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THE INFLUENCE OF WOMEN'S STATUS
ON ECONOMIC DEVELOPMENT: A
POOLED TIME SERIES CROSS-SECTIONAL
ANALYSIS OF 126 COUNTRIES, 1980-2005

Lynzie Rowland

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**THE INFLUENCE OF WOMEN'S STATUS ON ECONOMIC DEVELOPMENT: A
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COUNTRIES, 1980-2005**

by

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THESIS

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ABSTRACT

The role of women in development has generated countless studies devoted to illuminating distinct aspects of women's lives and experiences. Several theories, developmentalism and social feminism, were created as a response to modernization theory's inattention to the roles of women in the process of development. Developmentalism has focused on the influence of the improved status of women on economic development. This study examines this association from the developmentalist perspective for 126 countries every five years between 1980 and 2005. Additionally, this paper investigates the linking mechanisms of women's status to economic development. Secondary data acquired from the World Bank website was used to assess this relationship using a pooled time series cross-sectional analysis with two way fixed effects. My findings indicate that "the" status of women does not exist. However, several aspects of women's lives and experiences (education, employment and reproduction) have an influence on economic growth. Women's fertility and infant mortality rates were found to mediate the effects of female secondary schooling rates and female labor force participation rates on economic development.

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CHAPTER 1: INTRODUCTION

Ester Boserup's (1970) pioneering book, *Women's Role in Economic Development*, was one of the most influential works of its time, addressing women's position in the public sphere as well as highlighting their contributions within the economic realm. Boserup's work challenged several of the assumptions of the leading perspective of the time, modernization theory, particularly the notion that development was beneficial to all. Instead, she argued that women (as well as some men) have been marginalized by the process of development, with men receiving the majority of the advantages. Boserup highlighted the regional variation in "women's work," and emphasized the division of labor along gendered lines. Additionally, she examined how these gendered divisions of labor interacted with colonialism, underscoring that it often resulted in the erosion of women's status (Beneria and Sen 1981). Boserup brought women into the development discourse, underscoring that women play an important role in the development process, and overviewing their contributions and conditions within the economic sphere. Boserup's novel work inspired a new perspective devoted to critically examining the role of women in development—developmentalism, or the women in development (WID) school (Elliott 1977).

Developmentalist scholarship has highlighted women's roles in economic development, scrutinized policy implementation and its influence on women, and recognized the general deterioration of women's status due to colonialism. Developmentalists underline that women's productive roles have diminished,

increasing their reliance on a male income and their symbolic exclusion from the economic sphere (Boserup 1970; Tinker 1976; Blumberg 1981). While women produce three-fourths of the world's food, they have increasingly lost the rights to the ownership of their lands, or have seen a move from community to private male ownership, while men have been targeted for improved education and advances in agricultural technology (Tinker 1976). Ignoring women's traditional roles in production has diminished women's societal position.

The focus on women's contributions to development has led to a number of important results, most significantly the attempts of global governance institutions (United Nations, World Bank, and so forth) to integrate women directly into policies and projects aimed at improving social and economic development. The most noteworthy example is the Millennium Development Goals (MDGs)—global objectives created by the United Nations to improve social welfare in the developing world through reduced poverty, improved overall health, increased education levels and the improved status of women.

Despite increasing attention given to the role of women in economic growth, most scholarship continues to conceptualize women's status as an outcome of economic development while largely ignoring the converse or the reciprocal relationship between the two (Thomas 1993; Richards and Gelleny 2007; Gray et al. 2006). Although the WID literature provides a compelling counter-argument to modernization theory, scholarship within this perspective has predominantly been descriptive (Hill and King 1993). Studies that have provided a more sophisticated empirical analysis of the relationship between

women's status and economic development have operationalized women's status on the basis of gender deficiencies, rather than the absolute position of women (Klasen and Lamanna 2009; Klasen 2005; Clark and Clark 2004; Schultz 2002; Hadden and London 1996; Hill and King 1993; Benavot 1989). An up-to-date statistically sophisticated analysis is needed to adequately assess the influence of women's status on economic development. Pooled time series cross-sectional analysis is one of several appropriate methods to rigorously assess this relationship.

This study makes several contributions to the existing literature. To my knowledge, this is the first pooled time series analysis to assess whether women's status influences economic development. Moreover, I examine the causal mechanisms of this relationship by investigating whether several different components of women's status influence development. Another contribution is that this analysis incorporates several measures to assess the status of women—education, labor force participation, fertility and infant mortality. Solely using female labor force participation or education rates does not encapsulate women's status; instead these are different dimensions of the complex aspects covered by the global concept, women's status. I draw upon several conceptual frameworks to investigate the influence of women's status on economic development: modernization theory, developmentalism and socialist feminism. This paper begins with a general discussion of these frameworks, and delineates how women are integrated into the development process according to each framework. The models I test in this analysis, drawn from modernization

theory and developmentalism, are presented in this section, followed by an examination of the literature on economic development, women's status, education, labor force participation and reproductive roles. Data and methods are discussed next, followed by a discussion of my findings, implications of the results and concluding remarks.

CHAPTER 2: LITERATURE REVIEW

Conceptual Framework

Modernization theory reflects the liberal view point of development as a progressive linear process that transforms developing countries from unequal “traditional” societies to more egalitarian “modern” economies. Modernization theory considers the Western model (specifically the U.S.) as the “ideal” model of development. Less developed countries will hopefully follow this “universal” trajectory, reaching the desired outcome of economic development through modernization (Tipps 1973; Heo and DeRouen 2002; DeViney and Crowley 1978: 24). However, if countries are unable to develop according to this model, traditional attitudes and beliefs are blamed for producing underdevelopment a “backwardness” that prevents them from modernizing (Tipps 1973).

Modernization theory considers gender inequities to be incompatible with modernization and the capitalist mode of production, but assumes that they’ll be resolved through educational and legal reforms as a society modernizes (Jacquette 1982; Bandarage 1984). Any inequalities in the system are based on differential achievements, rather than ascriptive statuses such as race or gender (Jacquette 1982; Bandarage 1984). Women’s access to the public sphere is aided through technological innovations, which helps to “level” the playing field between men and women through improved education and consequently guarantee both genders’ equal entrée into the labor force. Any differences in the assimilation of men and women into the system are viewed not as a failure of the

system, but as a sign that women need to be better integrated into it (Jacquette 1982).

The process of modernization is viewed as an overall progressive force, often benefiting women more than men due to their limiting roles within “traditional” societies. According to this school of thought, it is the traditional attitudes and social structures within developing societies that continue to produce sexual inequality and underdevelopment. Likewise, it is the process of modernization which will solve women’s subordination by promoting legal reform and improved education (Bandarage 1984). This framework assumes that women’s primary roles are within the reproductive realm, although in modern societies women are freer to enter or leave the productive sphere than their counterparts in traditional societies (Tiano 1984). Lower rates of female labor force participation are not a reflection of restricted access, but rather a result of the lack of desire to take part in the workforce or to develop the necessary qualifications to compete in the modern labor market. It is assumed that since women’s wages are not the sole support of their households but merely provide supplementary incomes, women only work if they wish to (Tiano 1984). Modernization theory suggests that besides legal reform, education is the only necessary and sufficient condition for ending systematic gender-based discrimination. Once their levels of education are equivalent to those of men, women will have the same opportunities and access to social institutions as men.

The women in development (WID) perspective was created as a response to and critique of modernization theory. Boserup’s pioneering book, *Women’s*

Role in Economic Development (1970), criticizes several aspects of modernization theory, especially the assumption that women inevitably benefit from economic modernization and technological advancement. Instead she argues that women have been marginalized as their societies have developed. Boserup argues that technological advancements have decreased women's status by diminishing their access to productive roles (1970). Reduced female access to the centers of socially-valued production is a consequence of transplanted colonial ideals about the gendered division of labor. In cultures where a strict sexual division of labor existed in agriculture (as in many parts of Asia) gender divisions were reinforced by colonialism; cultures without strict divisions of labor (as in much of Sub-Saharan Africa) became more rigid in their gendered division of labor (1970).

Developmentalism focuses on women's economic participation, which is often concentrated in peripheral occupations (Bandarage 1984; Buvinic et al. 1983). Moreover, the WID School has recognized the negative influence that colonialism has had on the status of women. Developmentalists argue that women have been marginalized in the process of development through the deterioration of their productive roles (Boserup 1970; Tinker 1976). In subsistence economies, both men and women relied upon one another and were dependent on the contributions each made in both reproductive and productive spheres (Tinker 1976). However, with the introduction of capitalism, women's productive roles were diminished, resulting in restricted access to the economic sphere and a reliance on a male wage (Blumberg 1981). The loss of land and

diminished access to capital has reduced women's incentives to further cultivate farm land and crops (Tinker 1976). Additionally, the modern economy has drawn men away from their households, which has often resulted in female labor absorbing the additional workload (Tinker 1976). Thus, progress in development has not always led to improved productivity (Tinker 1976, 26).

While the developmentalist framework is a critique of the inattention of modernization theory to the plight of women under the capitalist economic system, it continues to uphold some of the basic tenets of modernization theory, regarding the West as the model of economic development for the rest of the world and perceiving underdevelopment as the result of "traditional" values (Bandarage 1984). According to this framework, women's status may be improved through equal participation within the system once sexual discrimination and male superiority have been addressed (Boserup 1970; Jacquette 1982; Bandarage 1984). Developmentalists view labor force participation, along with education and legal reforms, as essential to the improvement of women's status and the end of gender discrimination (Jacquette 1982). Proponents of this school of thought seek to spread to women the benefits men receive under modernization by improving the existing system, and they are optimistic that such reforms can be effective. Boserup and the WID School largely regard women's status as a key contributor to socioeconomic development.

Other feminist theorists feel developmentalist reforms do not go far enough. Socialist feminism developed out of the feminist and Marxist

perspectives, linking both capitalism and patriarchy as sources of the subordination of women. Patriarchy and the capitalist mode of production interact in a dialectical manner, simultaneously enforcing and constraining one another, and creating social hierarchies (Nash 1985). The sexual division of labor within capitalism relies on an ideology of segmentation of work based on perceived “natural” distinctions (Mies 1986). This perspective deconstructs the gendered division of labor in terms of the reproductive and productive spheres. Women’s work is typically defined within the reproductive sphere, often as “unpaid labor,” and is seen as a “natural” extension of the female role, which is not considered “real work” (Glenn 2002, 71). Productive labor, which takes place within the economic sphere, is valued within capitalism and receives monetary compensation. The labor force, within the economic sphere, is propagated and supplemented through the unpaid labor supplied by women in the domestic realm (Tiano 1984; Nash 1985; McDonough and Harrison 1973).

Women continue to be defined by their reproductive roles within both spheres of production. While participating in the capitalist realm, women are often confined to low-paying, menial, and routine jobs, and are frequently employed in domestic positions (Mies 1986; Nash 1985). By symbolically relegating all women to the domestic realm and defining them in terms of their reproductive capacities, companies are able to justify paying them lower wages because their incomes are seen as supplementary to the wage of the “male breadwinners” in their households (Mies 1986). Both modernization and developmentalist theorists view female marginalization as reflecting the failure to

properly integrate women into the productive sphere, albeit through different pathways (Jacquette 1982; Bandarage 1984).

Socialist feminists consider the subjugation and exploitation of women (and other groups) to be essential to the continuation of the current capitalist economy (Nash 1985). By defining women's primary role as anchored firmly within the domestic realm, women not only supplement and reproduce the labor force, they also serve as a reserve army which can be quickly added or removed within the economic sphere of production (Tiano 1984; Tiano 1994; Nash 1985). According to this framework, women's status may be improved through increased levels of education and better access to the labor force. However, these improvements are necessary but not sufficient under this framework. Improved levels of education will not increase status if there are no jobs available (Rothstein 1985). Likewise, mere access to the labor force will not necessarily reflect an increase in women's status as long as women are confined into low-wage, unskilled, and part-time jobs due to their secondary status. Socialist feminists believe that the quality and condition of employment must also be considered.

Modernization theorists view the improvement of women's status as a natural outcome of economic development. Modernization improves the well-being of both genders; women benefit more because they are farther behind. As Third World economies transition to modern economies and value systems, Western ideals will diffuse into these "traditional" cultures and create more "egalitarian" societies. Modernization theorists view the relationship between

economic development and general well-being to be reciprocal. Economic development improves women's (and men's) status, and in turn the increased status of women (and men) promotes further economic development. However, when modernization theory assesses the dynamic of the influence of women's status on development it emphasizes labor force participation and education. In a truly "modern" society, once "traditional" inequalities based on ascription were eliminated, all that would be needed to attain equity between men and women would be to provide equal access to education (Tiano 1984). This would fully integrate women into the capitalist system, allowing them to access the same opportunities as men. This school of thought views labor force participation as a key driver behind economic growth. Economic growth is promoted through increased human capital. A greater number of individuals in the labor pool allows for the best applicants to be drawn into the labor force, improving productivity and profitability. At the individual level, greater household income leads to increased consumption of goods and services, further fueling the economy. I will refer to these two processes as the individual and aggregate growth models.

While developmentalists also view the economic development- women's status relationship as reciprocal, they most often model women's status as an independent variable influencing economic growth. Much of this literature has focused on the positive influence of the improved position of women on economic development (Boserup 1970; Jacquette 1982; Bandarage 1984). As women's status improves, thereby "leveling" the playing field between men and women,

the odds that the best applicants will be employed in the productive realm increase, which strengthens the developing economy. Additionally, women tend to spend more of their income in the household, resulting in greater investments in the next generation and an overall healthier family. As opposed to modernization theory which conceptualizes development as a linear, progressive process, developmentalism sees it as irregular and underscores that the transition to the modern economy has in reality marginalized women. Like modernization theorists, developmentalists believe that women can be better integrated into the productive realm through improved education and labor force participation (Boserup 1970). While modernization theory views this outcome as an inevitable result of modernization, the WID School highlights the need to eradicate sexual discrimination and male supremacy for women to achieve these gains (Jacquette 1982). Developmentalists view increasing female education and labor force participation as a means of alleviating poverty and promoting economic growth. Both modernization theorists and developmentalists expect high fertility and child mortality rates to impair economic growth and augment poverty; however, modernization theorists have been criticized for over emphasizing women's fertility (Blumberg 1975).

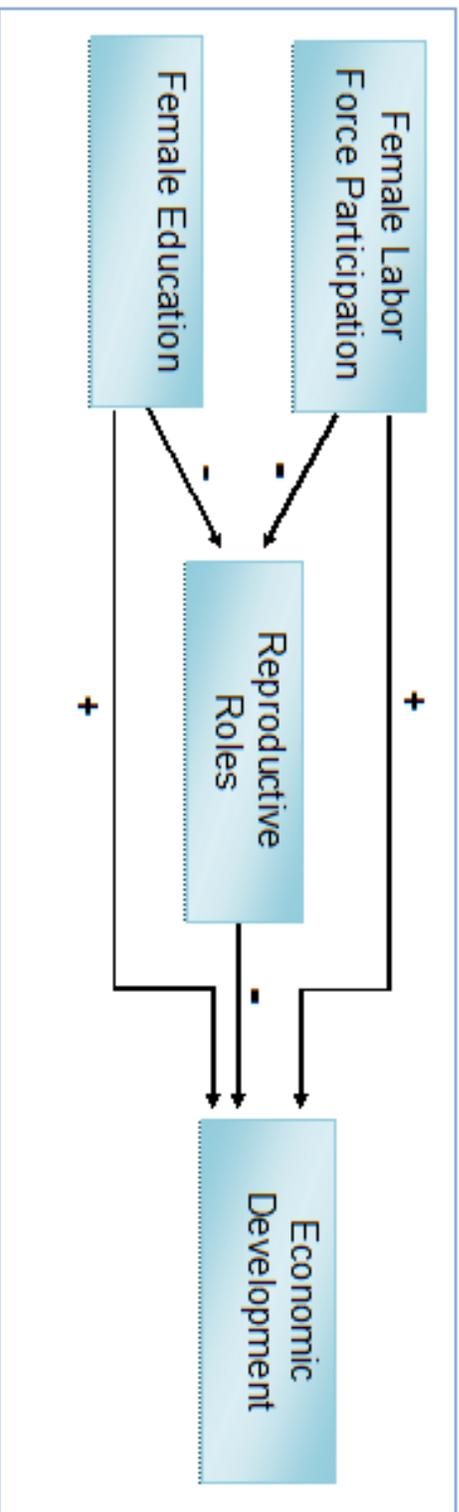
Socialist feminism critiques the liberal view points of developmentalism and modernization theory, and questions the capitalist economy's role in perpetuating inequality. This is a useful framework to consider while examining the links between women's status and economic modernization, as socialist feminism considers women's secondary status to be a result of the interaction

between patriarchy and capitalism. This school of thought considers increased levels of female education and labor force participation to be a necessary but not sufficient condition for alleviating female poverty and improving women's well-being. Contrary to the liberal view point, socialist feminists regard women's secondary status not as a failure to be properly integrated into the patriarchal and capitalist system, but a reflection of the broader inequities that maintain the system. Women are essential to many developing societies' economies and are central to the survival of their families (Bandarage 1989: 499). Socialist feminists view the capitalist mode of production as exploitive, and argue that inequality can only truly be eradicated through a transformation of the system.

I will employ these three frameworks throughout my analysis in order to better conceptualize, examine and interpret the interactions among the factors that link women's status and economic development. FIGURE 1 illustrates how I model the relationship between the status of women and economic development in this analysis¹. This figure demonstrates a cumulative model which blends these frameworks to conceptualize the effects of women's status on economic development. The following sections discuss economic development as well as highlight the empirical interactions between the independent variables and economic growth.

¹ FIGURE 1 assumes that women's status decreases women's reproduction and that data seem to support this: employment decreases fertility and that education decreases infant mortality rates.

FIGURE 1: Cumulative Model of the Influence of Women's Status on Economic Development



Economic Development

Economic development is the process where low income agricultural or resource dependent national economies transform into prosperous modern industrial economies. Countless studies have been devoted to investigating the determinants of economic development, but these findings have often been contradictory and inconclusive. Despite the lack of a clear unified theory, there are several perspectives that discuss the processes of growth. The neoclassical perspective presumes convergence of development across countries while the competing perspective argues for divergence among countries on the basis of political and cultural features (Meyers et. al 1975). The convergence perspective assumes that countries will become similar to one another over time with respect to related characteristics. Developing countries can take advantages of technologies generated in developed nations, allowing for developing nations to achieve rapid development and catch up to developed nations (Peacock et. al 1988, 838). This perspective argues that a country's level of growth is inversely related to its initial income level, meaning that poor countries grow faster than rich countries (Solow 1956). In contrast, the divergence perspective argues that countries may diverge in several important ways. Rather than converging, developing countries' path to development may deviate from the Western model, may not occur at all, or may not achieve the level of developed nations (Peacock et. al 1988). These dynamics may coincide simultaneously, with countries converging in some aspects and diverging in others (Meyers et. al 1975). Convergence and divergence are seen as a result of larger global dynamic or

world-system theory. World-system theory classifies nations into three zones: the core, semi-periphery and periphery, where capital flows from the periphery countries to core nations (McMichael 2008). World system theory predicts economic divergence between each zone, and convergence within them (Peacock et. al 1988, 839).

While these frameworks offer several perspectives toward development, the vast literature on economic development does not agree on a standard set of variables that predict growth. A compelling case is provided by Sala-i-Martin (1997) which demonstrated nine variable headings (22 variables overall) that consistently predict economic growth. I will discuss each determinant of growth incorporated into my analysis.

Level of investment has also been identified as a determinant of growth. Diminishing returns to reproducible capital results in low income countries growing at a faster rate than high income countries (Levine and Renelt 1992). However, this is conditional to countries which are structurally similar. Poor countries may not grow faster than rich countries if other factors are at work, such as a political regime hostile to outside trade or investment. A country must also be receptive to the diffusion of technological advances for convergence to occur.

The relationship between political structure and level of economic growth has also been explored. Research has focused on how political regimes affect national economies and their growth potential (Kreickhaus 2004; Barro 1996; Sachs and Warner 1995; Helliwell 1994; Arat 1988; Lipset 1960; Lipset 1959).

Earlier scholarship has shown democracy and economic to be positively associated (Lipset 1960; Lipset 1959; Shannon 1958). Lipset demonstrated democratic countries to be more likely to have higher levels of average wealth, education and level of industrialization (1960, 33). More recent studies have shown democracy to have a more ambiguous association with economic growth (Kreickhaus 2004; Helliwell 1994; Arat 1988). Democracy may spur growth through innovations in business, technology and knowledge, but also may impede development through increased national spending and diverging political interests (Kreickhaus 2004). Kreickhaus has shown the relationship between democracy and development to be a complicated one, with democracy negatively influencing development in the 1960s, positively impacting development in the 1980s, and not influencing growth during the 1970s and 1990s.

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Openness to trade has also been associated with increased levels of growth. Openness to trade allows for transfers of goods, technology, and

knowledge across borders. This allows less developed countries to come into contact with innovations that they would not have been able to develop until a later date (Petraikos and Arvanitides 2008). Openness to trade also allows for greater competition and the ability to develop specialty markets unprofitable at the domestic level (Levine and Renelt 1992).

The influence of demographic factors on development has generated a lot of attention in the literature; however, the findings appear to remain ambiguous. High rates of population growth may retard economic development by diminishing human capital potential, increasing dependency, and reducing investment levels. If natural resources are fixed, increases in population will impede development. Production cannot keep up with exponential population growth (Ehrlich 1990). However, greater population levels may improve development through increased specialization and knowledge production, greater investments in human capital and diffusion of innovation. The composition of the skills of the population largely determines its influence on development.

I've incorporated a number of these determinants of growth within my analysis. The following section highlights women's status (including education, employment and reproduction) and its relationship to economic development.

Women's Status

The concept of women's status emerged during the 1970s to conceptualize and signify women's autonomy, power and social standing in society. Despite the frequent use of this term, its meaning continues to be

somewhat ambiguous. Most definitions of women's status refer to one or more of several facets, including prestige, power, and access to or control over resources (Mason 1986: 286). At the very least, the term indicates an aspect of gender inequality (Mason 1986). While this term continues to be drawn upon in the literature, some have questioned the use of a single concept to define such a complex and multi-dimensional social construct (Mason 1986; Whyte 1978). Mason (1986) identifies the confounding of race and class, and the multidimensionality of the concept as sources of confusion. A decrease in one dimension of status will not necessarily correspond with a decrease in a second dimension (Whyte 1978; Mason 1986). Thus far, no single empirical measure has been found to encapsulate "the" status of women (Whyte 1978).

Despite the concerns about the utility of this concept, the status of women continues to be used in the literature (Haddad 1999; Clark and Clark 2004; Meyer 2003; Richards and Gelleny 2007). Most studies operationalize this concept through measures of labor force participation and/or education levels, even though there's some reason to believe they are not empirically correlated (Mason 1986; Haddad 1999; Klasen and Lamanna 2009). Others use composite indexes to measure the status of women, such as the GDI or GEM, but they can be difficult to interpret beyond the score given (Clark and Clark 2004; Richards and Gelleny 2007). With these caveats in mind, I will employ this term to conceptualize the social standing of women in society on the basis of power, prestige and access/control of resources. My research design enables me to assess empirically the correlation between different dimensions of

women's well-being, education, employment and two aspects of their reproductive roles, fertility and infant mortality.

Women's position within society is dependent on a variety of social and monetary factors. Status is a reflection of the ability to make autonomous decisions, allocate resources and access social institutions (Haddad 1999). Agency is essential to this story, as women typically make very different choices than men. Increasing women's status relative to men has been shown to have substantial positive effects on numerous dimensions of well-being, including health, education, income and poverty reduction on an aggregate level (Klasen 2005; Johnson 2005; Thomas 1993). Women influence economic growth directly through their participation in the labor force, and indirectly through the time, resources and effort they invest in the next generation. Despite their importance to economic well-being, women are allowed fewer opportunities and permitted less access to social institutions than men. Access to education and the labor force is crucial to the status of women, as these structures are the primary means of social advancement.

Women's status is variable across countries and time periods; however, a useful focus for analyzing the position of women is the gendered division of labor. Women's actual or symbolic exclusion from the capitalist sphere of production is largely created because of its reliance on an "unpaid" domestic sphere. The gendered division of labor results in a male dominated public sphere of production, with a female private sphere of reproduction (Tiano 1994; Blackmon 2009). Women's role in the domestic realm provides a necessary yet typically

unmeasured and unremunerated service through the supplementation and reproduction of the labor force (Tiano 1984). The Marxist feminist approach identifies how the position of women has been marginalized under capitalism because it separates the two spheres of paid and unpaid labor, and allocates women to the latter position. By designating reproductive work as unproductive because it is unpaid labor, capitalism leads to the devaluation and obscurity of women's contributions (Blackmon 2009). This division between the private domestic realm and the public capitalist sphere generates a distinction of worth along gendered lines that erodes women's position and autonomy (Tiano 1984). Participation in "unpaid" work in a system that values capitalist production reinforces women's subordinate status (Tiano 1984; Junsay and Heaton 1989). This has a number of implications regarding the status and position of women, particularly in an increasingly globalized world.

Globalization² has led to a world that is increasingly interconnected and interdependent. The spread of global capitalism has transformed as well as reinforced local gender divisions and inequities. One approach associated with modernization theory asserts that globalization improves the lives of all citizens of countries engaged in international trade. An alternative approach linked to the dependency perspective argues that globalization exacerbates existing inequities (Richards and Gelleny 2007; 857). Several studies have empirically assessed the influence of globalization on women's status (Richards and Gelleny 2007; Gray et al. 2006; Meyer 2003). Richards and Gelleny found that the relationship

² I define globalization in the same way as Richards and Gelleny (2007: 857), as referring to the acceleration in the "world-wide movement of capital, goods, services, and labor."

between women's status and economic development has varied over time and by type of development, though economic globalization was more often associated with an increase in women's position than not (2007; Gray et al. 2006; Meyer 2003). Additionally, trade globalization also corresponded with an improvement in the status of women (Richards and Gelleny 2007). However, many scholars would argue that the structural adjustment programs (SAPs) that have accompanied globalization have disproportionately harmed women (Blackmon 2009; Bergeron 2001; Acker 2004). Much of this has been due to the failure of the global governance institutions to account for women's "unpaid" contributions to a country's economy, which has worsened their poverty (Blackmon 2009). Additionally, SAPs respond to crisis by cutting government spending, especially social spending, which disproportionately harms women who are more apt than men to be the recipient of these funds (Bergeron 2001; Acker 2004).

While the empirical studies may suggest that there has been a general increase in women's status with globalization, it is difficult to determine exactly what this means. Using a composite index to encapsulate every aspect of women's status in a single value or numerical score loses the nuances and complexities of the globalizing process and its impact on women. What aspect of their status increases? Do they all increase proportionately? Perhaps the mechanism driving women's improved status in turn increases their labor force participation as a result of trade openness. Women are seen as a flexible, unskilled and cheap source of labor and are often targeted for employment by

multinational corporations. While this may increase their status within the household, it may not influence their broader societal position. The increasingly globalized world economy has had a profound effect on existing inequities, transforming and further complicating the status of women. Likely, women's relationship with globalization has both positive and negative aspects.

Education

Increases in female educational attainment influence economic development through a variety of avenues. Several studies have assessed the relationship between the gender gap in education and economic development (Klasen and Lamanna 2009; Klasen 2005; Clark and Clark 2004; Schultz 2002; Hadden and London 1996; Hill and King 1993; Benavot 1989). Gender inequality erodes economic performance by limiting the amount of human capital a society possesses, and as a result, it reduces average ability levels (Clark and Clark 2004; Klasen and Lamanna 2009; Klasen 2005; Thomas 1993). Large gender gaps in education further reduce human capital by limiting, along gendered lines, the number of qualified job applicants with adequate skill sets. With lower levels of educational attainment, women have less access to the labor force and are more dependent on male earnings. This reinforces the "feminization of poverty" and supports the gendered division of the private/public spheres.

Deficiencies in basic literacy and numeracy among the adult population have been known to have a striking curbing effect on a country's level of economic growth (Thomas 1993: 7). The global illiterate adult population is

disproportionately female; three-fourths are women (Hepburn and Simon 2006). This translates into decreased access to social institutions and structures, particularly for women because of the gendered dimension of illiteracy. Illiteracy tends to consign a person to a life of limited opportunities, meager life chances, and inevitable poverty (Nussbaum 2003). The systematic limitation of women's access to educational opportunities leads to gendered subordination and the reinforcement of women's secondary status.

A number of studies have found that increasing women's educational levels has a larger influence on economic development than increasing men's education levels (Thomas 1993; Hadden and London 1996; Schultz 2002; Richards and Gelleny 2007; Hill and King 1993; Benavot 1989). Most notably, Hill and King's (1993) extensive study of women's educational attainment in 159 developing countries analyzed data between 1960 and 1985. Gender gaps in secondary schooling were found to be more pervasive than gaps in primary schooling rates. Secondary education for women has been shown to have more substantial effects on child and family well-being, fertility and family planning—as well as agency and empowerment—than increases in male secondary education (Hadden and London 1996; Kabeer 2005; Hadden and London 1996). Greater levels of educational attainment for women may allow them a degree of independence and empowerment. Access to education improves cognitive abilities and critical thinking skills, and improves a woman's ability to participate with the public sphere (Kabeer 2005). Additionally, higher levels of maternal education have been shown to be associated with increased levels of their

children's education (Klasen and Lamanna 2009; Klasen 2005; Schultz 2002). Increased levels of education in the next generation improves overall human capital, leading to increases in economic growth. Higher levels of educational attainment also better equip women to enter the labor force.

Labor Force Participation

A large body of the literature has focused on the advantages of women's labor force participation for promoting economic growth (Klasen and Lamanna 2009; Klasen 2005; Clark and Clark 2004; Hadden and London 1996; Benavot 1989). A larger pool of skilled applicants to draw from translates into higher profits for companies as well as increased productivity, which in turn boosts economic growth (Clark and Clark 2004; Klasen and Lamanna 2009; Schultz 2002; Hadden and London 1996). Similar to education, gender gaps in employment presumably reduce average ability levels in the general labor pool based on the ascription of gender (Klasen and Lamanna 2009). In addition, greater female participation in the labor force has a large influence on lowered fertility rates, household well-being and child investment. One perspective suggests that it is the combination of demographic outcomes and increased female labor force participation that has a positive influence on economic development (Thomas 1997).

Women who participate in the labor force tend to experience greater autonomy and enhanced self-esteem than those who do not. They also make greater contributions to household income that can shift the power dynamics

within the household in women's favor (Klasen and Lamanna 2009; Kabeer 2005; Hill and King 1993). This may allow women to re-negotiate relations within the domestic sphere, to increase their power relative to male members, and to transform spending habits (Klasen and Lamanna 2009; Kabeer 2005). However, this is largely dependent on who controls and spends female income. Women tend to allocate more money to the household than men, but unless women control the distribution of their wages, their wages may not translate into a greater investment in the next generation (Blumberg 1988).

Women's participation in the labor force may improve their position through increased economic contributions to the household. Female control over resources bolsters their economic situation in the household in various ways. Female labor force participation coupled with greater autonomy within the household may lead to greater savings and repayment of debts, better investments, and greater investments in the next generation (Klasen and Lamanna 2009). Additionally, participation in the labor force often results in lowered fertility rates, which also tends to promote economic development, as the following section will reveal.

Women's Reproductive Roles

Increases in women's well-being influence economic development indirectly through improving the welfare of the next generation (Buvinic and King 2007; Brown 2004). Greater levels of maternal education have been associated with lower levels of child mortality, improved use of contraceptives and lower

fertility, and higher levels of child nutrition and health (Hadden and London 1996; King and Hill 1993; Buchmann 1996; Boyle et al. 2006; Klasen and Lamanna 2009). Advances in female education have shown to lower fertility rates (Hadden and London 1996; King and Hill 1993; Thomas 1993). Women with higher levels of education tend to use contraceptives and family planning methods more effectively, marry later in life, and have fewer children (Hadden and London 1996; King and Hill 1993; Kabeer 2005). Additionally, better educated women tend to be more likely to enter the labor force than their less well-educated counterparts. Labor force participation has also been shown to have a substantial influence on lowering fertility rates (Havens and Gibbs 1975).

Lowered fertility rates typically translate into greater resources being allocated to a smaller number of children, who consequently tend to have better nutrition, greater access to medicines, and greater overall health than children from larger families. Additionally, higher education levels improve cognitive abilities, resulting in better health and nutritional choices for women and their families (Kabeer 2005). With increasing education, women are also more knowledgeable about disease prevention and potential health risks, and are better equipped to administer medication to sick children (Boyle et al. 2006; Kabeer 2005; Hadden and London 1996). As previously noted, increased participation in the labor force channels more resources to children, as women generally contribute a higher percentage of their income to the household than men (Blumberg 1988). Additionally, women with higher education levels who are in the formal labor force tend to be more autonomous and to make more

decisions within the household (Klasen 2005; Kabeer 2005; Klasen and Lamanna 2009). This translates into more money spent on child education, health, nutrition, medications and other investments in the next generation (Klasen 2005; Kabeer 2005; Schultz 2002; Hadden and London 1996).

At the societal level, greater maternal education and higher female labor force participation rates contribute to economic growth, as the next generation reaps the benefits by displaying better health and education. Lowered fertility rates concentrate resources spent on each child, and when combined with increasing gender parity, may result in the labor force growing at a faster rate than the overall population. Furthermore, this future generation will generally be healthier overall and better educated with greater access to resources (Klasen and Lamanna 2009). Increased household resources decrease child mortality, improve child and familial nutrition, and increase overall health and well-being. Improving the status of women indirectly influences economic development through investments in the next generation. While the “unpaid” labor women contribute in the private sphere may not be considered “productive” according to conventional economic measures, it is essential to the continued growth of a country’s economy.

In short, the literature appears to suggest that improvements in women’s well-being will increase economic growth through several avenues. However, these predications have not been rigorously assessed over time and across countries. This study investigates how different dimensions of women’s well-being (education, labor force participation, fertility and infant mortality) influence

economic development, and explores the mechanism by which these influences occur. Drawing upon the theoretical frameworks of modernization and developmentalism, I examine the relationship of women's status to economic development. Modernization theory suggests that women's status is mainly associated with economic growth through educational rates and labor force participation, while developmentalism suggests that the influence of female labor force participation and education on development is mediated through women's reproductive roles. FIGURE 1 models an amalgamation of these conceptual frameworks illustrating the relationship between the status of women and economic development.

CHAPTER 3: METHODS

To assess the relationship between women's status and economic development, I analyzed data previously collected by the World Bank for all countries for which data were available. Data from the World Bank is collected through a variety of methods. Often the data is retrieved from the aggregate national census of World Bank member countries (2005). I examined data for all available countries for every five years between 1980 and 2005. Countries that did not exist during the entire interval between 1980 and 2005 were dropped from the analysis. A list of all countries that are included in the present analysis is presented in the appendix (TABLE A.1).

Economic Growth

A single indicator was used to capture the dependent variable, the economic development of a country: Gross Domestic Product (GDP) per capita. The GDP measure provides a value for everything produced in the country and takes into account the cost of production within that country. This value is then converted to U.S. dollars. GDP per capita was normalized with purchasing power parity (PPP) for the current international monetary exchange value for the dollar. PPP allows for GDP per capita to be comparable across countries, as it accounts for price differences among other countries and time periods. GDP per capita data are readily available and accessible. It is often used as a very rough indicator of average income, even though it is not a perfect measure because it is often "sensitive to fluctuations in currency exchange and inflation rates"

(Marshall and Paulin 1985; 221). GDP also accounts only for the formal sector within a country; the informal sector is ignored. Despite these issues, I chose this variable because it is often used in similar studies, and I believe it's the best indicator available for this analysis. GDP per capita was logged in order to normalize its values in the analysis.

Women's Status

Several indicators were used to measure different aspects of women's status. The first measure that I used to capture this construct was gross female secondary schooling rates. Gross enrollment rates are expressed as the total number of enrolled students in a specific education level divided by the total number of children of the appropriate age to attend this level of schooling. There are several problems with using this measure. Gross enrollment rates do not capture completion, progress or dropouts (Hill and King 1993), nor do they account for the age of the students who are enrolled in the educational level being measured. Some of the students who are counted may have failed to progress to the next educational level, and are repeating the previous grade. Net enrollment rates would solve this issue by dividing the total number of students of the correct age who are attending a specific educational level by the total number of children of that age to attend this level of schooling. However, net enrollment rates are not as widely available as gross enrollment rates so I considered it to be preferable to use gross enrollment rates as the educational measure in this study. Female gross enrollment was used in this study to gain a sense of a

country's absolute levels of female education. I expect female secondary school enrollment rates to have a positive influence on economic development.

Another measure used to assess the position of women was female labor force participation. This measure is expressed as a percentage of the total number of economically active women in the labor force, divided by the total population of females of age to be economically active (15 years of age or older). This measure, like many others, tends to underestimate the number of women in the labor force because women's unpaid labor is often not viewed as "work." In addition, this measure does not capture the full range of occupations in which women are employed. Women's contributions tend to be undercounted for all economic activities (Anker 1983). Furthermore, what is counted as labor force participation varies across countries. Countries may or may not chose to include seasonal, part-time or informal workers as part of the labor force. However, this measure roughly captures female access to the formal labor force. Countries where women are socially constrained will generally have lower rates of female labor force participation than countries where women have higher status. I expect the labor force participation to positively affect economic growth.

Another indicator I used to measure a dimension of women's well-being was fertility rate. Fertility rate is defined as the number of children per woman. Fertility is a good measure of women's well-being because it reflects women's control over their reproduction. Women with more control over their fertility tend to have fewer children and greater agency in the household. Additionally, better educated and employed women tend to have lower fertility rates. On the other

hand, children can be a source for greater monetary support, labor supply, or old age security, so high levels of fertility are rational for households in developing societies (Blumberg 1988; Fu 1998). Fertility rates are typically high in societies with high rates of child and infant mortality. Having a large number of children can be financially beneficial in countries with high rates of agricultural labor; in such societies children are relatively inexpensive to raise and provide a free source of labor. However, in more developed countries, capital flows from parents to children and it becomes more economically favorable to have fewer children (Fu 1998). As a country develops, mortality rates tend to decline while fertility is slower to level off. Women's well-being is directly related to fertility rates, as women with higher levels of education and labor force participation tend to have fewer children (Havens and Gibbs 1975). Additionally, lower fertility rates indicate a stronger sense of female agency in reproductive health, because women are able to implement and effectively use contraceptives and family planning methods.

Infant mortality rate was also used as an indicator of an aspect of women's lives and experiences. Infant mortality rate is expressed as the number of infants dying before the age of one per one thousand live births. Infant mortality rates reflect a family's quality of life as well as its ability to provide proper nutrition, administer medications, and prevent diseases and infections among their children. Since women are most often the child caretakers, infant mortality largely reflects the quality of care a woman is able to provide her children. Infant mortality rates are interrelated with fertility, poverty and

education rates. Lower infant mortality rates—a reflection of their ability to effectively maintain child and familial health, nutrition and overall well-being—are thus a key dimension of women’s well-being.

Because fertility and infant mortality rates were so highly correlated for this sample (0.86) (shown in the appendix), I created an indicator that combined both variables. I generated z-scores for both fertility and infant mortality rates, and then added these values together to create a women’s reproductive roles index. This combined value was again z-scored for purposes of standardization. I expect the women’s reproductive roles index to have a negative influence on economic growth.

Control Variables

A number of other variables correlated with economic growth were included in this analysis as controls: primary exports, political regime, country level investment, trade openness and total population. These variables have been shown empirically to be correlated with economic growth rates (Sala-i-Martin 1997; Kriekhaus 2004)³. Primary sector production data was downloaded from the World Bank website as two separate variables: agricultural and mineral/ore production (2005). I added these two variables together to create a variable that expressed the fraction of primary products in total exports

³ I primarily drew control variables from Sala-i-Martin’s extensive study (1997). However, several had to be dropped due to the lack of available data (market distortions, market performance, religious majority and degree of capitalism) or because their values did not vary sufficiently over time to be run with fixed effects analysis (regional variables and former Spanish colonies).

(primary export variable). Sala-i-Martin showed reliance on primary products to be negatively correlated with growth (1995).

The political regime variable measures polity type using the dataset constructed by Alvarez, Cheibub, Limongi and Przeworski (ACLP) (1996). This dataset codes polity type based on a binary scheme of democracy (1) or dictatorship (0). Regimes qualify as democratic if they meet strict guidelines based on type of elections held, mode of legislative selection, and number of parties allowed to participate (Krieckhaus 2006). This data set was chosen because of the strict guidelines of polity type. Countries are only coded as democracies if they meet all guidelines. There are other types of variables that measure political rights and liberties; however, they are composite indexes which are often difficult to interpret and inconsistently constructed. Sala-i-Martin found political variables (rule of law, political rights, and civil liberties) to positively empirically associated with economic growth (1997).

Gross fixed capital formation data were downloaded from the World Bank website to indicate a county's fixed assets and investment in infrastructure. As defined by the World Bank, gross capital formation is made up of the expenditures "on additions to the fixed assets of the economy plus net changes in the level of inventories" (2005). Sala-i-Martin found both equipment and non-equipment investment to be empirically positively associated with economic growth (1995). I used gross fixed capital formation data because separate equipment and non-equipment investment variables were not available.

Trade openness indicates how open a country's economy is to world

trade, and is thus linked to a country's level of growth. Sala-i-Martin found level of openness to be positively related to economic growth (1997). Trade openness was downloaded from the Penn World Table (PWT) website (Heston et al. 2009). Openness is defined by the PWT as a country's exports plus imports divided by the real GDP per capita, and is the country's total trade (as a percentage of GDP at a constant price). I used the openness variable from the PWT in the analysis because it is current to 2008, while the Sachs and Warner openness variable used in Sala-i-Martin's analysis is only current to 1999.

Total population was also included as a control variable. Population was downloaded from the World Bank website and was included in the analysis to control for the size of country (2005). This measure was logged to normalize its values. High rates of population growth may impede economic growth through decreased human capital potential, reduced investment levels and increased dependency (Ehrlich 1990). Population is expected to be negatively related to economic growth.

Statistical Analysis

Data were collected from the World Bank for every five years between 1980 and 2005 for all available countries, starting with a total of 1278 country-years (2005). During the 1980s, the definition of development shifted toward liberalization, which reduced attention to national development social goals while stressed participation in the global world economy (McMichael 2008; 157-178). I selected 1980 as the start data for this analysis due to the liberalization's

inclusion in development during this period. Additionally, I selected data in this manner to include as much recent data as possible, while retaining the most countries. Observations which did not have a value for the dependent variable were dropped from the analysis totaling 924 observations. Countries which did not exist during the period between 1980 and 2005 were also excluded, resulting in 866 observations. I dropped observations for all countries that did not have data for the entire period used in the analysis in order to balance the panels, which brought the total to 756 country-years. A list of all countries included in the analysis can be seen in the appendix (TABLE A.1). Missing values for the predicting variables were imputed with this balanced data set of 756 observations. The dependent variable was lagged one time period (5 years) resulting in a final total of 630 observations—126 countries for 5 time periods. Missing values for the independent variables were imputed using the statistical software Amelia II (Honaker et al. 2009).

Amelia II was developed specifically for imputing time series cross sectional national data. This software builds on the multiple imputations model, which is a common and acceptable approach for dealing with missing data (Honaker and King 2010), and is appropriate for this analysis. I analyzed the data set using a pooled time series cross-sectional (TSCS) analysis—two way fixed effects model—with the statistical software SAS. Pooled time series, also known as panel analysis, combines time series with cross-sectional data. Using panel analysis is desirable because it increases the total number of observations. Small “N” problems are alleviated in this method by combining cross-sectional

data (N) with time series (T) creating “country-year” (NT) observations (Podesta 2000). Pooled TSCS analysis is also desirable because it allows the study of variables that are “temporally invariant”—which are often elements in national systems (Podesta 2000, 8). Finally, panel analysis captures variance over space and time. Pooled time series usually violates two principles of ordinary least squares: heteroskedasticity and autocorrelation. However, there are several techniques within panel analysis that attempt to correct for these violations.

Fixed effects uses dummy variables to set different intercepts for each country and/or time period. The fixed effects model assumes that each country and/or time period has something uniquely associated with it that may influence the dependent variable. Fixed effects analysis allows us to measure errors associated with a particular country or period of time, resulting in more constant error across observations. In fixed effects, the covariation is “fixed” in an intercept term instead of being allowed to vary as a random variable (Sayrs 1989). In a pooled time series analysis, a fixed value is used for each cross-section and is unique to the data sample. However, with fixed effects, there is an assumption that there is one “true effect size” where any deviation from this true effect is due to random (sampling) error (Borenstein et al. 2009, 63).

There are some drawbacks to using the fixed effects model: it can be a less efficient estimator than other models, and may lose some information with time-invariant variables, because they cannot be included in the fixed effects model (Sayrs 1989). However, the model will not be mis-specified due to time invariant differences between countries because they are controlled for in the

model (Borenstein et al. 2009). The data in this analysis is cross-sectionally dominant, as $N > T$, with 126 countries and 5 time points in this data set resulting in 630 total observations. Fixed effects are recommended by Stimson for situations where $N > T$ (1985). I used a two way fixed effects model in this analysis for country and time period. The fixed effects model is estimated by: $Y_{it} = (\beta_0 + Y_t + \alpha_i) + \beta_k X_{k,it} + \varepsilon_{it}$, where α_i indicates country-specific effects and Y_t indicates period-specific effects.

CHAPTER 4: RESULTS

Variable Descriptives

TABLE 1 shows the summary of the descriptive statistics for the data analyzed for the original data (no imputation). This data set includes 126 countries (see TABLE A.1) with a possible 756 (country-year) observations. TABLE 2 shows the descriptive statistics for the data set with imputed values. The dependent variable, GDP per capita was not imputed, and therefore has the same values in both tables, with a mean of \$10,048.24, a standard deviation of \$12,012.75 and a range from \$150.81 to \$95,434.18. TABLES 3 and 4 show the descriptive summary of the independent variables of interest for this sample. TABLE 3 demonstrates the values for female secondary schooling, female labor force participation, fertility rates and infant mortality rates for 1980. Likewise, TABLE 4 shows the descriptive values for these variables for 2005.

The greatest number of observations that needed to be imputed was for secondary school enrollment rates, for which 189 observations were missing. Because a higher number of values were missing for this variable, the imputations influenced the sample more for this variable than when fewer observations were missing. However, looking at the descriptives in TABLES 1 and 2, the imputed values appear to maintain the pattern of the data.

The descriptive data (TABLES 2 - 4) demonstrate that women have made tremendous gains internationally in secondary schooling. Secondary enrollment rates were near 20% for both men and women in the 1960s.

TABLE 1: Descriptive Summary of Variables in Original Data Set

Variable	Observations	Mean	SD	Range
GDP per capita	756	10,048.24	12,012.75	150.81 – 95,434.18
Female Secondary Schooling Rate	567	61.04	36.48	1.62 - 170.55
Female Labor Force Participation	720	48.95	16.87	9.5 - 90.70
Fertility Rate	744	3.81	1.84	0.97 - 8.31
Infant Mortality Rate	744	48.95	41.85	2.1 - 184.70
Primary Exports	595	13.37	17.84	0.002 - 91.06
Democracy	744	0.54	0.5	0 - 1
Gross Fixed Capital Formation	719	21.99	8.17	3.45 - 92.44
Trade Openness	756	80.93	53.4	10.65 - 446.06
Total Population	756	3.68E7	1.33E8	41,000 – 1.26E9

TABLE 2: Descriptive Summary of Variables in Imputed Data Set

Variable	Imputed Observations	Mean	SD	Range
GDP per capita	0	10,048.24	12,012.75	150.81 – 95,434.18
Female Secondary Schooling Rate	189	59.1	35.2	-9.68 - 170.55
Female Labor Force Participation	36	49.39	17	9.5 - 90.7
Fertility Rate	12	3.8	1.83	0.97 - 8.31
Infant Mortality Rate	12	48.82	42.01	-19.29 - 184.70
Primary Exports	161	15.27	19.42	-28.54 - 94.60
Democracy	12	0.54	0.5	0 - 1
Gross Fixed Capital Formation	37	21.91	8.64	0.61 - 92.44
Trade Openness	0	80.93	53.4	10.65 - 446.06
Total Population	0	3.68E7	1.33E8	41,000 – 1.26E9

However, Boserup noted that there was a wide range of “higher” education rates during this time—secondary enrollments were in single digits in many developing countries, with female secondary education rates even smaller (1970). However, these samples are not comparable to the sample in my analysis, but provide a rough idea of the gains women have made since the 1960s. This dataset has an average international female secondary school enrollment rate near 60%. TABLES 3 and 4 demonstrate the average change in global secondary school from 1980 to 2005. The average global female secondary school enrollment rate improved from near 47% in 1980 to 71% in 2005 for my sample. This is a tremendous change in female education rates in 25 years. However, the gains women have made are not uniform. Burundi has the lowest level of female secondary education near 2%, while Sweden has a rate at 170%.

As noted previously, female labor force participation measures the number of women employed in the formal labor force as a percentage of the total number of working age women. Thirty-six observations were imputed for this variable, and appear to follow a similar pattern to that of the original data. Notably, the average level of female labor force participation was around 30% in the 1970s when Boserup first wrote about women and their roles in development. Again, my sample is not comparable to Boserup’s, but gives a rough idea of previous female labor force participation. Women have made large gains in the employment sector since the 1970s. This data set shows an average rate of

TABLE 3: Descriptive Summary of Independent Variables, 1980

Variable	Mean	SD	Range
Female Secondary Schooling Rate	46.74	31.84	-6.93 – 111.93
Female Labor Force Participation	46.42	18.49	9.50 – 90.30
Fertility Rate	4.62	1.97	1.50 – 8.31
Infant Mortality Rate	63.96	45.71	3.90 – 184.70

TABLE 4: Descriptive Summary of Independent Variables, 2005

Variable	Mean	SD	Range
Female Secondary Schooling Rate	71.45	33.12	-2.81 -144.94
Female Labor Force Participation	52.20	15.21	19.4 – 90.70
Fertility Rate	3.08	1.50	0.97 – 7.27
Infant Mortality Rate	36.41	35.11	2.10 – 134.20

TABLE 5: Average Country Profile for Women's Reproductive Roles Index

Reproductive Role Index Value (Standard Deviation units)	Average Fertility Rate	Average Infant Mortality Rate
-0.25 ≤ X ≤ 0.25	4.167	45.984
0.75 ≤ X ≤ 1.25	6.024	87.224
-1.25 ≤ X ≤ -0.75	1.92	11.151
All Observations	3.948	51.308

female labor force participation near 50% for the entire period between 1980 and 2005. My sample shows a notable increase in female labor force participation, from about 46% in 1980 to 52% in 2005. However, there continues to be a wide range of variation in female participation across national contexts—around 10% of women are employed in the formal labor force in Saudi Arabia while 90% of women are employed in Burundi. What is interesting to note is the Burundi has very high levels of female labor force participation near 90% and very low levels of female secondary education rates around 2%. While I cannot generalize from one case, Burundi demonstrates that female education and employment may not necessarily be related.

Fertility rates have also significantly decreased in the last fifty years. The average fertility rate for this data set is 3.8 children per woman. During the time Boserup was writing, fertility rates were closer to 5.5 children per woman. For my sample, fertility rates have declined from 4.6 children per woman in 1980 to 3.1 in 2005. Again, the improvements in fertility have not been completely uniform. While fertility rates have decreased in many parts of the world, some countries continue to have high rates—with some as high as 8 children per woman (Niger and Rwanda). Other countries have fertility rates closer to 1 child per women (Hong Kong, Ireland, Italy and others). Additionally, infant mortality rates have declined. This data set shows the average mortality rate to be around 50 infant deaths per 1,000 live births. The average infant mortality rate today is about half the rate it was during the 1960s. For my sample, infant mortality rates have reduced significantly from 67 infant deaths per 1,000 live births in 1980 to

36 infant deaths in 2005. While this is a significant improvement, there continues to be high infant mortality rates in some areas of the world, particularly parts of Africa, including Sierra Leon (185), Chad (125), Congo (125), Rwanda (120), Burundi (110) and others. However, the overall trend appears to be that women are having fewer and healthier children.

Fertility and infant mortality rates were combined into one indicator, the women's reproductive role index. These measures were standardized by generating z-scores for each variable, adding these values together to create one index, and z-scoring this value once more. TABLE 5 shows the profile of an average country in the analysis sample for the reproductive roles index, and displays the average fertility and infant mortality rates for countries in each reproductive roles index range. For example, countries with a value that ranged between -0.25 and 0.25 on the reproductive role index have an average fertility rate of 4.2 children per woman and an average infant mortality rate of roughly 46 infant deaths per 1,000 live births.

The control variables were also imputed. Primary exports also had a large number of imputed observations at 161 country-years. The mean value for primary exports in the original data was 13.37, with a standard deviation of 17.84 ranging from 0.002 to 91.06. The values for the imputed data of this measure were a mean of 15.27, a standard deviation of 19.42 and a range of -28.54 to 94.60. Due to the large number of missing data, the imputed values had a larger influence on the sample. However, the mean and standard deviation values of the imputed values were relatively similar to the original data and appear to

maintain the structure of the data. Gross fixed capital formation had a total of 37 observations imputed. This indicator had a mean of 21.99, a standard deviation of 8.17 and a range of 3.45 to 92.44 for the original data. For the imputed data, gross fixed capital formation had a mean of 21.91, a standard deviation of 8.64 and a range of 0.61 to 92.44. These values are very similar and appear to maintain the quality of the data. Finally, democracy had a total of 12 observations imputed. The average for both the original and imputed data was 0.54. Both had a standard deviation of 0.5 and a range of 0 - 1 (dummy variable). The variables trade openness and total population had no missing data, and therefore, were not imputed. Trade openness ranged from 10.65 to 446.06, had a standard deviation of 53.4 and a mean value of 80.93. I logged total population because its distribution was highly skewed. This measure had an average value of 3.68E7 with standard deviation of 1.33E8 and a range of 41,000 to 1.26E9.

Panel Analysis

The results from the panel analysis are summarized in TABLE 6⁴. Model 1 includes all control variables and the independent variables female schooling rates and female labor force participation rates. Model 2 includes all the variables from Model 1 and the women's reproductive roles index.

⁴ Several other models were run with different measures of women's reproductive roles, including fertility and infant mortality rates. However, because Model 2 includes the index which combines both infant mortality and fertility rates, these models are not shown. The findings from these models were similar to Model 2. Additionally, I ran several other models to determine if any interaction effects between pairs of variables were present. These models are not shown because no interaction effects were found to be significant

After controlling for country and time period effects, a number of the independent variables are found to be statistically significant (two tailed test). Secondary schooling rates are statistically significant in Model 1, but become insignificant when reproductive roles are introduced in Model 2. This finding suggests that countries with lower fertility rates may tend to have better educated women. One could further speculate that the apparent impact of women's schooling is actually an artifact of the tendency of better educated women to have lower fertility, which is the real force driving economic development.

Female labor force participation and education were both found to have a positive influence on economic development (Model 1). However, when the reproductive roles index was introduced (Model 2), the relationship between education and economic growth disappeared, while the strength of the relationship between female labor force participation and development was reduced. Additionally, the influence of women's labor force participation on growth was reduced once reproductive measures are included, suggesting that countries with high levels of female economic participation tend to have lower rates of reproduction. FIGURE 2 illustrates these findings (on pp. 51). One could further consider whether the apparent impact of women's economic participation on development may be partially a consequence of female control over or access to an income. However, more data is needed to assess this claim.

TABLE 6: Pooled Time Series Cross-Sectional Analysis of Imputed Data Set With Two Way Fixed Effects

Dependent Variable	GDP per Capita	
	Model 1 b (se)	Model 2 b (se)
Female Secondary School Enrollment Rate	0.0011* (0.00065)	0.00079 (0.00064)
Female Labor Force Participation	0.00321* (0.00165)	0.00285* (0.00163)
Women's Reproductive Role Index	--	-0.192*** (0.0448)
Primary Exports	-0.00045 (0.00072)	-8.73E-06 (0.00072)
Democracy	-0.0346 (0.00134)	-0.0463* (0.0014)
Gross Fixed Capital Formation	0.00343** (0.0262)	0.00305** (0.0259)
Trade Openness	0.00108** (0.00038)	0.00119** (0.00038)
Population (logged)	-0.624*** (0.0816)	-0.790*** (0.0890)

* p < 0.10

** p < 0.05

*** p < 0.001

Model 2 is the most complete, and considered the “best” model in this analysis. The reproductive roles index completely mediates education and partially mediates employment’s influence on development. Countries with more educated and employed women tend to have reduced fertility and infant mortality rates. Perhaps this is due to the tendency of educated and employed women to have fewer and healthier children, which may positively influence economic growth through the next generation.

Several of the control variables were found to be statistically significant: gross fixed capital, trade openness and population size are found to statistically significant in both models. Democracy is significant only in Model 2, while primary exports are not statistically significant in either model. The findings suggest that gross fixed capital formation positively influences economic growth, indicating that a greater investment in a country’s fixed assets and infrastructure leads to greater economic development. Democracy and population size were found to negatively affected development. This suggests that having a democratic political regime impedes a country’s level of economic growth. Additionally, having a large population size reduces a country’s level of economic development because natural resources are finite and cannot keep up with exponential increases in population (Ehrlich 1990). Finally, the data suggest that trade openness positively affects development, indicating that being open to world trade increases economic growth.

TABLE 7 shows the profile for the “average” country effect in the sample for all statistically significant variables from the most complete regression, Model

2. The difference in GDP per capita was calculated using the average GDP per capita in the sample of 126 countries, \$10,000. With a 20% increase of female labor force participation, GDP per capita is increased by \$590. This suggests that increasing the proportion of adult women who are in the labor force in the “average” country by 20% leads to roughly a 6% increase in GDP per capita. Clearly, increasing female employment positively influences economic growth. As the index for women’s reproductive roles is increased by 1 standard deviation (see TABLE 5), GDP per capita is decreased by \$1750. In more relatable terms, one standard deviation increase (from 0 to 1) shows a fertility rate increase to 6.0 children per woman from 4.2, and an increase in infant mortality rates to 87.22 from 45.98 infant deaths per 1,000 live births. This means a move of 1 standard deviation from the “average” country leads to roughly an 18% reduction in GDP per capita. This indicates that high fertility and infant mortality rates have a substantial negative effect on economic development.

Democracy was found to have a negative relationship with the dependent variable. For this sample, GDP per capita of democracies is 0.955 times that of dictatorships. This indicates that being classified as a democracy results in a decrease of \$450 per capita in this sample (roughly 5%) versus being classified as a dictatorship. Being classified as a democracy appears to impede growth. As gross fixed capital formation is increased 10 units, GDP per capita is multiplied by 1.031. For a country with a GDP per capita at \$10,000, this would result in an increase of \$310 (or 3%). Trade openness also was found to have a positive relationship. As trade openness was increased 20 units, GDP per capita

FIGURE 2: Empirical Model of the Influence of Women's Status on Economic Development

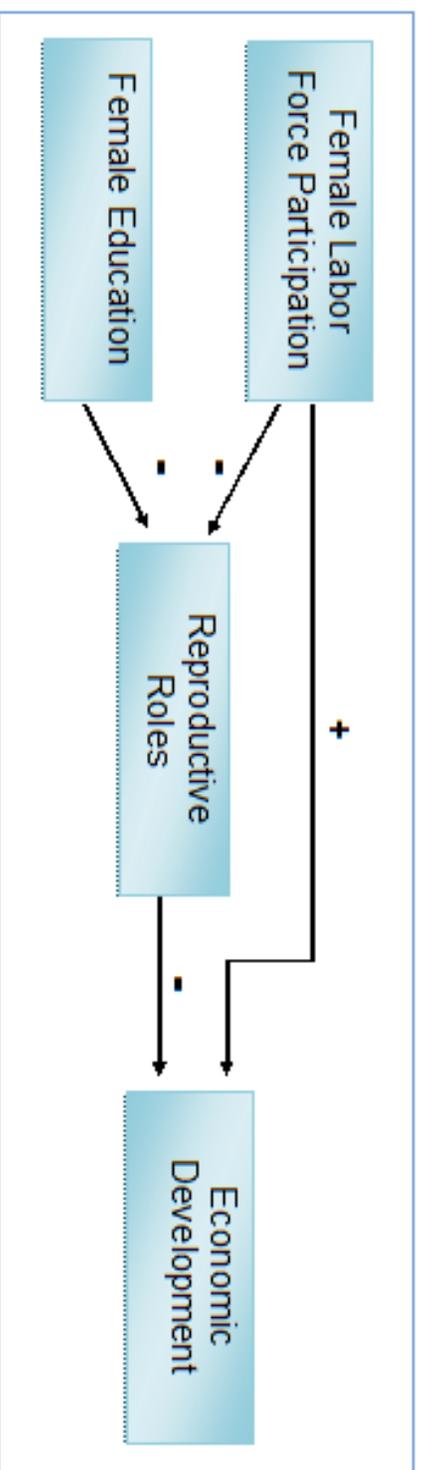


TABLE 7: Average Country Profile for Model 2

Dependent Variable	GDP per Capita	Mean Value	Estimate (b)	Estimate (e ⁵)	Value Increase in X	Estimate (e ⁵) for increase in x units	Difference in GDP per Capita (at \$10,000)
Female Labor Force Participation	49.39	0.00285	1.003	20	1.059	+	\$690.00
Women's Reproductive Role Index	-2.013E-17 (0)	-0.192	0.825	--	--	--	-\$1750.00
Democracy	0.54	-0.0463	0.965	--	--	--	-\$450.00
Gross Fixed Capital Formation	21.91	0.00305	1.003	10	1.031	+	\$310.00
Trade Openness	80.93	0.00119	1.001	20	1.039	+	\$390.00
Population (logged)	15.6	-0.79	0.454	10%	0.927	-	-\$730.00

was multiplied by 1.039. For a country with a GDP per capita of \$10,000, this would mean an increase of \$390 per capita, or near a 4% increase in GDP per capita. Finally, GDP per capita is multiplied by 0.927 as population size is increased 10%. A 10% increase in population size for the “average” country would mean a \$730 decrease in GDP per capita (about a 7% decrease), suggesting that a large population impedes economic growth.

The findings presented in TABLE 6 indicate that the influence of women’s labor force participation and education rates on economic development is mediated by their reproductive roles, as shown by Model 2. The influence of women’s education and labor force participation on economic growth may be attributed to better educated and employed women’s tendency to have fewer and healthier children. Lower fertility and infant mortality rates appear to bolster the economy substantially, thereby helping to drive development. FIGURE 2 illustrates the relationships between women’s employment, education, reproductive roles index and economic development assessed in Model 2. These findings support the developmentalist framework, while showing that without attending to the links between women’s productive and reproductive roles, modernization theory is incomplete. Modernization theorists would expect female education and labor force participation to directly influence development. However, the findings indicate that women’s employment and education indirectly influence growth, with women’s reproductive roles playing an important intermediate position. Female employment also appears to directly influence growth. The data appear to support the developmentalist framework with one

important distinction: education does not directly influence economic growth for this sample. This distinction can be explained by the socialist feminist framework which suggests education may not lead to employment if there are no jobs available (Rothestein 1985).

Reverse Causal Model

In addition, I ran several converse models to address issues of reverse causality, with economic development as the predictor variable and a measure of women's status as the dependent. I ran five pooled time series cross sectional models with fixed effects, using female secondary schooling rates, female labor force participation, fertility rate, infant mortality rate and the index of women's reproductive roles as the outcome variables (one for each model). All outcome variables were lagged one time period (5 years). The results for the reverse causality model are presented in TABLE 8 (see pp. 54).

GDP per capita does strongly predict female education rates; however, it is interesting that this measure does not predict women's labor force participation or their fertility or infant mortality rates. Economic development only appears to predict one measure of women's well-being—secondary education. This indicates that as a country's level of growth increases, women's access to educational opportunities improves. This also suggests that economic growth does not improve women's employment, fertility or infant mortality rates. These findings weaken the claim that increases in economic development improve women's status. The data suggest that development only improves one aspect

TABLE 8: Reverse Causality

Predictive Variable	Outcome Variable				
	Model a Female Secondary School Enrollment Rates	Model b Female Labor Force Participation	Model c Fertility Rate	Model d Infant Mortality Rate	Model e Women's Reproductive Roles Index
	b (se)	b (se)	b (se)	b (se)	b (se)
GDP per Capita (logged)	8.330** (2.5378)	0.238 (1.0140)	-0.082 (0.0788)	1.218 (1.6906)	-0.0087 (0.0345)
Primary Exports	-0.0840* (0.0476)	0.0078 (0.0190)	0.0051*** (0.00148)	0.1021** (0.0317)	0.00281*** (0.00846)
Democracy	-2.323 (1.7237)	-1.390** (0.6887)	-0.0024 (0.0535)	-6.198*** (1.1482)	-0.798*** (0.0007)
Gross Fixed Capital Formation	-0.0102 (0.0908)	-0.205*** (0.0363)	0.0076** (0.00282)	-0.201*** (0.0605)	-0.00033 (.7864)
Trade Openness	-0.0072 (0.0254)	0.0128 (0.0102)	0.0018** (0.000790)	0.0576*** (0.0169)	0.00125*** (0.0003)
Population (logged)	9.077 (5.6317)	5.672** (2.2501)	-2.570*** (0.1749)	-16.728*** (3.7515)	-0.968*** (0.0765)

* p < 0.10

** p < 0.05

*** p < 0.001

of women's lives, their educational attainment, which in turn drives economic growth.

Limitations

There are several limitations within my analysis. There are clearly problems with the validity and reliability of the indicators used in this study, as described earlier. I use them because many of the ideal measures are neither widely recorded nor available. Additionally, my analysis only includes countries that have regular data available, are recognized by the World Bank as countries, and existed the entire period from 1980 to 2005. Countries that do not report statistics to the World Bank are systematically different from those who do. Likewise, countries that were not in existence from the period of 1980 to 2005 are also systematically different. For example, many communist and socialist countries were either created or reformed during this period. Therefore, this analysis cannot be generalized beyond the scope of the 1980-2005 time periods, or the 126 countries included in this study. Finally, problems of reverse causality still exist within my analysis. However, I did take several steps to address problems through lagging the dependent variable by one time period to deal with simultaneity issues, and running a reverse causal model to show the converse relationship in which women's status is considered an outcome of development, rather than a predictor, as I conceptualized in this study (TABLE 8). One technique, cross lagged panel analysis, can be used to address issues of reverse causality. This technique corrects for heteroskedasticity and autocorrelation for the predictive variable over time, the outcome variable over time, and between

the predictive and outcome variables over time (Hipp et al. 2009). Incorporating this technique into a similar analysis would present results with fewer issues of endogeneity; however, it is beyond the scope of this study.

CHAPTER 5: DISCUSSION

My study investigates the influence of women's status on economic development, and examines the mechanism of this relationship (shown in FIGURE 2) for 126 countries. I have found that the effects of female education and labor force participation on development are mediated by fertility and infant mortality rates, two measures of their reproductive roles. This is due to the tendency for women who are employed and have higher levels of education to have lower fertility rates and healthier children. Both of these aspects of women's reproductive roles are important drivers of development. Women's participation in the labor force was also found to directly impact development, which is explained by both the individual and aggregate growth models. These findings have several implications.

First, my findings support previous literature by Whyte (1978), Mason (1986), and others who claim no single empirical measure—or combination of measures—encapsulate “the” status of women. At the very least, because these two variables are not highly correlated and are negatively associated in this sample, my analysis suggests that female secondary school enrollment rates and female labor force participation measure different aspects of women's lives and experiences. This may be attributed to a lack of available jobs, cultural norms against women working regardless of their educational levels (Middle-East), or a shortage of good jobs at the top of the hierarchy, which are the ones most likely to absorb highly educated women. Educated women tend to search longer for employment than less educated women, as they are often searching for better

positions than their less fortunate counterparts—jobs that may not be available in the necessary volume to absorb all the women with the required educational qualifications to compete for these jobs.

The imputed data set has a correlation of -0.22 ($p < 0.01$) for education and employment. Taken at face value, this negative correlation would suggest that less educated women are more apt to work than their better educated counterparts. This would contradict modernization theory's assumptions that human capital and employment go hand in hand. This result would speak to the paradox of female labor force participation—what Standing (1999) refers to as the “feminization of labor.” According to this view, women are a desirable source of labor because they are more apt to be unskilled, flexible, and cheaper to employ than men. The feminization-of-labor perspective refers to the movement of women into particular types of employment, an increase in this type of work, and a greater proportion of women occupying these jobs (Standing 1999; 583). If this negative correlation is more than just measurement error, it would support the feminism-of-labor perspective.

Even though my analysis suggests that “the” status of women does not exist, the findings indicate that several aspects of women's lives and experiences reflecting both their productive and reproductive roles influence economic development. Unexpectedly, female education rates were not found to directly influence development. Instead the findings suggest that the effects of education are mediated by fertility and infant mortality rates. I ran an analysis (not shown) to assess whether female education rates were at all mediated or

moderated by labor force participation; however, neither relationship was found to be significant. The effects of education were not found to influence growth indirectly through labor force participation, nor was there an interaction effect between education and employment. Employment was not able to help in the explanatory power of education on development. Again, these findings support the socialist feminism framework. Rothstein's argues that increased education levels may not necessarily result in employment or upward social mobility (1985). Increased levels of education improve a society's overall human capital and can promote greater productivity, ultimately leading to economic growth. However, simply giving women education does not eradicate their secondary status if they are unable to access quality employment, as suggested by socialist feminism. If unable to obtain good jobs (or jobs at all), then the benefits of educating women will be focused primarily within the reproductive sphere (FIGURE 2).

Female labor force participation was found to directly and indirectly influence economic growth. A larger pool of applicants to draw from increases average ability levels and allows companies to hire the best qualified individuals, thereby improving productivity and increasing profits. At the individual level, women's participation in the labor force also provides household income, which may be essential to the survival of their families. Often it is assumed that women only supplement the wage of a primary male breadwinner. Families in developing nations are generally dependent on multiple incomes for survival, and only the wealthiest of households can afford to depend on a single earner (Schmink 1984). Moreover, on average a third of the world's households are

headed by women (Buvinic and King 2007). Women are central to developing economies and often absorb unexpected burdens to ensure their families' continued survival while preventing destitution. Female employment not only improves the lives of women and their households, but augments the resource base of their societies.

A number of the control variables were also found to affect development including level of national investment, political regime, openness to trade and population. Expenditures on fixed assets and investment in a country's infrastructure (gross fixed capital formation) positively affected growth. The benefits of education can only be achieved if there has been sufficient investment to make educational opportunities available and accessible to the general population. In this analysis, democracy was shown to negatively affect development. Earlier literature suggests that the relationship between democracy and growth is positively linked (Lipset 1959; Lipset 1960). However, more recent literature suggests the relationship is more ambiguous (Kreickhaus 2004; Helliwell 1994; Arat 1988). Kreickhaus argues that democracy does not have a "generalized unidirectional effect" on development, and he suggests that democracy's influence on growth is dependent on the time period chosen (2004: 652). In his study, democracy was found to have a negative impact on growth in the 1960s, a positive impact in the 1980s, and no impact during the 1970s and 1990s. Additionally, the influence of democracy on development is largely determined by how these concepts are measured (2004). The influence of improving particular components of women's well-being (education, labor force

participation, reproductive roles) on economic development cannot be attributed to a particular type of political regime.

A country's level of openness to trade also had a positive influence on development. Trade openness helps growth by creating job opportunities and increasing labor productivity, and also allows for transfers of goods, technology, and knowledge across borders. A country's openness to trade allows for greater competition and the ability to develop specialization which would otherwise be unprofitable (Levine and Renelt 1992). Population was shown to negatively influence growth. Large populations may impede economic development through greater dependency, diminished human capital potential, and reduced investment levels.

Lastly, my findings suggest that both female education and labor force participation's influence on economic growth are mediated by women's reproductive roles. Women's participation in both productive and reproductive spheres influences economic development. These findings appear to support the socialist feminist framework suggesting women provide an unremunerated service, which serves to propagate the capitalist economy (Tiano 1994). The data also indicate that the influence of women's productive roles on development is partially enacted in the reproductive sphere. Women's unpaid work in the domestic realm serves to reproduce the labor force by lowering the cost of labor and by increasing investments in the future generation (Tiano 1994). Women directly impact development through participation in the labor force, but also indirectly through their child-rearing roles in the reproductive sphere.

Participation in the labor force provides women with an income, which can increase their empowerment and independence to exert control over their own fertility. Research has demonstrated a negative relationship between fertility and female labor force participation (Hadden and London 1996; King and Hill 1993; Kabeer 2005). Employed women tend to have fewer children in order to alleviate some of the strain of the double burden (Blumberg 1976). By limiting their fertility, women are able to concentrate their resources on fewer children, resulting in a future generation with better health and greater education levels.

Additionally the data indicate that the benefits of educating women are passed on to the next generation. Education better equips women to provide proper nutrition to their families, correctly administer medications, more effectively prevent disease and infection, and properly implement family planning methods resulting in smaller families and fewer child/infant deaths. Higher maternal education is also associated with greater education rates in their children. Larger investments in the next generation can reduce high child mortality rates and promote future human capital development, resulting in greater economic growth for the society as well. Lower fertility rates directly retard growth by reducing the level of parental investment per child, resulting in diminished human capital. In societies with high infant mortality rates, parents also tend to invest less in the next generation, as their children have a greater chance of dying. Like increased fertility rates, high rates of infant mortality impede economic growth through decreased human capital potential.

Future research would do well to incorporate measures of women's

education, employment and reproduction in predictions of economic growth. This analysis is only a preliminary study of this relationship—to create a fuller picture, future studies can expand upon my findings and further investigate the complicated relationship between different aspects of women’s lives and experiences on economic development.

CHAPTER 6: CONCLUSION

This investigation has shown that improving various aspects of women's lives and experiences increases economic growth. The influence of women's labor force participation and education rates on development is mediated by their reproductive roles, though female employment affects economic development directly. Since Boserup's pioneering work, *Women's Role in Economic Development*, women have made extraordinary gains internationally. Education rates have improved significantly, now with a global average near 60% gross enrollment rate for secondary education for girls. During the sixties, the average international enrollment rate for secondary education was closer to 20% for both boys and girls. Many developing nations had female enrollment rates in the single digits (Boserup 1970). Women have also made significant gains in the economic sphere, moving from an average of 30% of women in the labor force in the 1970s to around 50% internationally between 1980 and 2005. Globally, fertility rates and infant mortality rates have declined considerably, with infant mortality rates about half the global average of the 1960s. Average fertility rates have also declined from 5.5 children per woman to less than 4 children per woman. The global governance institutions' initiatives have appeared to better integrate women into development and improve several aspects of their lives. However, despite the substantial gains women have made internationally, the improvements to women's lives are not uniform. Women continue to have higher rates of illiteracy, less access to land and capital and fewer employment opportunities than men. Three-fourths of the world's illiterate population is

female (Hepburn and Simon 2006). Women continue to maintain a double burden—propagating the next generation through both their productive and reproductive roles.

This analysis suggests that improvements in various aspects of women's lives and experiences increase economic growth. Women not only increase human capital through their participation in the labor force, but also foster greater future human capital through increased investments in the next generation. Women tend to spend more of their incomes on the household, repay debts, and invest in education and healthcare. Demonstrating that improvements in these dimensions of women's well-being increase economic growth may encourage governments to create policies that invest more heavily in education, labor and health. By creating policies that improve women's lives, nations will also improve their current and future labor force, ultimately fueling their economies. However, investing in women and the future generation should be more than about creating future growth. By focusing on the determinants of development, governments center the discourse on the achievement of growth rather than the significance of improving women's level of education, employment and reproductive roles. Focusing discourse solely around increasing economic growth minimizes the attention given to ameliorating poverty and generating greater social progress. Improvements to women's lives should be regarded as more than a means to an end. Societies should not only judge their level of development by their economic capacities, but also by the magnitude of their societal progress.

APPENDIX

TABLE A.1: Countries Included in Analysis

Albania	Dominican Republic	Lesotho	Senegal
Algeria	Ecuador	Liberia	Seychelles
Antigua and Barbuda	Egypt, Arab Rep.	Luxembourg	Sierra Leone
Argentina	El Salvador	Madagascar	Singapore
Australia	Fiji	Malawi	South Africa
Austria	Finland	Malaysia	Spain
Bahrain	France	Mali	Sri Lanka
Bangladesh	Gabon	Malta	St. Kitts and Nevis
Belgium	Gambia, The	Mauritania	St. Lucia
Belize	Ghana	Mauritius	St. Vincent and the Grenadines
Benin	Greece	Mexico	Sudan
Bolivia	Grenada	Morocco	Suriname
Botswana	Guatemala	Mozambique	Swaziland
Brazil	Guinea	Namibia	Sweden
Brunei Darussalam	Guinea-Bissau	Nepal	Switzerland
Bulgaria	Guyana	Netherlands	Syrian Arab Republic
Burkina Faso	Honduras	New Zealand	Thailand
Burundi	Hong Kong SAR, China	Nicaragua	Togo
Cameroon	Hungary	Niger	Trinidad and Tobago
Canada	Iceland	Nigeria	Tunisia
Central African Republic	India	Norway	Turkey
Chad	Indonesia	Oman	United Arab Emirates
Chile	Iran, Islamic Rep.	Pakistan	United Kingdom
China	Ireland	Panama	United States
Colombia	Israel	Papua New Guinea	Uruguay
Comoros	Italy	Paraguay	Vanuatu
Congo, Dem. Rep.	Jamaica	Peru	Venezuela, RB
Congo, Rep.	Japan	Philippines	Zambia
Costa Rica	Jordan	Portugal	Zimbabwe
Cote d'Ivoire	Kenya	Romania	
Cyprus	Kiribati	Rwanda	
Dominica	Korea, Rep.	Saudi Arabia	

TABLE A.2: Correlation Matrix for Independent

	Female Secondary School Rate	Female Labor Force Participation	Fertility Rate	Infant Mortality Rate	Democracy	Trade Openness	Primary Exports	Population (logged)	Gross Fixed Capital
Female Secondary School Rate	1								
Female Labor Force Participation	-0.22	1							
Fertility Rate	-0.85	0.18	1						
Infant Mortality Rate	-0.85	0.31	0.86	1					
Democracy	0.45	0.02	-0.52	-0.47	1				
Trade Openness	0.17	-0.05	-0.16	-0.23	-0.05	1			
Primary Exports	-0.40	0.20	0.46	0.50	-0.26	-0.20	1		
Population (logged)	-0.04	0.01	-0.10	0.00	0.00	-0.20	-0.09	1	
Gross Fixed Capital	0.23	0.00	-0.26	-0.30	0.08	0.35	-0.20	0.07	1

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