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## RESEARCH ARTICLE

### EFFECT OF GENDER INEQUALITY ON ECONOMIC GROWTH IN NIGERIA

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#### ABSTRACT

Gender equality is a key factor in contributing to the economic growth of a nation. The United Nations Population Fund believe that economic growth and social equality should go hand in hand, arguing that “gender inequality holds back growth of individuals, development of countries, and the evolution of societies, to the disadvantage of men and women”. The discrimination against women remains a common occurrence in today’s society and serves to hinder economic prosperity. The empowerment of women through such things as the promotion of women’s rights and an increase in the access of women to resources and education proves to be key to the advancement of economic development. Namely, gender equality in the work force and in social relationships are the two primary factors that instill economic growth. The influential role of gender equality on economic growth is most directly illustrated in the participation of women in the labor force. When women are not involved in the workforce, only part of the able workforce is being utilized and, thus, economic resources are wasted. Gender equality allows for an increase in women in the working sector, thereby leading to an expansion of the labor force and an increase in economic productivity. Figure 1 illustrates the increasing contribution of women to the gross domestic product (GDP) as well as to the economic growth of specific countries proving that an increase in female participation in the workforce undoubtedly will create economic growth.

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## INTRODUCTION

Inequality between women and men has been clearly identified as one of the causes blocking development over the last two decades. In a developing economy like Nigeria it is often difficult to establish evidence based causal links between impacts of gender inequality on a country’s development because of the lack of available sex-disaggregated data. And because of limited data, we may not capture the complexity of gender inequality in different contexts (such as looking at the gender specific effects of public investment cuts for example). One way to measure gender inequality is to look at the differences for women and men in areas such as education, health, decision making and access to economic opportunities. Analysis based on quantitative data reveals that considerable progress has been made in terms of women’s access to education and healthcare in the region. However, this level of analysis do not show how gender inequality influences policies. This is why we decided to dig deeper.

For instance, increasingly, many governments in this region decided to invest in education, in part to encourage participation in the labour market – which would then boost economic development. Meanwhile, most investments supported by education policies are gender blind: data from all countries in the region reveal that investments in education produce distinct outcomes for women and men:

- Women outnumber men in universities
- Working women have higher university degrees than men

But investments in education are not directly leading to women participating in the labour market. On average, in the region, women represent 44 percent of the workforce. So, why is it that the gains in women’s education do not increase the number of women in the workforce? And how can we change it? The reason why investments and education policies are producing different outcomes for women and men is because they happen in societies where gender inequality is deeply entrenched. Gender inequality is often driven by existing gender stereotypes that determine how we perceive the roles of women and men in society. Economic inequality of women has featured since old-testament times and doubtless before that.

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The second half of the 20<sup>th</sup> century, however, brought a major transformation including, for the first time, the promotion of gender equality as formal commitment on national and informational political agendas. In the advanced economies unlike the developing economics like Nigeria, the role of women the paid employment has expanded at an unprecedented rate, lending, in some countries, to near parity with the number of men in the labor force for the first time within the span of modern statistics. This feminization of the workforce in numerical terms has been paralleled by qualitative changes as women enter occupation and industries from which they were previously absent, or entre this increasing numbers. With this progressive shift of women's economic activity from household to market place women's earnings are making an increasingly important contribution to the household's income, enhancing their status and bargaining power within it.

But while women continue to make major strides towards economic equality, the transformation remains seriously incomplete. The employment opportunities many of the developing and developed economies are still often inferior, and concentrated into a relatively narrow range of activities. Equality of outcomes in the labor market has not been achieved. The persistence of unequal outcomes, with the under-utilization of female abilities and restriction of individual opportunities which it implies, is economically inefficient and socially inequitable. Even after several decades of massive economic and social change, inequality in economic outcomes remains a significant issue. This has prompted the idea of this paper looking at the effect of gender in equality on the economic growth of Nigeria, not loosing sight of the developed economics also.

## The Gender GAP in Employment

### Women's employment participation rates:

A generation ago just over 100 million women were in the labor force across the advanced economics. By 2005 this had risen o almost 180 million, in one of the most sustained and striking economic and social developments of the era.

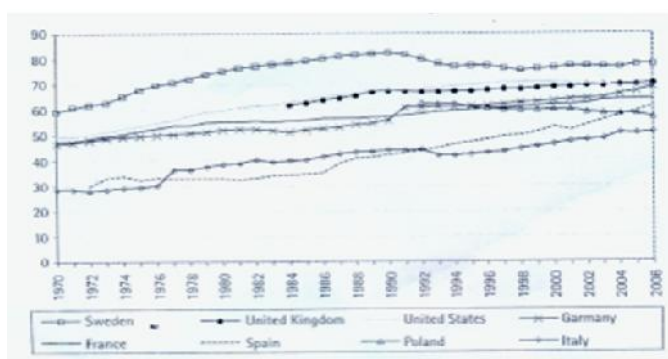


Fig.1. Women's labour force participation, ages 25-54; selected countries

As Table 2.1 illustrates, the upward trend is almost universal, with women's employment growing at more than twice the (modest) growth rate for men. As a result the female share in OECD employment has risen from 37 to 45% highest in the Nordic nations (over 45% in finland) and lowest, just over 40%

in southern Europe. The massive expansion in women's labour force participation has heaved the gender employment gap, as measured by difference in the employment/ population ratios for men and women Fig 1. shows the marked trend towards convergence, with participation rates growing particularly strongly in those countries where nits was lowest while remaining static, or even declining, were it had already reached high levels (Sweden; recently the USA). In spite of strong recent growth, women's participation in southern Europe remains below the level already attained in much of the rest of the OECD a generation ago.

## Institutional Policy Frame Work For Growth Vis-À-Vis Gender Bias

### Improved access to infrastructure

Consider the case of a public policy aimed at promoting access to infrastructure by investing in rural roads, power grids, and others. The direct effect of this policy is of course an increase in the public-private capital ratio, which therefore promotes growth directly. In addition, this increase reduces mothers' time allocated to home production and raises time allocated to market work, human capital accumulation, and child rearing. The latter is also productive; it leads to improved health in both childhood and adulthood. Thus, all of these effects also help promote growth and health outcomes. Crucially, the increase in time devoted to human capital accumulation raises women's bargaining power, which translates into a higher family preference for girls' education and children's health, an increase in the average share of family income spent on children, and a lower preference for current consumption. The first two effects increase further the amount of time allocated to education and child rearing, whereas the last effect contributes to a rise in the savings rate. Because increases in the level of income and in the savings rate raise private savings and the private capital stock, there is a positive effect on the growth rate of outputs. At the same time, female health in adulthood also improves – as a result of receiving more care in childhood and higher government spending on health.

In quantitative terms, the numerical experiments focused on a policy that takes the form of a budget-neutral increase in government spending on infrastructure investment, from its current value of about 2.1% of gross domestic product (GDP) to 3.1% of GDP. Calculations suggest that this policy could add between 0.5 and 0.9 percentage points to Brazil's annual rate of output growth once direct and indirect effects – most notably through changes in women's time allocation and their bargaining power over family resources – are accounted for. This positive effect could be even higher if the increase in the share of spending of investment is accompanied by reforms aimed at improving the quality of such spending. Thus, a policy aimed at promoting access to infrastructure could have a substantial impact on the population's standards of living over a relatively short time horizon.

### Reduction in gender bias in the market place

Suppose now that the government introduces antidiscrimination laws that lead to a complete elimination of gender bias against women in the workplace. Women's 'take-

home' pay therefore increases, all else being equal. The direct effect of this policy (at the initial level of wages) is to raise family income.

impact on women's time allocation; in turn, changes in women's time allocation may have substantial effects on growth, both directly and indirectly.

Table 1. Civilian labor force, OECD and selected countries, 1973–2005

Country	Female civilian labor force (millions)			Females: average annual increase %	Males: average annual increase %	Female share in civilian labor force %		
	1973	1995	2005	1973–2005	1973–2005	1973	1995	2005
France	8.1	11.4	12.8	1.4	0.2	37.7	45.9	47.3
Germany <sup>1</sup>	10.2 <sup>1</sup>	16.8	18.4	1.9 <sup>1</sup>	0.9 <sup>1</sup>	37.8 <sup>1</sup>	43.1	45.1
Italy	6.2	8.4	9.8	1.5	0.1	30.3	37.2	40.5
Sweden	1.6	2.1	2.2	1.0	0.1	41.0	47.8	47.7
United Kingdom	9.4	12.5	13.6	1.2	0.0	37.1	44.7	46.4
United States	34.8	60.9	69.3	2.2	1.2	38.9	46.1	46.4
Nordic countries <sup>2</sup>	4.3	5.6	5.9	1.1	0.3	41.5	47.1	47.7
Southern Europe <sup>3</sup>	12.5 <sup>3</sup>	18.3	23.0	1.9 <sup>3</sup>	0.4 <sup>3</sup>	30.5 <sup>3</sup>	38.4	41.5
Eastern Europe <sup>4</sup>	13.0	13.2		0.1 <sup>4</sup>	0.2 <sup>4</sup>	45.5	45.3	45.3
OECD	102.9 <sup>5</sup>	159.1	178.6	1.7 <sup>5</sup>	0.7 <sup>5</sup>	37.2 <sup>5</sup>	43.6	44.9

Notes: <sup>1</sup> Prior to 1991 data refer to West Germany only (Federal Republic of Germany).

<sup>2</sup> Denmark, Finland, Norway, Sweden.

<sup>3</sup> Greece, Italy, Portugal, Spain.

<sup>4</sup> Czech Republic, Hungary, Poland, Slovakia.

<sup>5</sup> Greece and Portugal 1977.

<sup>6</sup> East Europe 1995–2005.

Source: OECD, Employment and Labor Market Statistics; Labor Force Statistics, summary tables, vol. 2006, release 02.

In turn, higher income leads to a higher level of private savings and higher private capital stock, which has a direct positive effect on growth and brings higher tax revenues. Because changes in the degree of gender bias in the workplace affect tax revenues and private savings in exactly the same way, the public-private capital ratio is not affected, nor is women's time allocation. Nevertheless, because higher tax revenues lead to higher public spending on health, there is a positive effect on health in childhood and female health in adulthood. Thus, a reduction in gender bias leads to an increase in the growth rate of output and improved health outcomes.

In quantitative terms, the model-based calculations suggest that an 'equal work, equal pay' policy that would ensure that women earn a wage that fully reflects their marginal contribution to market production could add up to 0.2 percentage points to the country's annual growth rate. Over a sufficiently long period of time, this would also have a significant impact on the population's standards of living. In addition, it is important to note that the analytical framework from which this estimate is derived does not capture the possibility that gender gaps in access to managerial positions and employment may also distort the allocation of talent and women's incentives to invest in particular skills, thereby constraining overall productivity growth. If these effects were to be accounted for, the growth benefits of eliminating gender bias in the market place would be even higher.

### Infrastructure and women's time allocation

Just like gender equality, the role of infrastructure in the process of economic development has received renewed attention in the ongoing debate over how to promote growth in low-income countries.<sup>1</sup> In addition to the conventional positive effects on factor productivity and private investment, more recent evidence suggests that access to infrastructure may have a significant impact on health and education outcomes. In addition, a number of empirical studies have documented that improved access to infrastructure may have a significant

For instance, on average women in rural sub-Saharan Africa spend between four hours and ten hours a week fetching water and firewood (see Table 1). Including other household chores, women may be forced to allocate up to six hours a day to home production activities – thereby constraining their ability to invest in their health, in the health of their children, and to engage in market work. Table 2.2 Average time per week spent fetching wood and water, rural areas of selected sub-Saharan African countries (hours)

Gender and ratio	Guinea (2002–03)	Madagascar (2001)	Malawi (2004)	Sierra Leone (2003–04)
Women	5.7	4.7	9.1	7.3
Men	2.3	4.1	1.1	4.5
Girls	4.1	5.1	4.3	7.7
Boys	4.0	4.7	1.4	7.1
Women/men	2.5	1.1	8.3	1.6
Girls/boys	1.0	1.1	3.1	1.1

Source: United Nations Development Programme (2011).

By implication, better access to infrastructure may enable women to devote more time to market activity, thereby promoting growth. At the same time, it may lead to improved learning monitoring (for instance, in the case of electricity) as well as improved childcare practices. These improvements may strengthen the health status of children and their ability to learn and, in turn, this would improve their productivity in adulthood and their earning potential.

### An overlapping Generations model of gender and growth

In a series of contributions, we have developed a gender-based overlapping generation's model to address interactions between infrastructure, women's time allocation, and economic growth. Key features of our model include:

- Women allocate their time between four alternatives: market work, raising children, human capital accumulation, and home production.

- Home production combines women's time allocated to that activity with infrastructure services.
- In families, fathers have a relatively higher preference for current consumption, whereas mothers have a higher preference for children's health, thus family-wide preference parameters for consumption and children's health depend on women's bargaining power.
- Gender bias in the workplace is captured by assuming that women earn only a fraction of their marginal product, and differences in economic outcomes in the market place between men and women are fundamentally related to gender bias experienced in the home during childhood.
- Women's bargaining power depends on the relative levels of human capital of husband and wife, and thus indirectly on access to infrastructure, which influences women's time allocation and thus the time that they allocate to human capital accumulation.
- Inter- and intra-generational health persistence, in the sense of women's health affecting the health of their children, and health in childhood affecting health in adulthood.

The main linkages in the model (assuming that women also allocate time to their own health) are represented. It illustrates the fact that in addition to conventional productivity and cost effects associated with access to infrastructure, such access can also generate important externalities in terms of health and education outcomes, as documented by a wealth of evidence (see Agénor 2012b). A key relationship that the figure illustrates also is the inverse link between time allocated to home production and access to infrastructure. It implies that time allocated to own health or education, and time devote to child rearing (which are all productive in this setting) are positively related to access to public capital. Thus, one of the key channels through which infrastructure affects growth operates through women's time reallocation.

The model produces equilibrium values for women's time allocation, health and education outcomes, and an explicit expression for the economy's growth rate in the long run. These static, long-run relationships are then calibrated (using a variety of data sources) and simulated. In the case of Brazil, the results of the calibration exercise show that in the benchmark scenario women allocate 20.6% of their time to home production, 11.7% to child rearing, 18.5% to human capital accumulation (including both formal schooling and post-schooling time), and 42.1% to market work.

### **The fundamental drivers: education and technology**

#### **Women's Educational Attainment**

The bedrock for the transformation in women's economic activity outside the home is the transformation in their relative educational attainment. This upsurge in their human capital accentuates the incentive to employment participation, and opens access to higher skilled occupations with their greater rewards which as if were have some positive effects on the economic growth of economies. But women's rising educational attainment is not all good news for their labor market prospects. In choice of college major, women tend to specialize in humanities and the creative arts, which are less well rewarded in future earning than the engineering and

physical sciences disciplines which remain largely a male preserve. This choice of specialism is found to lead to wages for male graduates 2-4 percent higher than for females, contributing over one-quarter of the explained portion of the graduates wage gap (Mechin and Puhani, 2003). In university, women are typically over-represented in subjects such as health, social science and education, and consequently, these choices influence their job choices, and in the long run, their competitiveness in the labour market.

Women also tend to be over represented in public employment (health, education), and consequently, they are less likely than men to be re-employed in similar jobs in the private sector, putting them at a disadvantage if they lose their job – not to mention increasing state investment in social benefits. In a time of the financial constraints, this situation represents a waste of resources and consequently, impedes development progress. Even though the loss cannot be estimated in actual cash terms and detailed impact cannot be established for each country because of limited data available in the region, we wanted to give it a try. Women working at the Bank of America in 1970. In 2014, there is no country in the world where women have equal political and economic power to men. According to a recent UN report, the progress made in the past 20 years towards reducing global poverty is at risk of being reversed because of a failure to combat widening inequality and strengthen women's rights. The UN's *ICPD Beyond 2014 Global Report*, has found that the number of people living in developing countries has more than halved from 47 per cent in 1990 to 22 per cent in 2010, but argues that many of the 1 billion people living in the 50-60 poorest countries will be left behind as the rest of the world gets richer.

Around the world, different groups are marginalized and discriminated against, but discrimination against women is universal. It is a shocking thought that in 2014, there is no country in the world where women have equal economic and political power to men. As well as holding back billions of women from achieving their full potential, and asserting their right to live full, healthy lives, this is having an impact on the global economy too. Is, as the UN suggests, the reason for global wealth creation shifting from the West to fast-growing Eastern economies in part due to women's increased economic participation? Most certainly. According to the IMF, closing the gender gap in the labour market would raise the GDP of the USA by 5 per cent, the UAE by 12 per cent, Japan by 9 per cent and Egypt by 34 per cent. Using Trading Economics figures for 2013, we calculated that this means gender equality is worth \$784.2bn for the US, \$536bn for Japan, \$43.2bn for the UAE and \$96.2bn for Egypt. IMF also estimates that 853million women worldwide have the potential to contribute more to their economies, and 812million of these live in developing countries. In wealthier countries, more women in work can offset some of the negative effects caused by an ageing and shrinking workforce.

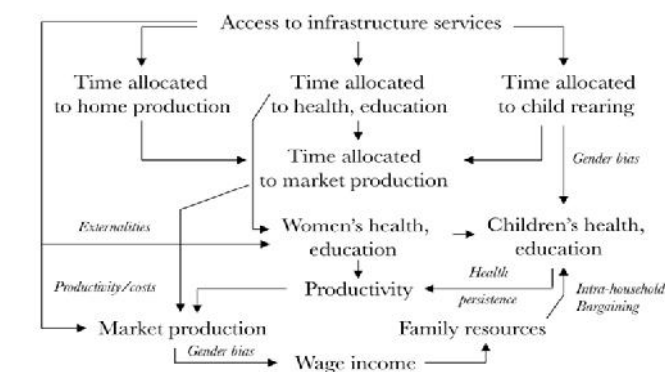
#### **Technological Change**

Where educational attainment provides the fundamental driver on the supply side, demand is also evolving in ways favourable to women's role in the labor market. Shifts in demand patterns are oriented towards services, which often feature the

interpersonal “soft” skills where women have a comparative advantage. The demand for skills is rising at a time when women’s gains in educational attainment are qualifying them to meet it. At the same time, women have escaped much of the job destruction affecting male dominated manual occupations as brain comes to be valued over brawn (Welch, 2000; Weinberg, 2000). This process is characterized by Galor and Weil (1996) as “female-biased technical change”. More subtly, technological change at the workplace is now emerging as the major new force expanding demands for women’s skills. The ICT-based transformation of work is having a major impact on the evolution of men’s and women’s productivity and on the gender pay gap. In a task-based framework developed by Autor et al (2003) and applied by Spitz-Oener (2006) and Goos and Manning (2007) gives central place to workplace computerization as an underlying cause of changes in occupational skill requirements. For gender equality the major inference from this task-based approach is that up-skilling within the job has taken place in Jobs predominantly held by women enhancing women’s productivity in traditionally “female” occupations. By contrast, the range of routine task more typically performed by men has not experienced comparable up-skilling.

### Advertising

Bringing more women into work creates a positive cycle: as today’s UN report points out, poverty often hits women hardest. In the world’s poorest countries, women are more likely to die in childbirth, for instance, and are disproportionately affected by the grind of unpaid, physical domestic chores like food production and collecting water. Across many countries, single mothers are among the poorest sector of society. Poverty is a both a cause and a consequence of inequality. Both globally and within countries, the gap between rich and poor is widening - more than half of the gains in global income since 1988 went to the richest 5 per cent - a fact that will have an outside impact on women. Worldwide, 97 per cent of countries report having programmes and policies in place to address gender inequality, but with the lack of real political will, this still hasn’t levelled the playing field for women. The economic impact of this global policy failure is just one reason for supporting women’s equality – but it is a good way of pointing out one obvious, but often overlooked point: when women gain, the whole of society benefits.



Source: Self-Compilation

Fig 2.

### Conclusion

Our approach calibrates the steady-state solution of the model – based on rigorous micro foundations and which possesses well-defined long-run properties – and focuses on the long-run effects of gender-based policies. Many of these policies are structural in nature and are likely to produce tangible economic results but only over a period of several years. While the model described here may not provide complete versatility, it does represent a significant analytical step forward in an area where there is a dearth of quantitative tools available for policy analysis. Many impediments to women’s economic and social status have been highlighted and some level of progress has been achieved towards economic equality for women, nevertheless, inequality and discrimination certainly still exist. It is the view of this paper that the fundamental drivers transforming women’s labor market outcomes, educational achievement, and up-skilling through technological change at the workplace, and both imperfectly understood. The transformation of women’s role in education is worldwide, but why they have so suddenly and pervasively outstripped men in some countries needs an explanation which is viable on a global basis. Similarly, the task interpretation are highly suggestive, but establishing a robust evidence base remains for future research. Hence, the paper is of the view that closing the gap of equality can go a long way in enhancing the economic growth of a given economy especially Nigeria.

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