to accommodate more spending financed by foreign sources, including grants. Almost all programs emphasize improving governance through improved public expenditure management. This review did not focus explicitly on gender issues, though PRGF-supported programs are expected to report on the social effects of measures that could harm the poor and to include countervailing measures.

A wider IMF study covering 66 program countries, including 32 low-income ones, over the period 1985-2000, also finds that under IMF-supported programs, education and health spending has risen significantly. Since the year preceding the program, education spending increased by more than 1 percentage point of GDP and health outlays by about ½ of 1 percentage point of GDP in low-income countries, with a smaller increase in program countries as a whole (Gupta and others, 2002b). This translates into sizable increases in spending per capita in these areas. In addition, these increases have been accompanied by broad improvements in education and health indicators, particularly those associated with the Millennium Development Goals. For instance, primary school enrollment increased 0.8 percent per year and female primary school enrollment, 1.2 percent per year.

An evaluation of major programs in the decade of the 1990s encompassing Indonesia, Korea, Thailand, the Philippines, Turkey, Argentina, Mexico, and Brazil, finds that most of the countries recorded increases in poverty, loss of physical assets among the poor, rising rates of malnutrition, and a shrinking middle class, during the post crisis period (Ghosh and others, 2002). To counteract these hardships, IMF-supported programs incorporated measures to bolster social safety nets, including through targeted transfers, improved distribution or temporary price controls on key commodities, severance pay and training for laid off public sector workers, and civil works programs to provide employment. None of these programs, however, explicitly examined the gender-disaggregated effects.

Kraay and Van Rijckeghem (1995) examine the civil service effects of IMF-supported programs, finding that short-term stabilization programs have a negative impact on public sector wages, while medium-term structural adjustment programs have a negative association with public employment, but that there is no significant effect on wages, suggesting that the wage effect of the short-term programs is temporary.[29]

[29] In combination with Brazil's frequent recourse to stabilization programs in recent decades, detailed Brazilian labor market data could be used to investigate the effect of IMF stabilization programs, as separate from macroeconomic developments, on labor market outcomes for the labor market as a whole and for various components of the labor market, including women.

These studies, which are mainly anecdotal in nature, suggest that austerity measures accompanying early structural adjustment programs had a disproportionately harsh effect on women. However, research examining more recent programs in a systematic manner has not reached that same conclusion and has generally found little or a positive effect of adjustment programs on the relative indicators of men and women's well-being. From a policy perspective, the main implication is that structural adjustment programs need to be carefully designed to ensure that the harshest effects of fiscal adjustment and labor market retrenchment are offset through well-designed social safety nets and through macroeconomic policies that take into account the potentially harsher effects on women and vulnerable households. This may imply a different, perhaps more gradual, path of fiscal adjustment.

In this regard, the recent efforts to strengthen the PRGF are critical. The international financial institutions should use their influence through program and surveillance work to encourage the reduction of the limitations women face that prevent their full participation in markets. This can be achieved through the support of fiscal, monetary, and structural measures that contribute to the appropriate level of spending on public services, a fair tax burden that does not discourage socially worthwhile activities, and technical assistance in fiscal legislation—mainly in the tax area—and financial sector legislation that removes arbitrary discrimination against women.

VI. Summary of Survey on Gender and Macroeconomics

This survey of research on gender and macroeconomics points to a number of conclusions, with implications for macroeconomic policy-making. First, it highlights the importance of recognizing that systematic differences in the behavior of men and women may lead to different macroeconomic outcomes, particularly for such important macroeconomic aggregates as private consumption, saving, and investment, and for risk-taking behavior. It may also lead to different public choices with regard to the composition of expenditures, the structure of government programs, and the size of government. Women tend to devote a larger share of household resources to activities that benefit the household. In addition, they are more oriented toward productive saving and investment, though they are less likely to take risks in their saving and investment behavior. Their political empowerment leads to their support for a larger role for public insurance.

Altogether, these differences suggest that policies that shift resources to the control of women lead to beneficial behavior and strengthen growth while at the same time moderate economic volatility. Women are disproportionately harmed during periods of economic stress, further emphasizing the importance of appropriate policies.

Second, this survey highlights the importance of taking into account gender differences in assessing the sources of economic growth and in examining the impact of labor and product market changes, including as a result of structural adjustment, exchange rate changes, and trade and financial liberalization. There is a simultaneous relationship between gender

inequalities and economic growth. Gender inequalities reduce economic growth while at the same time economic growth leads to lower gender disparities.

In some countries, mainly those still based primarily on subsistence agriculture, inequalities in women's opportunities limit their ability to take advantage of beneficial macroeconomic and structural policies. This is a particular problem highlighted in research on sub-Saharan Africa. Where women are mainly limited to subsistence agriculture, exchange rate depreciation geared toward restoring external balance, can impose a relatively harsher adjustment burden on women. Where women have broader opportunities, including in export-oriented industries, this conclusion may not hold. In addition, it is important to separate the short-term from the longer-run effects in assessing the impact of changes resulting from structural adjustment. Longer-run effects may be more beneficial overall, if successful adjustment leads to higher growth and greater stability.

Trade liberalization has led to improved employment opportunities for women in many developing countries, with a somewhat more ambiguous effect on gender wage gaps. Exchange rate changes are also important in interacting with trade liberalization. Exchange rate depreciations in low- to middle-income countries where export industries are entrenched, would tend to benefit women by creating job opportunities, offset to some extent by wage effects. Financial liberalization has also improved economic opportunities for women, including through greater access to credit, but financial volatility that may be linked to financial liberalization also imposes at times a disproportionate burden on women.

Third, this survey highlights the need to address the criticisms of structural adjustment programs. It is essential to ensure that austerity measures, which may be essential to stabilize the macroeconomy and re-establish the conditions for sustained growth, do not impose an excessive burden on women and that efforts are made to mitigate the harshest effects of economic volatility through social safety nets and through an appropriate pace of fiscal adjustment. Recent programs, supported by the IMF and World Bank, support altering the pace of macroeconomic adjustment to take into account the need to mitigate the harshest effects on vulnerable households and the need for effective social safety nets, composed of both private and public elements. These programs also need to continue supporting legislative reforms, supported by technical assistance, to remove arbitrary discrimination against women that limits their ability to take advantage of improved macroeconomic (and microeconomic) environments.

This survey suggests a number of areas for additional fruitful inquiry. These include: (i) conducting further study at the macroeconomic level of how gender differences in behavior influence macroeconomic outcomes and whether macroeconomic policies can be structured to take into account those differences to help in achieving the goals of higher growth and greater stability; (ii) measuring and quantifying the influence of gender inequalities on economic growth and other economic markets and the simultaneous relation between gender inequalities and growth; and (iii) examining more systematically the gender-disaggregated effects of structural or other economic adjustment programs and whether changes in the composition of fiscal adjustment and other fiscal and structural policy measures can contribute to reducing gender inequalities and strengthening the outcomes of

economic adjustment by avoiding the harshest effects of austerity that often accompany adjustment.

There are several implications of this research to guide the work of the IMF:

- First, in the area of macroeconomic policy, gender differences in economic behavior may influence optimal fiscal, and to a lesser extent, monetary policies. In determining the pace and composition of fiscal adjustment, IMF programs already take into account the ability of the government, supported by civil society, to provide an adequate social safety net. However, it may also be important to sharpen the focus on the potentially harsher short-term effects of economic austerity and structural adjustment measures on women and to ensure that programs provide the needed support to avoid creating or exacerbating gender inequalities.

- Over the medium term and long term, policy advice should be designed to further reduce gender inequalities and ensure that women are able to take full advantage of the beneficial effects of macroeconomic adjustment.

- The IMF can contribute to reducing arbitrary discrimination against women in legislation in areas where it provides technical assistance, including tax and financial sector legislation.

- It would be useful to take a more systematic look at the gender-differentiated effects of IMF programs, using data from the 1990s and early 2000 period.

The Role of the International Community and the Millennium Development Goals

The international community has committed itself to the achievement of the Millennium Development Goals, which aim to halve extreme poverty in the world by 2015. These goals entail a strong commitment to gender equality, which is seen as an important social objective in its own right and contributing to the achievement of the key economic objectives (Box 1).

Box 1: The Millennium Development Goals

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Goal 3: Promote Gender Equality and Empower Women

Target: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Indicators:
Ratio of girls to boys in primary, secondary, and tertiary education
Ratio of literate female to males of 15-24 year-olds
Share of women in wage employment in the non-agricultural sector
Proportion of seats held by women in national parliaments

Source: United Nations, United Nations Millennium Declaration, 2000

The target of the Millennium Development Goals that specifically relates to gender equality is mainly associated with eliminating gender inequalities in primary and secondary education. However, the roadmap for these goals includes other indicators of equality such as literacy rates, the share of women working in nonagricultural jobs, and the proportion of seats women hold in national parliaments, which suggests the importance of a many faceted approach to removing gender inequalities (World Bank, Gender and Development Group, 2003)..

The role of the international institutions

International institutions, governmental, and nongovernmental organizations have all contributed to putting gender and poverty reduction on the development and macroeconomics agenda.

The IMF's direct role in this area has so far been limited, though the scope for it to play a useful role is discussed in an unpublished note (Heller and Lueth, 2003). This note suggests that the IMF and the World Bank should make the Millennium Development Goals the key framework to underpin the Poverty Reduction Strategy Papers (PRSPs) and in the IMF's case, to shape Poverty Reduction and Growth Facility (PRGF)-supported programs, which are targeted at low-income countries. The authors indicate that PRSPs increasingly provide a broader coverage of these Millennium Development Goals indicators, including a disaggregation by gender. So far, however, no IMF study has examined systematically the influence of IMF programs by gender.

The World Bank is one of the institutions at the forefront of these efforts, and a series of evaluations of the Bank's work concluded that attention to gender enhances its effectiveness (World Bank, 2002, p. 11). The World Bank undertook in the 1990s several organizational changes to increase attention to gender, including ensuring a more complete treatment of gender issues in Country Assistance Strategies (CASs), issuing an Operational Policy on the gender dimension of development in 1994, and creating a Gender and Development Board and placing it within the Poverty Reduction and Economic Management Network in 1997. The Bank continues to work with governments, civil society, and donors to diagnose gender-related barriers to poverty reduction and sustainable development. This process relies on the preparation of multisector, periodic Country Gender Assessments (CGAs) that analyze the gender dimensions of development, respond to this in the Bank's country assistance program, and monitor implementation and the result of policy and operational interventions. The content is tailored to the circumstances of each country. As of the end of fiscal year 2003, the Bank had prepared 25 CGAs, which have contributed to the Bank's work in these countries.

The Bank has also incorporated gender into sectoral analytical work and country assistance strategies (CSAs), and the criteria used to assess the poverty reduction focus of Poverty Reduction Strategy Papers (PRSPs) in the joint staff assessments of the IMF and Bank (JSAs) and in the PRSPs, themselves (World Bank, 2002, 2004; Moser, Tornqvist, and van Bronkhorst, 1999). World Bank (2004, p. 11) lists good practices in integrating gender in core diagnostic sectoral analysis. These include disaggregating all available data by sex, linking gender issues across sectors, identifying actions to correct gender inequalities, and conducting gender analysis of the budget in the context of public expenditure reviews.

With respect to PRSPs, the World Bank (2004, p. 16) describes successful practices used in South Asian PRSPs to integrate gender. In Bangladesh, the Bank, together with the Ministry of Women's Affairs and other donors, facilitated the establishment of a platform of gender issues to incorporate into the PRSP. This platform was used to develop an action plan and a road map for the full PRSP. In Nepal, the Bank was able to get the government to identify social inclusion as one of the four pillars of the PRSP through dialogue and the provision of

background analysis on gender, caste, and ethnic inequalities in income, human development indicators, and political participation. In Pakistan, the Bank encouraged an active gender dialogue with special focus on political participation, poverty reduction, and strengthening of institutional mechanisms. In Sri Lanka, the Bank supported the government's strategy on gender as part of the PRSP process, resulting in increased emphasis on the protection of women's rights, introduction of an employment policy to promote equal training and employment opportunities for women, continued support for entrepreneurship programs for women, greater support for victims of gender-based violence, specific rehabilitation programs targeting women affected by conflict, and the introduction of gender sensitization programs for the public and private sectors.

The World Bank (2004, pp. 26-28) has identified priority areas for implementing a gender mainstreaming strategy: first, making greater use of partnerships; second, increasing attention to gender issues in core diagnostic studies; third, increasing attention to gender issues in lending operations in key sectors beyond the human development sectors; fourth, creating an enabling environment for engendering development through increased emphasis on capacity building; fifth, moving from measuring progress largely in terms of outputs to measurement of outcomes; and sixth, adopting a plan to complete CGAs for all member countries which have an active lending program in the medium term.

Other institutions have contributed greatly to bringing gender considerations to the fore. These include the Commonwealth Secretariat, the United Nations, through various bodies including the United National Development Fund for Women (UNIFEM), the Division of the Advancement of Women of the Department of Economic and Social Affairs, and the United Nations Development Program (UNDP), the OECD, and the European Union.

Microeconomic Evidence on Gender Differences in Behavior

Education

Gender-based differences in behavior are especially pronounced and important with regard to education decisions within the household. An extensive literature has examined the economics of education decisions, in a developing country perspective (Behrman, 1999, Schultz, 2002, Glick, Saha, and Younger, 2004). In the standard formulation, demand for education reflects price, income, and taste or culture variables, and the price is composed of both direct and indirect components of cost. The direct costs of education have several components, including the direct monetary costs and the opportunity cost of time.

The monetary costs may in some contexts be the same between males and females and in others, they may differ, for instance, the costs of uniforms or materials required for school. The opportunity costs of time generally differ between males and females, especially when children play an important economic role in the household. For instance, in many cultures, girls are expected to help care for younger siblings and help with housework, hence there may be a significant opportunity cost to their time spent in school. In addition, in some countries, even very young girls are used for certain types of labor. In some countries, boys may also play an important economic role, especially in caring for livestock. Thus it is hard to generalize. Nevertheless this is an important factor in discouraging parents from sending their children to school.

The direct costs of education vary, depending on the ability of the country to fund public education. These costs may often be prohibitive, especially in the poorest countries in the world where even though the monetary costs may not be high, they may still be prohibitive to households with little excess cash income. Hence these costs may also discourage parents from sending their children to school, and since girls may often be a lower priority, such costs would have a more prohibitive effect on girls' schooling.

The supply of education reflects the availability of schools, teachers, and other facilities, reflecting both public and private alternatives. Where the public sector is well funded, schools are typically one of the major expenditures of government. However, in poorer countries, public spending on education may be relatively small. Private alternatives exist in some countries, but these are usually available to only a small group of higher income households.

Gender inequalities in education are a result of supply and demand factors that interact with cultural considerations to limit the opportunity of females to gain an education. In some developing countries, the supply of education is strongly affected by the availability of a culturally acceptable environment for educating females. Although there may be access to schools in principle, in some cultures, schools would have to be outfitted in a culturally appropriate way before parents would allow their daughters to attend. For instance, girls might need to be taught by female teachers or segregated from males. Cultural considerations also influence the demand for schooling. Where parents are limited in their ability to benefit financially from their daughters' education (for instance, by requiring daughters to turn over

some part of their income meet household expenses), they may be less inclined to invest in the education of their daughters. Cultural norms vary, but in some cultures, girls become part of the household of their spouse, thus reducing their economic usefulness to parents. Boys are seen as a form of insurance in old age, one of the key reasons for the strong preference for boys indicated by the "missing women" phenomenon (Sen, 1989). Religious attitudes may play a significant role in determining parents' tastes for schooling for children.

Schultz (1995) notes that parents may not invest in an efficient amount of education for their children because they expect the private rate of return on this education to be low relative to the rate of return on other investments. Even if they perceive the expected return to be competitive with alternative investments, they may not choose an efficient level of education because of risk aversion or credit constraints that limit their ability to borrow to pay for their children's education.

From a social perspective, apart from the private benefits, there are also significant external benefits from educating females. Higher levels of education for females are associated with better health and nutrition, reflected in longer life expectancies and reduced child mortality. Glewwe (1999) and Christiaensen and Alderman (2004) find evidence of the beneficial effect of mother's education on their children's health. Female education also tends to promote reduced fertility, and interacts with other cultural factors to encourage parents to invest more in the human capital of their children. Weir and Knight (2004) find in the context of Africa, the benefits of education diffuse through social networks. They find, using survey data from Ethiopia, that the majority of farmers say they were influenced in their decision to adopt modern inputs by someone of the same gender. The evidence is thus clear that the benefits of increased education, although internalized to some extent, also spill over to the society. Unfortunately, the external benefits are hard to quantify, but they form a critical part of the argument for using public subsidies to reduce gender inequalities.

Schultz (2002) concludes that there is "mounting empirical evidence from around the world that the social returns to the years of schooling of females are greater than the returns to males….there are few instances in international quantitative social science research where the application of common statistical methods has yielded more consistent findings than in the area of gender returns to schooling." Further he notes that the regions of the world that have achieved the most economic and social progress over the past several decades are those—among other things—that have most successfully promoted equal educational achievements for males and females.[30]

Health care

Gender inequalities in investments in health are harder to measure since biological differences between males and females could lead to different nutritional requirements and different needs regarding use of health services. For instance, women in their childbearing years generally require more health care than men. Schultz (1995) notes, however, that in

[30] Also see Schultz (1997); Klasen (1999); World Bank (2001); and Abu-Ghaida and Klasen (2004).

general, there has been a significant advance in female longevity relative to male longevity in the twentieth century in most countries, with the exception of some countries in South Asia, reflecting reduced inequalities in health care access (and even South Asia now appears to be catching up). However, the measurement of a significant number of “missing women” suggests that at least in some countries, gender inequalities in health still lead to excess mortality.

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