
Impacts of Women's Education on Economic Growth

BY

Leon K. DAVID, Ph.D
Faculty of Education
University of Rochester
Rochester
New York City

ABSTRACT

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, and habits. It is also the process of development from infancy to maturity, the process by which an individual adapts himself gradually in various ways of his physical, social and spiritual environment. Women education is also said to be a form of education that aims at improving the knowledge, and skill of women and girls. It includes general education at schools and colleges, vocational and technical education, professional education, health education, etc. The paper viewed that women's education has a positive direct and indirect effect on the economic growth through reducing fertility rate and infant mortality, and increasing labour participation, total factor productivity, health, and life's conditions. This paper concludes that women's education is a master-key to economic growth and development accompanied by a healthy and good quality of institutional capital and by eliminating all forms of gender discrimination. One of the recommendations was that Both government and policy makers should design tools to encourage female education, by providing female scholarship, female dormitory, and girls' schools, as well as implementing (genderless) compulsory primary schooling. By doing this it will effectively promote not only female education but also sustainable economic development.

KEYWORDS: Women's Education and Economic Growth

Introduction

Economic growth involves a combination of different types of capitals to produce goods and services, such as human, natural and produced capital. Certainly, economic growth depends also on political institutions and social conditions quality. In the early 60s, economists have given a big importance to the concept of human capital principally with the writing of Becker (1962), Schultz (1961, 1962), Mincer (1958, 1962), Kiker (1966) and Blaug (1976). All these authors confirmed that human capital is different from other types of capitals. Without human capital, the country cannot grow. This capital affects and controls other factors that explain economic growth and development of a country. Barro (2013) specified that human capital includes education, health, and "social capital". This capital is defined by Organization of Islamic Cooperation (2011) as a capital that "refers to the knowledge and capabilities embodied in people that can be utilized to advance the production techniques and contribute to the social and economic development", (OIC, 2011). Thus, education plays a considerable role in the human capital accumulation. This organization declared also that "the role of education in increasing the productivity and efficiency of labour force by increasing the cognitive stock of economically productive human capability is well acknowledged" (OIC, 2011).

Conceptual Reviews

Concept of Education

Etymologically, the word "Education" is derived from the Latin words "educare" and "educere". Educare refers to "to bring up" or "to nourish", whereas the word "educere" means to "to bring forth" or "to draw out". Some others believe that the word is derived from another Latin word "educantum" which has two components (Chakma, 2019). According to Wikipedia (2018), education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, and habits. Adhikary (2018) defined education as a process of development from infancy to maturity, the process by which an individual adapts himself gradually in various ways of his physical, social and spiritual environment. Thus, education may also be defined as a purposive, conscious or unconscious psychological, sociological, scientific and philosophical process which brings about the developments of the individual to the fullest extent and also the maximum development of society in such a way that both enjoy maximum happiness and prosperity. Educational methods include teaching, training, storytelling, discussion and directed research. Education frequently takes place under the guidance of educators, however learners can also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy (Wikipedia, 2018).

Concept of Women Education

Women education refers to every form of education that aims at improving the knowledge, and skill of women and girls. It includes general education at schools and colleges, vocational and technical education, professional education, health education, etc. Women education encompasses both literary and non-literary education (IMP Center, 2019). According to Bhasin (2002), women's education can be regarded as a kind of knowledge given to women for enhancing their self-respect and self-dignity. This knowledge can be in form of formal, non-formal and informal education, it can also be in form of Adult Education, Community Development, Workshops, Seminars, Conferences and Training. Women's education is for making women to become economically independent and self-reliant. It includes areas of gender equality and access to education, and its connection to the alleviation of poverty (Bhasin, 2002). In fact, women education refers to the entire movement and advocacy towards encouraging women to venture into education beyond the basic level so as to have equal job opportunity with their men counterparts. It is encouragement for easy access to all levels of education, irrespective of the course involved. The essence of women education is partly to make these gender disparities in education better (Lawson, 2008).

Concept of Economy

An economy is the large set of inter-related production, consumption, and exchange activities that aid in determining how scarce resources are allocated. The production, consumption, and distribution of goods and services are used to fulfill the needs of those living and operating within the economy, which is also referred to as an economic system. Concept of economic growth (Kenton and Boyle, 2017). An economy encompasses all activity related to production, consumption, and trade of goods and services in an area. These decisions are made through some combination of market transactions and collective or hierarchical decision making. Everyone from individuals to entities such as families, corporations, and governments participate in this process. The economy of a particular region or country is governed by its culture, laws, history, and geography, among other factors, and it evolves due

to the choices and actions of the participants. For this reason, no two economies are identical (Kenton and Boyle, 2017).

Concept of Economic Growth

Economic growth is an increase in the production of goods and services over a specific period. To be most accurate, the measurement must remove the effects of inflation. Economic growth creates more profit for businesses. As a result, stock prices rise. That gives companies capital to invest and hire more employees. As more jobs are created, incomes rise. Consumers have more money to buy additional products and services. Purchases drive higher economic growth. For this reason, all countries want positive economic growth. This makes economic growth the most-watched economic indicator (Kimberly, 2018). The process of economic growth, a continuing increase in the standard of living that persists over decades, can only come from growth in the productivity of labor. An increase in the standard of living requires, in turn, that a society devote a portion of its economic output to research and development of new technologies, to education and training of workers, and to the production of new capital goods. This can only happen if society is willing to forgo some immediate consumption of goods and services, freeing a portion of the current output of the economy for investment in future growth (Charles, 2009). According to numerous studies, human capital and economic growth have a positive and long-run relationship. This capital continued to be a master-key of growth and development of a country, as well as an important factor to decrease poverty and migration, and to improve the quality of institutions and social conditions of citizens. Studying and measuring the impact of human capital on economic growth is always important, especially, in developing countries where the school enrolment remains feeble, mainly for girls and in rural area.

Literature Reviews on Women's Education and Economic Growth

Several studies such as Psacharopoulos (1994), Hill and King (1995), Barro (1996), Klasen (2002), and Bloom, Canning and Chan (2006) have showed that women's education has a positive direct and indirect effect on the economic growth through reducing fertility rate and infant mortality, and increasing labour participation, total factor productivity, health, and life's conditions. Past studies linking education to economic growth have focused predominantly on the effects of primary and secondary education, and have neglected others aspects of education especially higher education and women's education. These areas of studies are considered as a way to improve economic growth and social conditions in order to decrease the technology and gender gap and to establish the democratic society. So, recent studies have shown not only the importance of primary and secondary education on the economic growth, but also the importance of higher and women's education on both economic growth and social development. Due to vast existing literature in the area on women's education and economic growth, it is suitable to recite some of them (Bloom, Canning and Chan, 2006).

Poor countries differ from rich countries, like people, not only because they have less capital or income but because they have less knowledge (World Bank, 1999). In its report, World Bank illustrated the case of Ghana and the Republic of Korea that had the same income per capita in 1958, but Korea's income per capita was six times higher than Ghana's in by the end of 90s. Using Solow model, the World Bank showed that half of the gap is due to Korea's greater success in acquiring and using knowledge. So, this example showed clearly that there is a positive correlation between education and economic performance. The World Bank confirmed also that the absorption of knowledge involves ensuring a universal basic

education - including special emphasis on extending education to girls and other traditionally disadvantaged groups -, creating opportunities for lifelong learning, and supporting tertiary education, especially in the science and engineering. Thus, countries without a "minimum scientific and technological capacity will also lag in realizing social and human benefits such as rising life expectancy, lower infant mortality, and improved health, nutrition, and sanitation. Such countries will be increasingly vulnerable to emerging threats", (World Bank, 2002). The knowledge is considered a driver of growth in the context of globalization and technological revolution. Among results of the World Bank is that the benefits of women's education include better child nutrition, a good health and reduced fertility. Similar results are found by numerous authors, such as Ainsworth, Beegle, and Nyamete (1996), Klasen (2002), Barro and Sala-i-Martin (2003), Lawson (2008), Pritchett (2001, 2006), and Quamrul, Weil and Wilde (2013).

Examining relationship between female schooling and two behaviours (the cumulative fertility and contraceptive use) in fourteen Sub-Saharan African countries, Ainsworth, Beegle, and Nyamete (1996) showed that increased women's education is linked to lower fertility. Similar results are found by Klasen (2002). This author showed that there is a statistically significant correlation between a lower fertility rate and an increase in human capital and the economic growth. In a cross-sectional study, Barro and Sala-i-Martin (2003) found that the fertility rate tends to decline with an increase in GDP per capita and there are stronger relationships between educational attainment and fertility, i.e. female schooling is negatively linked with fertility rate, whereas male schooling is positively related with fertility rate. These authors found also that the average years of male's secondary and higher schooling -observed at the start of each period, 1965, 1975, and 1985- is often significantly related to subsequent growth. Then, women's attainment and for both sexes at the primary level turn out not to be significantly related to growth rates.

In his work, Lawson (2008) tried to evaluate the potential economic impact of women's education on the BRICs and N-11 countries. The main findings are that women's education leads to longer life expectancy (for women and men) and larger use of technology. In the BRICs and N-11 countries, greater investments in women's education could yield to a 'growth premium' that raises trend GDP growth by about 0.2% per year. Thus, he confirmed that women's education affects economic growth across multiple channels. Firstly, women's education can improve household welfare via higher wages and better jobs, lower fertility and maternal mortality, better health (lower rate of HIV/AIDS infection), entrepreneurial success, and intergenerational benefits. Secondly, women's education supports macroeconomic/growth through higher women's labour-force participation rates in tertiary activities, stronger human capital and higher productivity, higher returns on investment, increase of productive agriculture, and the "demographic transition".

Using a combination of microeconomic estimates and standard components of quantitative macroeconomic theory to investigate the effect of a change in fertility from the United Nations (UN 2010) medium-variant to the UN low-variant projection in Nigeria, Quamrul, Weil and Wilde (2013) constructed a general equilibrium model where "output is produced with a neoclassical production function that takes physical capital, land, and a human capital aggregate (embodying education and experience) as inputs". The exogenous variables are fertility and mortality rates (and thus population size and age structure) and the endogenous variables include physical and human capital, labour force participation, and wages. The authors concluded that the long-run effect of reducing fertility from the UN medium variant to the low variant is to raise output per capita by 5.6% at a horizon of 20 years, and by 11.9% at a horizon of 50 years, (p. 25). Another aspect of studies is measuring the impact of human

capital on economic growth by only the quantity of education, i.e. the primary or secondary school enrolments, was inappropriate. So, a range of studies have shown the importance of higher education to economic growth. Jenkins (1995) investigated the relationship between total factor productivity and different levels of educational attainment. This author showed that an increase in the proportion of workers with higher qualifications by 1% raises annual output by between 0.42% and 0.63%, where higher education qualifications included undergraduate, postgraduate, and other tertiary graduate stock.

The economic growth is affected by ideas and invention, which in turn are related to the stock of human capital either through research and development (R&D) activities or through adoption behaviour. Hanushek and Dennis (2000) proposed introducing a quality of education using "student cognitive performance on various international tests of academic achievement in mathematics and science". The main findings showed that a "one standard deviation in mathematics and science skills translates into more than one percentage point in average annual real growth, also looks implausibly large". Using a modified neoclassical growth equation and a dynamic panel estimator, Gyimah-Brempong, Paddison and Mitiku (2006) found that all levels of education, including higher education, have positive and statistically significant effect on the growth rate of per capita income in African countries during 1960-2000 period as a 1% increase in the average years of higher education increases the growth rate of per capita income by about 0.09% points per year.

Among conclusions of Barro is that the schooling variable¹ was positive and highly significant in economic growth, and countries can grow faster by 0.2 percentage points per year (Barro, 1992). Analysing the effect of education on the growth in a panel of around 100 countries observed from 1965 to 1995, Barro (2001) highlighted the importance of knowledge spillover. The growth is positively related to starting level of average years of school attainment of adult males at secondary and higher levels. However, school attainment of females at secondary and higher levels has not affected economic growth because highly educated women are not well utilized in labour markets. In recent work, Barro and Lee (2010) confirmed that workers' education has a significant positive effect on the level of income at the country level. Similar results are found in his recent work, Barro (2013). He showed that the quality and quantity of schooling both matter for growth but that the quality is much more important, i.e. a one-standard-deviation increase in sciences scores - by 0.08 - would raise on the growth rate impact by 1.0 percentage per year, whereas a one-standard-deviation raise in attainment would increase on the growth rate impact by only 0.2 percentage per year, (Barro, 2013, p. 322).

Bloom, Canning and Chan (2006) highlighted also the importance of higher education in economic growth and development. They suggested that higher education can help countries with technological catch-up and thus improve the potential for faster growth. It can produce both public and private benefits. The private benefits for individuals included better employment, higher salaries, and a greater ability to save and invest, thereby, a better health and a good quality of life. The public benefits can be found in the economic development through technological catch-up facilitated by the higher education. It can also "improve a nation's health, contribute to reduced population growth, improve technology, and strengthen governance", (Bloom, Canning and Chan, 2006).

Conclusion

The paper concluded that women's education is a master- key to economic growth and development accompanied by a healthy and good quality of institutional capital and by

eliminating all forms of gender discrimination. Economic growth is seen as an increase in the production of goods and services over a specific period. Economic growth creates more profit for businesses. Women's education has a positive direct and indirect effect on the economic growth through reducing fertility rate and infant mortality, and increasing labour participation.

Recommendations

1. Both government and policy makers should design tools to encourage female education, by providing female scholarship, female dormitory, and girls' schools, as well as implementing (genderless) compulsory primary schooling. By doing this it will effectively promote not only female education but also sustainable economic development.
2. Systematic efforts should be made to ensure women's full integration and participation into the national development process.

ROLES OF WOMEN SPECIAL

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