Chapter 11

Revisiting Boserup's Hypotheses in the Context of Africa

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Keywords Human development · Gender gap index · Status of women · Total fertility rate

11.1 Introduction

The role of African women in the community and national development process cannot be overemphasised, and it was the work of Ester Boserup on women and development (Boserup 1970) that pioneered this perspective. Until today, women remain the pillars of the household during times of economic hardship and crisis. They are often the ones who devise strategies to sustain their families and who work the extra hours it takes to put these plans into practice. In addition to their informal work, African women are also involved in formal employment and play a particularly prominent role in the agricultural sector. Boserup (1970) referred to Africa as the region of female farming “par excellence”. In 1980, 44 % of the population economically active in the agricultural sector were female, increasing to 48 % by 2009—a proportion noticeably higher than women’s general share in employment (38 % in 1980 and 41 % in 2009, all data: FAOSTAT 2012). However, this high share in employment does not translate into an equal standing of women workers in agriculture compared to their male counterparts. The International Labour Organization (ILO) notes that women are generally faced with more vulnerable forms of employment, own less than 1 % of the land, have limited access to technology, and often earn significantly less than male agricultural workers (ILO 2009).

The following chapter highlights the relevance of Ester Boserup’s hypotheses for women’s empowerment in Africa, reassessing the status of African women today. We attempt to answer the following questions: Does gender inequality in ownership

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and control over means of production (such as land and technology) persist, and, if so, are the factors sustaining the inequality the same as those identified by Boserup? Since Boserup first published her theories on woman's role in economic development in 1970, we have seen strong international progress in the field of gender policies. To take these changes into account, we also examine the level of progress achieved for women through development policies in Africa. We have structured our deliberation in three phases: (1) the pre-colonial, (2) the colonial, and (3) the post-colonial era. The latter is also the period in which various initiatives and policies aimed at improving the status of women in Africa gained momentum and the possible adverse implications of macroeconomic policies, such as the structural adjustment programmes (SAP), gained recognition. Our comparative analysis of selected countries in Africa is undertaken based on the Human Development Index (HDI), the Gender Gap Index (GGI), and the Total Fertility Rate (TFR). The chapter concludes by suggesting ways of applying Boserup's thinking for the twenty-first century.

11.2 The Status of African Women from the Pre-Colonial Era to the Post-Colonial Era

Gender discrimination is a long-standing issue. This section provides a brief overview of the status of African women from the pre-colonial era to the post-colonial era. In patriarchal African societies of the pre-colonial era and in traditional African societies today, marriage and motherhood earn a woman her honour. As a result of this emphasis, women's activities have revolved around familial work, including both productive and reproductive tasks. In most African societies, the family pattern is based on extended family with a patrilineal system of inheritance, leading to a preference for sons. Males tend to be the heads of the households and exert more power than their female counterparts. Nevertheless, African women have been involved in socio-economic activities from the pre-colonial era through the post-colonial era and there is a tradition of practical female participation in political affairs, albeit informally. In Nigeria, for example, there are powerful women's associations, such as the Yoruba ethnic group's "Iyalode" and the Igbo ethnic group's "Umuokpu" or "Umuada" council of women. The famous "Aba Riot" of 1929—organised by women from the eastern part of Nigeria in protest of a tax on women's property that the government was rumoured to be planning to introduce—has remained a popular example of the strength of women's organisations. During the colonial era, women's economic status did not improve much; the patrilineal system of inheritance continued, and women were, for the most part, still not allowed to own land or property. In fact, according to Boserup (1970), "African women are marginalised under the institution of private ownership" introduced by the colonial administrators, simultaneously experiencing a setback in their status compared to the pre-colonial period. During this time, married women were not given permanent appointments in the civil service and were only entitled to a basic salary. According to Ighadalo (1990), married women also had to resign from their jobs during pregnancy and re-apply for a position once

their child was born. In the post-colonial era, women's position in society has continued to see little improvement because women are not economically independent from men, which limits their impact on decision-making. The limited economic independence of women is rooted in the patriarchal system, perpetuating cultural inertia. The process of women's empowerment during the post-colonial era can be regarded as paradoxical (Nwakeze 2006), especially due to the adverse consequences of past macroeconomic policies, such as the Structural Adjustment Programmes (SAPs) of the 1980s. The SAPs consist of policies implemented by the Bretton Woods institutions, namely the World Bank and International Monetary Fund, which are a prerequisite to the approval of a loan. The policy measures generally aim to reduce government expenditure (austerity measures) and promote privatisation. However, according to Ruth Bamela Engo-Tjega, "structural adjustment overburdens women by relying on them to replace the collapsed public sector" (cited in Gellen 1994). In many regions, the implementation of SAPs is directly linked to the food crisis and rising poverty. Women, as the principle actors in devising coping strategies for households, thus face an additional impacts from SAPs.

11.3 The Role of African Women in Food Production and Agriculture

In most Sub-Saharan African countries, women play a very distinctive role in agriculture, particularly in food crop production. Most studies estimate that women contribute approximately 80 % of the labour input (cf. Gellen 1994). According to Boserup (1970), men's labour is concentrated on the initial clearing of the agricultural land (i.e., felling of trees and bushes) and on the production of cash crops, which provide returns in the form of income. Women, on the other hand, tend to perform the subsequent tasks after clearing, namely the removal and burning of felled trees, as well as planting/sowing, weeding, and harvesting of crops for immediate consumption. In addition to crop production, women engage in horticultural activities and animal husbandry, including small-scale poultry farming, animal rearing, collecting fodder for animals, and growing vegetables. Another important aspect of food production that women are involved in is fisheries. Women's roles in fisheries are processing (e.g., drying and smoking), marketing, and distribution. Apart from food production, women use agricultural products and their by-products to produce a wide range of other commodities, such as soap, pomade, oils, medicinal herbs, hurricane lamps, clothes, jute bags, baskets, and other household products, such as twine and broomsticks. Women are also involved in the marketing of surplus food and non-food items as a means of earning income to meet other family needs, including children's education, health services, clothing, and shelter. Although it is an area dominated by men, women also make an appreciable contribution to the agricultural economy through the labour they supply in the cultivation of commercial or cash crops. As the process of modernisation motivates more men to migrate to the cities and other countries for employment in industry and services, an increasing number of women

are shouldering agricultural responsibilities on a day-to-day basis throughout rural areas. However, women in agriculture continue to face the drudgery of crude technology and laborious methods of food and non-food processing. This includes lack of access to improved seeds and livestock breeds, which results in lower agricultural productivity and income. Furthermore, poor transportation facilities that prevail in rural areas and the difficulty in accessing financial credit exacerbate the situation for many women. In highlighting the crucial role that African women play in agriculture, Gladwin and McMillan (1989) argue that a turnaround in the African economy may not be possible without improving women's roles in agricultural production, which would require removing the constraints that women face in agriculture and, more broadly, in the development process. Overall, society bestows significant responsibility on women without granting them access to the entitlements, rights, and rewards associated with this essential work.

11.4 Women's Lack of Control over the Means of Production

Productive resources that African women have limited access to include land, credit, and improved technology. Although less frequently mentioned, the latter is highly relevant because an increase in the use of technologically advanced equipment would reduce the amount of time a woman spends in productive and reproductive activities. With increased efficiency, the relative income for women farmers would rise. Technology here refers to both equipment or tools and basic infrastructures, such as electricity, water supply, and sanitation. It is important to emphasise that the availability of technology alone is not enough—the appropriateness of the technology is of equal importance. The word “appropriateness” here implies that the technology and its use must be affordable and culturally acceptable. It should add value to the output of women's labour, either in terms of quantity or quality. Given the rising levels of poverty in Sub-Saharan Africa, many women currently cannot afford the improved technologies even if they are available.

Land and credit are also crucial productive resources to which African women have limited access. Land, in particular, is considered the most important asset for both poor and non-poor households in Africa. It underpins cultural identity, political power, and participation in decision making. It is the basis for sustenance farming, enables economic and social activities, and often serves as collateral for credit. The widespread exclusion of African women from owning and/or controlling land means that they are often barred from effectively engaging in economic activities and, consequently, having a secure and sustainable livelihood. Development partners and African governments have made commitments, which, if implemented, would help to unlock the potential for growth and development that lies in the hands of African women. These commitments addressing gender equality and the empowerment of women are based on the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). CEDAW promotes gender equality through access to social and economic opportunities and political power. The principle of

equality between men and women was also enshrined in the legal instruments of the African Union (AU). In 2003 at Maputo, the AU Heads of State adopted the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol). This protocol calls for the elimination of all forms of discrimination against women, including the condemnation and prohibition of harmful practices against women and the assurance of equal rights in marriage for men and women. The right to food security was also explicitly included in the Maputo Protocol, calling for the provision of women with "access to clean drinking water, sources of domestic fuel, land, and the means of producing nutritious food" (African Union 2003, Art. 15). However, while 46 of the 53 member countries of the African Union had signed the protocol by 2010, only 28 countries had also ratified it (African Union 2010). Despite ratification, the laws and institutional structures required for the protocol's implementation are not yet in place throughout these 28 countries. In a study by Nwakeze (2006) women's access to productive resources in Nigeria—a country that has signed but not yet ratified the Maputo Protocol—is empirically analysed, exemplifying the broader consequences of institutional weakness. Nwakeze found that 69 % of the female respondents in the study indicated that they do not own land. This was not surprising because the case study was carried out in Anambra State in the south-eastern region of Nigeria, an area inhabited primarily by the Igbo who live in a patriarchal society where the line of inheritance normally passes through the sons. This limited control over land also affects women's access to credit because land is often required as collateral.

Gender budgeting initiatives are another example of attempts to improve women's access to productive resources and unleash their economic potential. Gender budgeting is a broad and encompassing phrase for government efforts that seek to address gender issues in the domain of public expenditure and policy. Australia and South Africa were the pioneers in gender budgeting initiatives, and other African countries including Botswana, Kenya, Mozambique, Tanzania, and Uganda have adopted similar measures. Stotsky (2007) argues that reducing economic disadvantages for women can lead to higher economic growth and to greater stability. Similarly, Buvinic and King (2007) assert that greater gender equality in terms of access to opportunities, rights, and political empowerment can lead to a more efficient economy and improved institutions. However, this link between the promotion of gender equality and overall economic and social well-being has hardly entered into the mainstream political arena. Measures taken to promote equality for African women have not yet succeeded in thoroughly improving their situation.

11.5 Are Human Development, Economic Growth, and the Status of Females Interrelated?

The third goal of the United Nations' eight Millennium Development Goals is to "empower women and promote equality between men and women" (MDGs, cf. United Nations 2000). Although politicians, stakeholders, and researchers alike would argue that the link between overall development and specific gender issues remains

Fig. 11.1 Framework for analysis by indicators

poorly understood and insufficiently addressed (cf. Buvinic and King 2007), much has changed over the last half-century in how the subject is approached. When Ester Boserup first illustrated the mutual relationship between the status of women and development, the Millennium Development Goals did not exist to support her claims. This did not dissuade her from arguing that understanding the role that women play within a society is essential to understanding the overall development of that society. She showed that besides women's reproductive work, the agricultural labour performed by women is especially crucial to societies' economic development (Boserup 1970, 1986, see also Chap. 8 by Ringhofer et al. in this volume). Boserup integrated these deliberations into her multidisciplinary approach cutting across issues of population, agriculture, and technology (see Boserup 1970, among others). Ester Boserup's theory was unique given the manner in which she integrated women into her fundamental theory of economic change. Her model has stimulated a number of research initiatives and international declarations on the status of women. In fact, her scholarship laid some of the groundwork for the inclusion of equality between men and women throughout the MDGs.

Although it is not always cited, Boserup's model continues to be highly influential in the discourse on women and development within the concepts of gender and development (GAD) and even gender mainstreaming.

In a contribution for the International Monetary Fund (IMF), Buvinic and King (2007) illustrated the relationships between gender equality and economic performance, arguing that "leveling the field of opportunities" through greater gender equality would have impacts at the household, economy and market, and society levels and thereby enhance aggregate economic performance both in terms of poverty reduction and economic growth.

We understand the hypothesis put forth by Buvinic and King as an expression of Boserup's theories on the relationships between the status of women and development and therefore use it as a reference to test this proposed relationship in the context of Sub-Saharan Africa. In Fig. 11.1, we have sketched out the framework of our analysis. We use the UN's Gender Inequality Index (GII, data source: UNDP 2010) as an indicator reflecting the degree of gender inequality. This indicator covers three dimensions: reproductive health, labour market, and empowerment. These

dimensions coincide well with the spheres for improvement as illustrated by Buvinic and King: household, economy and markets, and society. A GII of 1 represents total inequality, while a GII of 0 represents total equality. We have chosen to further examine the role of the total fertility rate (TFR), as it is not among the indicators included in the GII (data source: United Nations 2010a). By definition, the TFR is the average number of children that would be born alive to a woman during her lifetime if she was to pass through her childbearing years (15–49) conforming to the age-specific fertility rates of a given year. As measures of aggregate performance, we examined overall GDP growth, per capita GDP, as well as the Human Development Index (HDI) (data source: UNDP 2010; United Nations 2010b). The HDI consists of three components: income per capita (GNP per capita in US dollars at purchasing power parity), educational attainment measured by literacy rate and combined enrolment ratio, and longevity measured by life expectancy. In the following analysis, we tested whether there is a relationship between the status of females within a society and that society's overall performance in terms of human development and economic performance (as postulated by Buvinic and King 2007) in Sub-Saharan Africa. For this purpose, the aforementioned indicators were compared and contrasted for a total of 48 Sub-Saharan countries at different points in time, spanning the period from 1995 to 2005. The indicators taken into account were the Human Development Index (HDI), the Gender Inequality Index (GII), the Total Fertility Rate (TFR), and the Gross Domestic Product (GDP) in absolute and per capita terms.

Initially, we examined the relationship between GII and GDP in absolute terms as well as GDP growth as indicators of overall economic performance. We found no systematic relation between these indicators for the Sub-Saharan African countries examined. Countries with different levels of gender inequality achieved similar rates of GDP growth. Almost the same total GDP could be achieved by countries where gender inequality was similar to European countries (e.g., Mauritius) and by countries in which gender inequality was even higher than the Sub-Saharan average of 0.65 (e.g., Democratic Republic of Congo). Considering the differences between countries across Sub-Saharan Africa, it would have been quite surprising to find a correlation between GII and GDP or GDP growth, especially because economies that are similar in terms of GDP or GDP growth may be very different in terms of population. We therefore decided to focus on GDP per capita (GDP/cap) as a more comparable measure of economic performance. All correlations were checked for statistical significance.¹

For the years 2000 and 2005, we found significant correlations between GDP/cap, total fertility rate, the Gender Inequality Index, and the Human Development Index among Sub-Saharan African countries (see Fig. 11.2). As was described above, GDP is a component of the HDI, and therefore, this correlation cannot be tested for significance.

We also found a negative correlation between per capita GDP and both the total fertility rate and the Gender Inequality Index: The higher the number of births per woman and the higher the gender inequality, the lower the GDP per capita was in 2000. This very important result illustrates that the high rates of overall GDP growth,

¹ All correlations shown in the following were tested for a significance level of $\alpha = 1\%$.

2000	GDP/cap (current USD)	TFR 95-00 (births/woma n)	GII 2000	HDI 2000	2005	GDP/cap (current USD)	TFR 00-05 (births/woma n)	GII 2005	HDI 2005
GDP/cap (current USD)	1.00	- 0.74	- 0.64	0.85	GDP/cap (current USD)	1.00	- 0.70	- 0.65	0.28
TFR 95-00 (births/woma n)		1.00	0.68	0.87	TFR 00-05 (births/woma n)		1.00	0.70	0.82
GII 2000			1.00	0.62	GII 2005			1.00	0.70

Fig. 11.2 Correlation coefficients for 2000 and 2005

Fig. 11.3 Relationship between GDP (in current US\$) per capita and GII (N = 17; a) and GDP per capita and TFR (N = 48; b) for a selection of Sub-Saharan African Countries in 2000

which are exhibited by many of the countries of Sub-Saharan Africa, do not benefit the population. As shown in Fig. 11.3, the majority of countries exhibit fairly low per capita GDP, which is in turn coupled with high GII and TFR.

Figure 11.3 shows the per capita GDP in the countries of Sub-Saharan Africa in relation to the GII (Fig. 11.3a) and to TFR (Fig. 11.3b). The clustering on the left-hand side of both diagrams illustrates the relatively low per capita GDP in almost all countries of this region. This low economic wealth can be associated with both high gender inequality (e.g. Niger) and relatively low gender inequality (e.g. Rwanda). However, it must be noted that the GII levels analysed here were well above the world average (0.5) and significantly higher than the European average (approximately 0.3).

Fig. 11.4 Relationship between GII and TFR for a selection of Sub-Saharan African countries in 2000 (N = 17; **a**) and 2005 (N = 48; **b**)

The three countries in which GII approached the world average in 2000 (Namibia, South Africa, and Botswana) were also the countries with the highest per capita GDP. The total fertility rate also varies considerably amongst those countries with a low per capita GDP and ranges from more than 7 to less than 4 children per woman (Fig. 11.3b). The majority of countries in the investigated region had a TFR of 5 or more births per woman between 1995 and 2000. During this same period, the world average TFR was below 3, and the European fertility rate was below 2. Again, those countries with a noticeably lower TFR (South Africa, Botswana, Gabon, and Mauritius) were also those exhibiting higher GDP/cap values. If we relate the total fertility rate to fertility decisions for countries of Sub-Saharan Africa, we can find evidence that the relationship between women's status at the household level (or family level, in Boserup's terms), their say in fertility decisions, and overall economic performance is worth investigating further.

The relationships analysed between the total fertility rate and the gender inequality index showed a significant positive correlation (see Fig. 11.4). In the year 2000 (Fig. 11.4a), those countries with a high fertility rate were also likely to exhibit a high level of gender inequality, with the highest level of gender inequality in 2000 (GII = 0.82) occurring in the country with the highest 1995–2000 TFR (7.7). This

Fig. 11.5 Relationship between TFR and HDI for a selection of Sub-Saharan African countries in 2000 (N = 17; a) and 2005 (N = 48; b)

relationship also holds true for the year 2005: As clearly shown in Fig. 11.4b, those countries with more births per woman exhibit higher gender inequality. As was noted earlier, the TFR in Mauritius was by far the lowest in the region, and this country also exhibited the lowest level of gender inequality. There are two countries (Rwanda and Burundi) that diverged somewhat from this trend because the fairly high TFR that occurred was coupled with an uncharacteristically low GII. The latter was especially due to the relatively high level of involvement of women in political decision-making processes as well as their integration in the wage labour market in Rwanda and Burundi. It is interesting to note that if Rwanda and Burundi were not included in the correlation analysis, the fit of the linear trend for the remaining data sample would improve to $R^2 = 0.74$.

Our data analysis has shown that the relationship between TFR and HDI was even stronger, mainly because all countries included in our sample seemed to follow the same trend: The more births that occur per woman (i.e., the higher the TFR), the lower the HDI (Fig. 11.5). In both 2000 and 2005, the highest level of human

development measured by the HDI occurred in the country with the lowest number of births per woman (Mauritius), while the lowest level of HDI occurred in the country with the highest number of births per woman (Niger).

Upon re-examination and our modification of the model proposed by Buvinic and King (2007) as shown by Fig. 11.1, we can postulate that the status of females at the household level plays a crucial role in not just overall gender equality but also in a society's general development. Far from being a private household issue, women's control over fertility decisions is highly political.

11.6 Fertility Transition in Africa

Most Sub-Saharan African countries remain in a high fertility regime. On average, a woman in Sub-Saharan Africa has five children in her lifetime. This is much higher than the world average of a 2.55 TFR (United Nations 2010a). In fact, some countries, such as Mali, Guinea-Bissau, and Niger, continue to have total fertility rates close to or above seven children per woman. In approximately 10 other countries, including Somalia, Rwanda, and Uganda, the total fertility rate is more than 6. Several factors contribute to the sustained high fertility in Africa. These factors include early marriage, preference for sons, and low contraceptive use, among others. Additionally, low levels of development, low levels of female education, and poor reproductive health influence the proximate determinants of fertility. Over the past decade, there has been evidence that some African countries have begun to experience a fertility transition. Among them are South Africa, Botswana, and Zimbabwe, with an average of 2.4 children per woman over her lifetime. In countries such as Ghana and Kenya, the decline in fertility rates appears to have stalled. The explanations for the reversals are not very clear.

Apart from the general heterogeneity across African countries, significant fertility differences exist within countries by sub-region and socioeconomic status. For example, Addis Ababa, Ethiopia, has achieved below replacement fertility (of 2 children per woman), while surrounding regions of the country have fertility in excess of five children per woman (Sibanda et al. 2003). These differentials have implications for policies and programmes aimed at addressing high fertility in Africa. There are considerable inter-country and intra-country differences in levels and rates of change of fertility, which include differences across urban and rural areas as well as across individual communities. Another classic example is the variability in fertility levels across the formal and informal settlements in Accra, Ghana (Weeks et al. 2010). These types of studies indicate that the aggregated fertility trends at the national level are composed of heterogeneous fertility trends at the subnational and local levels.

Recent focus has been on the behavioural determinants of fertility change rather than the description of fertility change. Specifically, the influences of education, marriage, religion, and living in a poor neighbourhood on fertility change are emphasised, in addition to proximate determinants of fertility change, such as contraception and birth spacing. Due to methodological challenges, it has not been easy to establish clear connections between changes in norms or behaviour and changes in fertility

while controlling for income, assets, or wealth. However, it is assumed that with education there should be increasing economic independence for women, which allows them to make independent fertility decisions, such as the number of children to have. There is no need to re-visit the debate about whether to invest in family planning or development, but rather an understanding of the interactions between family planning policies and broader development policies is required. Additionally, the dilemma of Malthus versus Boserup arguments of whether population growth is an impediment or stimulus for development has been avoided in this analysis. By and large, it is important to recognise that fertility is still very high in Sub-Saharan Africa, while the means of sustenance (food security) are grossly inadequate. This situation is worrisome given that the carrying capacity of land is limited.

11.7 Conclusions: The Relevance of Boserup's Theories in Twenty-first Century Africa

At the beginning of the twenty-first century, the Millennium Development Goals (MDGs) emerged as a new global development agenda that pursues a total of eight goals with specific targets set for 2015. Goal number 3 refers to ensuring gender equality and empowering women, while goal 5 (improved maternal health) has implications for reproductive health and reproductive decisions including fertility decisions. Apart from these two goals, gender issues cut across each of the other goals. In fact, to achieve the MDGs, there has been a call for gender mainstreaming in all development policies, including in budgeting for MDG-related activities. As noted, MDG 3 specifically recognises the role of women in the development process, just as Boserup did more than 30 years ago. It can even be said that Boserup's model has framed the theoretical underpinnings of the MDG 3 (United Nations 2000).

Because Sub-Saharan Africa is less industrially developed, has the highest fertility rate, and has a wider gender gap than other regions around the globe, the attainment of the MDGs is crucial for Africa. Just as issues of gender, population, and development were central to Boserup's model, they remain so for the MDGs; the MDGs strive to apply the results of her research. One way to sustain Boserupian thinking in the twenty-first century is to ensure that MDG 3 is achieved in Africa, which requires recognising the role of women in development (Boserup 1970) as well as suggesting strategies for enhancing their status in society. Generally speaking, to achieve this goal, there is a need for 1) legislation and implementation of land and property rights for women, 2) access to appropriate technologies, and 3) fundamental cultural changes towards accepting basic human rights and gender equality. In the process of attaining these goals, women's co-operatives can play an important role in counteracting men's control and the oppression of women. Furthermore, male commitment and shared responsibility in household activities is required.

Revisiting the Boserupian model in the context of Sub-Saharan Africa has provided us with insights about the interrelationships between gender, population, and development. Boserup's holistic thinking has allowed us to better understand and illustrate that the status of women in Sub-Saharan Africa is not just a question of women's development, but rather of overall human economic development.

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