

## HUMAN CAPITAL DEVELOPMENT ISSUES AND GENDER GAPS

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### **Abstract**

*This article examines the impact of gender gaps in human capital on economic growth. This paper contributes to the literature on gender inequality and economic growth making a step forward in causal inference by focusing on a particular channel through which higher gender equality may support economic growth: by allocating female labor to its more productive use.*

### **Keywords**

*Human capital, HCI, gender gaps, girls' education, female life expectancy, developing country.*

### **Introduction**

People's health, knowledge and abilities have become the main factor of the well-being of any society and the economic development of the state. Because the development of human capital is a necessary condition for the development of innovative economy, knowledge economy, investments, global information systems, the latest technologies and new forms of business.

Human Capital Development is a global initiative to accelerate greater and more efficient investment in people to promote social equity and economic growth.

Studying the gender perspective on the quality of human capital has not only scientific, but also practical value, because it allows to develop a strategy for the development of education and to see the problems and trends that should be taken into account in the socio-economic policy in general.

There is an index that measures the development of human capital globally. The Human Capital Index (HCI) launched by the World Bank Group in October 2018 is a simple but powerful metric that measures the future productivity of children born today, compared to what it could be if they had benefited from 'complete education and full health'. The index is made up of important

components of human capital: education, health, and survival. The sex-disaggregated HCI emphasizes the World Bank Group's priority on gender, and specifically in ensuring equal investment in human capital of boys and girls [1].

The importance of human capital development can be understood in several different ways. Traditionally, economists measured this by the income of people with more education. Research shows that each additional year of education increases a person's earnings by an average of 10 percent. The quality of education is also important.

But educational opportunities are not the only indicator of human capital. Social-emotional skills, such as courage, will, and honesty, usually lead to greater economic productivity. Health is also important. After all, the work efficiency of healthy people is high.

Measuring human capital in different ways from an early age is beneficial. Feeding the child right from infancy and encouraging his healthy development will improve his physical and mental well-being later. At the same time, some deficits in cognitive and social-emotional capacities in childhood are costly to correct in adulthood. Therefore, the development of human capital by the government in the first 1000 days of a child's life is economically beneficial.

What does all this have to do with economic growth?

Economists estimate that when individual investments in human capital are aggregated, the gap between investment in human capital and per capita income in different countries ranges from 10 to 30 percent [2].

After all, it is necessary to pay special attention to the issues of gender equality in the development of human capital. Because in many developing countries compared to developed countries, families with average or low incomes prefer boys than girls when making decisions about their children's education.

### **Literature review**

According to Minh Quang Dao [3] Ethnicity is an important factor contributing to the understanding and addressing of gender gaps. Lewis and Lockheed [4] estimate that two-thirds of girls who are out of school globally are part of ethnic minorities in their own countries. And this is true even for countries that have experienced rapid economic growth. As a result, wide gender gaps in education persist. Chioda et al [5] find indigenous women in Guatemala suffer a 60 percent illiteracy rate, putting them 20 percentage points above their male counterparts and twice the rate of their nonindigenous counterparts. Similarly, according to Hannum and Wang [6], rural ethnic minorities in China have less

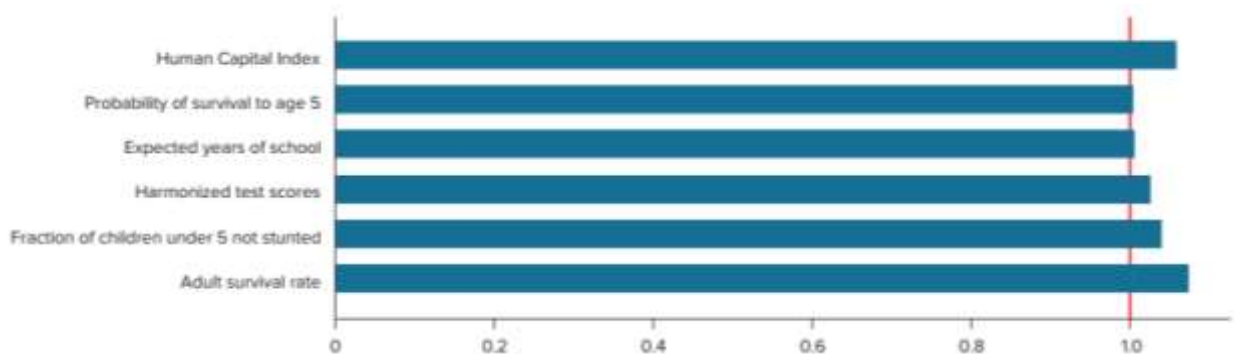
access to education and health than the Han, Hui, and Manchu who are more urban.

Poverty is another important element in the persistence of gender inequality. According to the UNESCO [7], a wealthy urban child attains on average around 10 years of education whereas a poor rural girl has less than 6 months.

Also, G.A.Adesina-Uthman and A.I.Obaka said [8] Access to education has been tasking especially among the girl-child when school enrollment is considered. This has prompted nations zeroing in consideration on gender disparity through Millennium Development Goals (MDGs) that transformed into Sustainable Development Goals (SDGs). Findings show a male-centred framework as there exist a significant gender difference in human capital development, which by inference are socially built negative attitudes towards female professionals, and this hinders their pedagogic endeavours and professional development. Stopping gender differences in human capital development would assist in elevating the status and abilities of women for all-inclusive national development.

**Research and methodology**

Globally, the average HCI is slightly higher for girls (0.59) than for boys (0.56). Although the gap between boys and girls has closed in these early-life outcomes, boys and girls both remain far from the frontier of complete education and full health. The gap in human capital compared to full potential far exceeds any gender gap in HCI in most economies. Boys and girls are, respectively, 2.6 and 2.5 years of schooling away from completing upper-secondary education. Large shares of boys and girls are stunted – 24 and 21 percent, respectively. Far too many boys and girls do not survive beyond their fifth birthday – 2.8 and 2.4 percent, respectively. Conditional on making it to age 15, only 83 percent of boys and 89 percent of girls are expected to survive to age 60 (Figure 1).

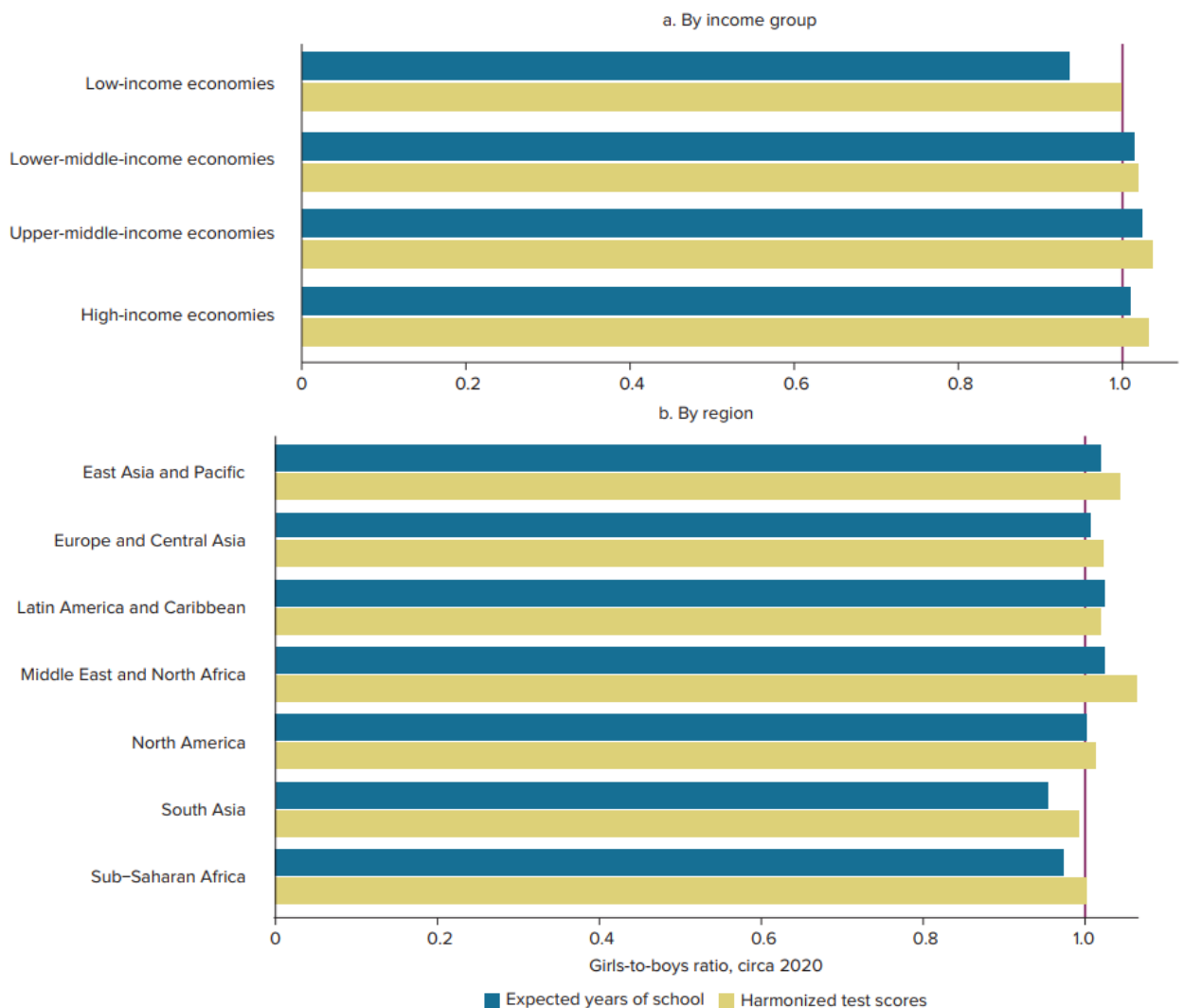


**Figure 1. Girls to boys ratio, circa 2020**

Source: World Bank calculations based on the 2020 update of the Human Capital Index (HCI).

In this figure, the red vertical line indicates gender parity for each component. Simple averages are computed without population weights.

The global HCI average, however, masks important regional and income group differences with respect to gender (figure 2). Although girls still surpass boys in the HCI value overall, with lower stunting and lower child and adult mortality rates in all regions and income groups, advantages for girls are more prominent in some regions and muted in others. For example, the gap in stunting rates between girls and boys is as high as 4.6 percentage points in Sub-Saharan Africa, with boys having a higher stunting rate.



**Figure 2. Regional and income-group variations in education gaps between boys and girls**

Source: World Bank calculations based on the 2020 update of the Human Capital Index (HCI).

The gender gap in the HCI varies quite widely across economies, with a difference in the score between boys and girls ranging from a low of -0.043 in Afghanistan to a high of 0.096 in Lithuania. Overall, girls are outperforming boys in 140 of the 153 economies for which sex-disaggregated data are available. The gender gap in Expected years of school (EYS) favors boys in 46 economies. In learning outcomes, boys are favored in 31 economies (20 percent). Although EYS are higher for girls than for boys in most economies, the magnitude of the resulting gender disparity is larger in those economies where boys have an advantage over girls with respect to schooling. For example, in Kiribati, St. Vincent and the Grenadines, and Tunisia, girls on average complete more than one extra year of school compared to boys, whereas, in Angola and Afghanistan, boys on average complete 2.3 to 2.7 more years of school than girls. The top-five economies where girls outperform boys in learning outcomes are Nauru, Qatar, Oman, Bahrain, and Samoa, three of which are in the Middle East and North Africa region. Conversely, 6 in 10 economies where boys have higher learning outcomes than girls are in Sub-Saharan Africa.

And the human capital report expresses the gender difference in the development of human capital through the following report (Table 1):

**Table 1**  
**Workforce diversity [9]**

Indicators	2018	2019	2020	2021
Total female, %	5.3	5.5	5.6	5.3
Total male, %	94.7	94.5	94.4	94.7
Females in All Management Positions, %	23	23	21	21
Females in Junior Management Positions, %	23	23	21	21
Females in Top Management Positions, %	21	23	22	28
Females in Management Positions with Revenue Generating Functions, %	36	38	37	35
Females in Craft Positions, %	3	3	3	2
Females in STEM-Related Functions, %	20	18	16	16

According to the table, the share of women among the total workers globally will be 5.3 percent in 2021, which is a decrease of 0.3 percent compared to the

previous year. The share of women in general management positions and junior management positions was 23 percent in 2018, and in 2021, this figure decreased to 21 percent. The share of women in senior management positions has increased by 7% over the past 4 years and will reach 28% in 2021. This situation is evidence of the high assessment of women's work potential. The share of women working in the business sector also decreased by 2 percent compared to 2020 and reached 35 percent in 2021. The percentage of women employed in STEM (science, technology, engineering and math) fields also decreased from 20 percent to 16 percent between 2018 and 2021.

Human capital and economic growth have a strong correlation. Human capital affects economic growth and can help to develop an economy by expanding the knowledge and skills of its people. Because, human capital refers to the knowledge, skill sets, and experience that workers have in an economy. The skills provide economic value since a knowledgeable workforce can lead to increased productivity. The concept of human capital is the realization that not everyone has the same skill sets or knowledge. Also, the quality of work can be improved by investing in people's education.

The impact of reducing gender differences in the development of human capital on the country's economy is determined as follows:

$$Y = F(K, N, H, G, INF)$$

Here:

Y - income, K - physical capital, N - labor, H - human capital, G - gender difference, INF - infrastructure.

Assuming that the aggregate production function requires constant labor:

$$Y/N = F(K/N, 1, H/N, G/N, INF/N)$$

Based on the above, the following formula is obtained:

$$y_{pc} = FK(I/Y) - bKn + bHh_{pc} + bGg_{pc} + bINF_{infpc}$$

Here:

$y_{pc} = y - n$  - GDP growth rate per worker,  $h_{pc}$  - human capital growth rate per worker,  $g_{pc}$  - gender gap growth rate per worker,  $inf_{pc}$  - infrastructure growth rate per worker,  $F_i$  - the marginal product in the economy with respect to input  $i$ ,  $I$  - investments is defined as the change of the total capital stock over time,  $b_j$  - the elasticity of the total volume with respect to the input  $j$ , and lowercase letters indicate the rate of change.

Statistical model of factors affecting average growth of GDP:



$$ypc = \beta_0 + \beta_1 I/Y + \beta_2 \text{malelife} + \beta_3 \text{femlife} + \beta_4 \text{lifegap} + \beta_5 \text{PGDP} + \beta_6 \text{sanit} + \beta_7 \text{pop} +$$

€

Here:

ypc - average growth of GDP

I/Y = share of gross capital formation in GDP;

malelife = Average annual growth rate of male life expectancy;

femlife = Average annual rate of increase in female life expectancy;

lifegap = average annual growth rate of male to female life expectancy ratio;

PGDP = GDP per capita;

sanit = Average annual growth rate of the proportion of the total population with improved sanitation services;

pop = Average annual growth rate of the total population.

Women's full and effective participation in the workforce and decent work for all are critical to inclusive and sustainable economic growth. While women account for half of the total population, they remain an underused resource, constituting less than a third of the actual workforce (Lagarde 2013).

### Conclusion

We studied whether gender inequality inhibits economic growth by constraining the use of female labor potential. And we got these conclusions:

- Human capital affects economic growth and can help to develop an economy by expanding the knowledge and skills of its people.

- The level of economic growth driven by consumer spending and business investment determines the amount of skilled labor needed.

- Investing in workers has had a track record of creating better employment conditions in economies throughout the world.

In a growing economy, companies also take on additional borrowing from banks to expand production due to higher consumer demand. The loan proceeds are usually used for large purchases of assets such as manufacturing plants and equipment. The added production also leads to higher wages and increased employment as more workers are needed for the increase in consumer demand for a company's products. And as a result, they strive to find solutions to the problems of gender inequality. Women's education, health and employment benefits are supported.

Ensuring gender equality and harnessing women's human capital has been repeatedly proven to increase a country's prosperity. Women often remain as owners or employees of micro and small enterprises. Such barriers to employment are confined to areas with underdeveloped public and private sectors. As women

gained experience in microenterprise, they expanded their opportunities to contribute to trade and commerce development. To remove the barriers, it is necessary to develop and implement programs aimed at overcoming the problems faced by disadvantaged women trying to build businesses and participate in life sectors. It is worth noting that, given the same age, education, and working conditions, women's average earnings are lower than men's, and moreover, women's earnings grow more slowly as education levels increase. A key determinant of women's and men's investment in human capital has historically been related to length of employment. In recent years, the activity of women in the labor market is growing very fast. However, women are less active in the labor market than men, and even if they do work, they are less likely to be employed full-time. In addition, women working full-time also spend fewer hours sitting than men. Although there is a difference in wages between women and men, this does not mean that they do not receive the same level of knowledge from training. The fact that women's working life is shorter than men's is largely due to women's historical role in raising children and in the household. Despite the great changes in the labor market, this traditional role causes many women not to offer their work in the labor market for several years in order to raise children. That is why, as a rule, the labor activity of female workers does not continue as continuously as the labor activity of male workers. For this reason, investors in human capital development are reluctant to invest in women.

Data from the analysis of statistics of the World Bank show that in countries with a large percentage of women in the country's population, if women are not employed in the labor market and do not make a profit, this situation slows down economic growth. Therefore, developed countries have somewhat mitigated the issues of gender inequality, although not completely.

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