Cost of Inaction: Education Deprivation in Iraq and the Potential of Social Protection to Reverse it

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March 7, 2023
Iraq is in the early stage of an “demographic window of opportunity”, with a young population and a growing labour force. However, the country is currently not fully catalysing on this demographic gift as it is unable to create sufficient jobs to meet growing demand. In turn, the young generation entering the labour force is facing an “education deprivation”, as only 51 percent of boys and 45 percent of girls are enrolled in secondary education, with even lower rates of completion.

This education gap leads to several costs, to the individuals themselves, but also to society and the economy as a whole. This paper aims to estimate one of those many costs - that of loss of earnings – and the findings therefore represent a conservative estimate of the cost paid by the Iraqi people and the economy of this education gap. Social protection can play an important role in closing this gap, and international experience in effective programme design is shared.

Under a European Union funded programme to reform social protection, the ILO is providing technical assistance to the government of Iraq, in efforts to strengthen the adequacy, coverage and sustainability of the social protection system.

This paper forms part of a series of working papers produced under the programme – often jointly - by the ILO country team in Iraq which aim to support Government decision-making pertaining to social protection reform. These papers are feeding into important policy discussions on the priorities and direction of reform. This includes the dialogue platform established by the ILO and the Ministry of Planning that brings together central thought leaders, academics, decision-makers and development partners to discuss and debate key issues and priorities relating to social and labour policy in Iraq.

Thanks go out to the authors for the preparing the report, and to Santosh Khatri from UNESCO for feedback on the draft.

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1. Summary

Over the past few decades, Iraq has been enjoying a relatively favorable demographic environment characterized by working age population growing at a higher rate than the overall population. However, Iraq has not been very successful in translating this demographic window of opportunity into a sustained economic growth path, poverty reduction, and achievements in non-income dimensions. Nevertheless, Iraq is still at an early stage of its demographic window of opportunity.

With a low rate of secondary school completion rate in Iraq, this paper examines and estimates the national economic loss in terms of potential cash flow from the labor market that could have been generated if young Iraqis receive education at the same level of peers in comparator countries. The model developed for this purpose traces a cohort of young Iraqis aged 19-26 over the next 38 years (until they retire). Under a set of conservative assumptions, the cost of forgone earnings only from the labor market is estimated to amount to 17.65 -29.95 percentage point of GDP in 2023.

It is important to understand how this number can be interpreted. It does not mean that if Iraq's young people are educated, the country will immediately gain 17.65 -29.95 percent of GDP. It only says if a cohort of young Iraqi age 19-26 completed secondary education at the same rate of peer countries (Upper Middle-Income Countries), the possible cash flow over their productive years will be on average higher than the situation if the status quo perpetuates. Discounting the differential between these cash flows amounts to 17.65 -29.95 percent of GDP. By any standard, this is a very large number.

It is also worth noting that the study focused on educational deprivation and consequent loss in earnings as a result of this education gap. However, lack of education has other important costs (such as social problems, ill health, mortality, psychological deprivation, etc.). This fact, coupled with the conservative assumptions used in the study, give grounds that the study's estimate only represents a lower bound to the possible cost of the education gap in Iraq.

Social protection programs represent a powerful tool to strengthen access to education, by addressing some of the financial barriers faced by school-aged children. Evidence from across the globe points to several design features that can strengthen such impacts, lessons from which can be drawn in establishing child-sensitive programs in Iraq.
2. Demography and Labor Market Profile

2.1. Iraq's Demographic Window of Opportunity

According to the 2019 revision of the World Population Prospects, Iraq's population was estimated to have reached 42.165 million in 2022. Over the last 10 years, Iraq's population growth averaged 2.97 percent annually, which is significantly higher than that of Middle-Income Countries (1.09 percent) and that of the West Asia (1.84 percent). By 2050, the growth rate will remain positive at 1.45 percent (UN, 2019). The pattern of strong but declining natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. Compared with 1950, Total Fertility Rate (TFR) decreased by almost 60 percent, from 8.11 children per woman to 3.45 children per woman in 2022. It is expected to decline further and reach 2.61 children per woman by 2050 (UN, 2019). The second factor, the mortality rate, has shown improvement over the same period. The Under-Five mortality rate declined significantly from a rate of 365.0 deaths per 1,000 live births in 1957 to 26.3 deaths per 1,000 live births in 2020. Life expectancy at birth, therefore, increased steadily and reached 70.8 years as of 2020, more than double the life expectancy in 1950 (34.9 years-old). It is expected to increase further and add 4.5 more years by 2050 (UN, 2019). In addition to the natural population change (fertility and mortality), net migration has also shaped a key feature of Iraq's demographic characteristics. For instance, during the 5-year period between 2005 and 2009, an average of 240 thousand Iraqis left Iraq annually (a total of 1.2 million in this 5 year-period), which was reversed in the next 5-years period (2010-2014), with an average of 240 thousands persons returning to Iraq.

Combining these factors together (fertility, mortality, and migration), the population structure has changed over the past few decades. Nevertheless, Iraq's young population continues to be the main demographic feature that most characterizes Iraq's population. However, the broad base of the population pyramid is getting smaller while the midsection of Iraq's population pyramid is expanding.

Figure 1: Population Pyramid, 1980 - 2050

Source: Study calculation based on data from (UN, 2019)
The population dynamics discussed earlier has three main potential consequences:

**First**, the young dependency ratio (the ratio of children under 15 years of age per working-age person) and the total dependency ratio (ratio of children under 15 years and elderly over 65 year-old per working-age person) have been both decreasing in Iraq, though still high at 69.94 dependents (children under 15 and elderly over 65) for every 100 working-age persons as of 2020 (UN, 2016).

**Figure 2: Number of Dependents per 100 Persons of Working Age (15-64), 1950-20100**

Source: Study calculation based on data from (UN, 2019)

**Second**, the likelihood of steady and possibly increased population growth, despite the declining fertility rate. This phenomenon is known as the “demographic momentum,” which occurs due to the fact that more women are in their reproductive years. This might come into effect in the near future in Iraq and will translate into an increase in the pace of the population growth.

**Third**, the expansion of the mid-section of the population pyramid and the declining dependency ratio in Iraq signals that Iraq is enjoying what is widely referred to as the “demographic window of opportunity”. This occurs when the working-age population expands at a higher rate than the general population, since the expansion of the working-age population, and the concomitant enlargement of the labor force, can present a favorable condition for sustained economic growth path if the country creates sufficient jobs to absorb the rapid growth in number of labor market entrants (discussed later).
**Figure 3: Population Growth Rates by Major Age Groups, per cent, and Demographic Window of Opportunity (start and end period), 2000-2100**

![Population Growth Rates by Major Age Groups](image)

Source: Study calculation based on data from (UN, 2019)

In comparison of other countries at different income levels, the length of Iraq’s demographic window of opportunity is remarkable.

**Table 1: Length of Demographic Dividends, Years, Selected Countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Start</th>
<th>End</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>1930-35</td>
<td>1992</td>
<td>60</td>
</tr>
<tr>
<td>South Korea</td>
<td>1966</td>
<td>2013</td>
<td>47</td>
</tr>
<tr>
<td>Taiwan</td>
<td>1963</td>
<td>2014</td>
<td>51</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1961</td>
<td>2010</td>
<td>49</td>
</tr>
<tr>
<td>Singapore</td>
<td>1964</td>
<td>2012</td>
<td>48</td>
</tr>
<tr>
<td>China</td>
<td>1965</td>
<td>2010</td>
<td>45</td>
</tr>
<tr>
<td>Thailand</td>
<td>1968</td>
<td>2013</td>
<td>45</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1964</td>
<td>2019</td>
<td>55</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1971</td>
<td>2025</td>
<td>54</td>
</tr>
<tr>
<td>Philippine</td>
<td>1964</td>
<td>2052</td>
<td>88</td>
</tr>
<tr>
<td>Nepal</td>
<td>1991</td>
<td>2046</td>
<td>55</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>1969</td>
<td>2014</td>
<td>45</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1968</td>
<td>2027</td>
<td>59</td>
</tr>
<tr>
<td>Egypt</td>
<td>1989</td>
<td>2041</td>
<td>52</td>
</tr>
<tr>
<td>Senegal</td>
<td>2009</td>
<td>2100</td>
<td>91</td>
</tr>
<tr>
<td>Yemen</td>
<td>1991</td>
<td>2056</td>
<td>65</td>
</tr>
<tr>
<td>Palestine</td>
<td>1991</td>
<td>2055</td>
<td>64</td>
</tr>
<tr>
<td>Libya</td>
<td>1978</td>
<td>2033</td>
<td>55</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1978</td>
<td>2034</td>
<td>56</td>
</tr>
<tr>
<td>Iraq</td>
<td>1982</td>
<td>2074</td>
<td>92</td>
</tr>
</tbody>
</table>

Source: Study Calculation based on data from the UN (2019). For Japan, Taiwan, South Korea, Singapore, Thailand based on Oizumi (2013).
Fourth, as a result of the falling fertility rate and longer life expectancy, Iraq's population transition will shift gears from youthful to aging at a certain point. The author's calculation indicates that Iraq will be considered as an ‘aging nation’, defined when post working population (65+) constitute 7 percent of the total population, by 2050. Nevertheless, it will not be considered an ‘aged nation’, defined when post working population (65+) constitute 14 percent of the total population, until 2086.

Figure 4: Post-Working Population as Percent of Total Population, 1950-2050

In comparison of other countries, the speed of aging expected in Iraq will be rapid. While it took France, for instance, 115 years to move from aging to an aged phase, Iraq is projected to do so in only 36 years. However, it seems that the fast-aging society is a common feature of today's developing countries across different regions.

Table 2: Speed of Aging, Years, Selected Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>7% Year</th>
<th>14% Year</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>1970</td>
<td>1995</td>
<td>25</td>
</tr>
<tr>
<td>South Korea</td>
<td>1999</td>
<td>2018</td>
<td>19</td>
</tr>
<tr>
<td>Taiwan</td>
<td>1994</td>
<td>2017</td>
<td>23</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1984</td>
<td>2013</td>
<td>29</td>
</tr>
<tr>
<td>Singapore</td>
<td>1999</td>
<td>2021</td>
<td>22</td>
</tr>
<tr>
<td>China</td>
<td>2001</td>
<td>2027</td>
<td>26</td>
</tr>
<tr>
<td>Thailand</td>
<td>2002</td>
<td>2022</td>
<td>20</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2020</td>
<td>2045</td>
<td>25</td>
</tr>
<tr>
<td>Myanmar</td>
<td>2024</td>
<td>2055</td>
<td>31</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2023</td>
<td>2045</td>
<td>22</td>
</tr>
<tr>
<td>Philippines</td>
<td>2035</td>
<td>2070</td>
<td>15</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2016</td>
<td>2033</td>
<td>17</td>
</tr>
<tr>
<td>Nepal</td>
<td>2028</td>
<td>2054</td>
<td>26</td>
</tr>
<tr>
<td>Oman</td>
<td>2041</td>
<td>2056</td>
<td>15</td>
</tr>
<tr>
<td>Yemen</td>
<td>2054</td>
<td>2080</td>
<td>26</td>
</tr>
<tr>
<td>Libya</td>
<td>2032</td>
<td>2045</td>
<td>13</td>
</tr>
<tr>
<td>Palestine</td>
<td>2048</td>
<td>2073</td>
<td>25</td>
</tr>
<tr>
<td>Iraq</td>
<td>2050</td>
<td>2086</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Study Calculation based on data from the UN (2019). For Japan, Taiwan, South Korea, Singapore, Thailand based on Oizumi (2013).
2.2. Labor Market Issues

While the expansion of the working-age population, and the concomitant enlargement of the labor force, can be the driver for sustained economic growth, Iraq’s inability to create sufficient jobs to absorb the rapidly growing labor force has led to waves of social unrest. Youth (age 15-24) unemployment is especially alarming estimated at 32.1 percent and 62.1 percent for male and female labor force participants, respectively (Government of Iraq, 2022). This age and gender dimension to the unemployment ratios in Iraq is coupled with the low participation rate of female citizens in the labor market, currently at only 10.6 percent in comparison with male labor for participation rate of 68 percent.

Figure 5: Labor force Participation Rates (left graph) and Unemployment Rate (right graph), 2021

These two factors (low participation rates among female citizens and high unemployment rate) have not allowed Iraq to translate the demographic gift into an economic window of opportunity. Out of the 25.214 million people of working age, only 9.010 million are employed (UN, 2019), (Government of Iraq, 2022).

Figure 6: Population by Working Status, Millions, 2022

Despite this large pool for potential employment, the share of the employment in the private sector remains low at only 61.6 percent of those employed (37.9 percent of employment is in the public sector) (Government of Iraq, 2022). The increased demand for public sector demand is driven by the generosity of employment benefits in the sector, which disadvantages the private sector’s employability over that of the private sector, resulting from an elevated wage bill compared with peer countries (IMF, 2021).

One of the decent work deficits relates to the limited social security coverage for private sector workers. Informal work is generally characterized by decent work deficits, including low wages, limited rights at work, and weak job and income protection. This is especially applicable to the case of Iraq, where the main feature that characterizes Iraq’s labor market is the high degree of informality. Reports suggest that about two out of three workers have informal job (Government of Iraq, 2022).
Despite this large pool for potential employment, the share of the employment in the private sector remains low at only 61.6 percent of those employed (37.9 percent of employment is in the public sector) (Government of Iraq, 2022). The high demand for public sector work is driven by the generosity of employment benefits in the sector, resulting from an elevated wage bill compared with peer countries, which disadvantages the private sector's employability (IMF, 2021).

**Figure 7: Public Wage Bill and Public Employment, Selected Countries, 2020**

Source: (IMF, 2021)

Instead, the private-sector is characterized by high levels of informality and many decent work deficits, including the limited social security coverage.
3. Social and Private Returns on Education

The impact of human capital investments, specifically on education, can be obtained at accrued and at individual level. At national level, social benefits of education are those benefits that accrue to the entire society such as the benefits of a more literate workforce and citizenry. Private returns of education are accrued at individual level such as higher wages and lower risks of unemployment.

Table 3: Individual (Private) and Social Benefits of Education

<table>
<thead>
<tr>
<th>Monetary</th>
<th>Community/society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher probability of employment</td>
<td>Higher productivity</td>
</tr>
<tr>
<td>Greater productivity</td>
<td>More rapid economic growth</td>
</tr>
<tr>
<td>Higher earnings</td>
<td>Poverty reduction</td>
</tr>
<tr>
<td>Reduced poverty</td>
<td>Long-run development</td>
</tr>
<tr>
<td>Nonmonetary</td>
<td>Increased social mobility</td>
</tr>
<tr>
<td>Better health</td>
<td>Better-functioning institutions/service delivery</td>
</tr>
<tr>
<td>Improved education and health of children/family</td>
<td>Higher levels of civic engagement</td>
</tr>
<tr>
<td>Greater resilience and adoptability</td>
<td>Greater social cohesion</td>
</tr>
<tr>
<td>More engaged citizenship</td>
<td>Reduced negative externalities</td>
</tr>
<tr>
<td>Better choices</td>
<td></td>
</tr>
<tr>
<td>Greater life satisfaction</td>
<td></td>
</tr>
</tbody>
</table>

Source: (World Bank, 2019)

These returns (social and private) can be quite substantial. A global review of more than 60-plus years of estimates of return of educations across 139 countries showed that the private average global rate of return to one extra year of schooling is about 9 percent a year and very stable over decades. For secondary education, these rates of returns amount to an average of 15.1 percent and 11.8 percent, for private and social returns respectively (Psacharopoulos & Patrinos, 2018).

Table 4: Education Returns by Income Group and Education Level, percent

<table>
<thead>
<tr>
<th>Per capita income level</th>
<th>Private</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>18.7</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>26.8</td>
<td>13.2</td>
</tr>
<tr>
<td>Middle</td>
<td>17.7</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>20.2</td>
<td>11.4</td>
</tr>
<tr>
<td>High</td>
<td>13.2</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td>12.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Average</td>
<td>15.1</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>15.8</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Source: (Psacharopoulos & Patrinos, 2018)
3.1. Social Return on Education: Education, productivity, and economic growth

The social return to education refers to the economic and social benefits that are generated for society as a whole as a result of investing in education. These benefits can include improved economic growth, reduced poverty and inequality, increased social mobility, and improved health outcomes. Several studies have shown that investing in education can provide a high rate of social return. For example, a study by the World Bank found that every additional year of schooling can lead to a 10 percent increase in a country’s GDP per capita (Montenegro & Patrinos, 2014).

To understand this potential in Iraq’s context, the neoclassical long-run path of economic growth model decomposes economic growth into two components: the growth rate of the employed population and growth of labor productivity.

**Figure 8: Economic Growth Decomposed**

While the demographic dynamics in Iraq highlights robust growth of working age population, which increases the supply side of labor that can be used to fuel economic growth if sufficient jobs are created, productivity is an instrumental driver for long-term growth path towards the convergence with high-income economies. In fact, rising labor productivity accounted for at least half of GDP per capita growth in most OECD countries from 1990 to 2000 (OECD, 2017). Nevertheless, Iraq’s productivity continues to lag behind peer countries. The Human Capital Index, which measures the productivity of the next generation of workers relative to the benchmark of complete education and full health, for Iraq is significantly lower than what is expected for the level of income.
To unlock labor productivity, and therefore economic growth, education is instrumental. There are three possible justifications:

1. Causal chain flowing from schooling, to skills, to greater worker productivity, to increased growth of national income.
2. The role of education in enhancing innovation in the economy as a whole (endogenous theories of growth).
3. The innovation dimension but more from the diffusion than creation perspective, seeing an educated population as crucial for the spread of new processes, products, and technologies.

The fact that Iraq is at an early stage of its demographic window of opportunity, as discussed earlier, highlights that its ability to address the quality of its labor force is at the center of making best use of its demographic gift. There is also an urgent need to address gaps in education to unleash and sustain a path of economic growth for the nation.

In addition to the social return to education that is linked to the productivity angle, education is instrumental in investing in peace and order. Education can help reduce crime and social unrest by providing individuals with better job opportunities and reducing their likelihood of engaging in criminal activities.

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1 The human capital index ranges between 0 and 1. The index is measured in terms of the productivity of the next generation of workers relative to the benchmark of complete education and full health. An economy in which the average worker achieves both full health and full education potential will score a value of 1 on the index. GDP = gross domestic product; PPP = purchasing power parity. For further explanation, please visit World Development Report 2021: Data for Better Lives (worldbank.org).
3.2. Private Return on Education in the Labor Market

At the individual level, there is a well-established relationship between education attainment and wage. On average, individuals with higher levels of education tend to earn higher wages than those with lower levels of education. This is because higher levels of education often lead to acquiring specialized knowledge and skills that are in high demand by employers, which can increase an individual’s productivity and value in the job market. Studies have consistently shown that the more education an individual has, the higher their earning potential. For example, according to data from the U.S. Bureau of Labor Statistics, in 2020, the median weekly earnings for workers with a bachelor’s degree was $1,305, while the median weekly earnings for workers with a high school diploma was $781 (U.S. Bureau of Labor Statistics, 2021). Similarly, workers with advanced degrees, such as Master’s or doctoral degrees, typically earn even higher wages.

There is also a substantial amount of literature on the return of completing secondary education, which refers to the economic benefits that individuals and society as a whole receive from investing in secondary education. One important study on this topic is the World Bank’s World Development Report 2018, which focuses on the role of education in promoting economic growth and reducing poverty. The report found that investing in secondary education can have a significant impact on economic development, as it can help individuals acquire the skills and knowledge they need to access higher-paying jobs and contribute to their country’s economy (The World Bank, 2018). Another influential study on the return of secondary education is the «Returns to Investment in Education: A Further Update» report by the World Bank, which analyzes the economic benefits of education across multiple countries and time periods. The report found that investing in secondary education can provide a high rate of return, with an average of 15 percent return on investment per year across developing countries (see table 3). Several other studies have also found positive returns to secondary education.

In Iraq, as in most developing countries, the expected income gains from additional years of education are high. Evidence from the labor market clearly shows that wages for labor force participants increase progressively with better educational attainment. For instance, an employed male worker with a tertiary education enjoys a wage that is double that of an illiterate male worker (Government of Iraq, 2022).

It is important to note that the relationship between education and wage is not always linear or straightforward. There are many other factors that can impact an individual’s earning potential, such as the industry they work in, their job experience, and the local labor market conditions. Additionally, there are systemic issues, such as discrimination, that can impact wages and career advancement opportunities for certain groups, even if they have similar levels of education as other workers.
Figure 10: Average Monthly Earnings of employees by Education Level, IQD, 2021

It is to be noted that return to education is not only limited to benefits generated in the labor market (in the form of higher earnings, or wage premium for education and better employability), but also can accrue several benefits to individuals, such as:

- Improved literacy and numeracy skills: Schooling can help individuals develop basic reading, writing, and math skills. This can make it easier for them to navigate everyday tasks and communicate effectively.

- Improved health outcomes: Education is linked to better health outcomes, including lower rates of chronic diseases, better mental health, and longer life expectancy.

- Increased social mobility: Education can provide individuals with the skills and knowledge they need to advance in their careers and move up the social and economic ladder.
4. Costing the Loss from Low Education Attainment

Education attainment rates in Iraq have been impacted by several factors such as poverty, conflict, and cultural norms. Despite the challenges, there have been efforts exerted by the government to improve education attainment outcomes. According to data from Multiple Indicator Cluster Survey (MICS) of 2018, the gross enrollment ratio for primary education in Iraq was around 93 percent for both boys and girls in 2018. However, this figure drops significantly for secondary education, with a gross enrollment ratio of around 51 percent for boys and 45 percent for girls in the same year. The incidence of completion rate of lower secondary education was estimated at 46.2 percent and 47.0 percent for boys and girls respectively (Government of Iraq, 2019) - almost half of the rate for Upper Middle-Income Countries (UMIC), estimated at 91.0 percent (The World Bank, 2022).

This significant gap between Iraq’s education attainment and its potential as an upper middle-income country has both social and private costs (as discussed earlier). In this chapter, the focus will be on estimating the loss in earnings as a result of this education attainment gap. Therefore, the estimates provided will only represent a lower bound to the possible cost of education attainment gap in Iraq as lack of education has other important costs (such as social problems, ill health, mortality, psychological deprivation, etc.).

The costing model used is built on a logical approach that starts with an 8-years cohort of youth aged 19-26 in 2023. Using the above data of school completion rates by sex, this cohort is then divided into two groups: completed lower secondary education and did not complete lower secondary education. The study further divides the group that did not complete secondary education into two parts: first, the group with no secondary education in line with countries at the same level of income (UMIC). The second group is that with no secondary education but in excess of the average MICs. The latter group is of the study’s interest for further treatment, as the group who could have gained lower secondary education had Iraq had the same completion rates as other peer countries.

**Figure 11: Iraq’s Completion Rate of Secondary education in Comparison to MICs, 2018**

Source: based on data from (The World Bank, 2022) and (Government of Iraq, 2019)
This new group of interest (those who did not complete lower secondary education in Iraq in excess to average MICs completion rates) is then traced for 38 years, from year 2023 to year 2061. The projection exercise then follows the cohort method (single year and single age) employed by the projection made available by UNDESA Population Division under the medium-variant population projection. Applying age-specific labor force participation rates obtained from the labor force survey of 2021 on the projection of the cohort over the horizon produces a projection for the employed persons among the group of interest over their career until the year 2061. The following diagram illustrates the method applied throughout the projection period and the resulted projection of the interest group.

**Figure 12: Cohort Evolution based on Demographic and Labor Force Participation 2018-2061**

**Figure 13: Projection of the Study Interest Group: Employed Persons Aged 19-26 in 2023 who did not Complete Lower Secondary Education in Iraq in Excess of the Average MICs Completion Rates, in thousands, 2023-2061**
Education deprivation, as explained earlier, reduces the future flow of potential income (see figure 11). The wage differential between those who completed secondary education and those who did not complete secondary education is established for the year 2021 (year labor force survey was conducted), which shows that the education premium for completing secondary education in Iraq amounts to IQD 254,528, with higher premium for female labor force participants (estimated at IQD 382,341).

Figure 14: Average Monthly Earnings of employees by Completion of Secondary Education, IQD, 2021

For the projection horizon, real wages are projected to grow with the rate of productivity. To do so, the study uses the latest 3 IMF medium-term forecast for real GDP growth rate and inflation rate, which covers up until 2027. The productivity growth for this period is calculated as the premium of growth of real GDP over the growth of the employed population, with productivity growth found to be negative over the past period as a result of COVID 19. Therefore, the study assumes that this rate will increase to 0 by 2028 and then gradually increase to reach 0.25 percent by 2033 and remain the same to the end of the projection period. For the inflation rate (CPI), the study assumes that the rate of 2027 will remain the same over the projection period. GDP deflator is linked to CPI and starting from 2028 the two rates are equated.
It is important to understand how this number can be interpreted. It does not mean that if Iraq's secondary education completion rates reaches the same level of UMICS average, the country will immediately gain 17.65-29.95 percent of GDP. It only points out that if a cohort of youth aged 19-26 received secondary education similar to peers in MICs, the possible cash flow over their productive years will be on average higher than it is in the current situation. Discounting the differential between these cash flows amounts to 17.65-29.95 percent of GDP of 2023. In any case, this is a very significant number.

It is to be noted that this significant gap between Iraq's education attainment and its potential as an upper middle-income country has both social and private cost (as discussed earlier). In this chapter, the focus was on estimating the loss in earnings as a result of this education gap. Therefore, the estimates provided will only represent a lower bound to the possible cost of the education attainment gap in Iraq as lack of education has other important costs (as noted above).

This is the October 2022 projection. Data obtained on February 1, 2023 from the IMF website.
5. The Potential of Social Protection to Address the Education Deprivation: Lessons Learnt from Global Experience

Iraq lags behind many of its peers at similar income levels when it comes to the comprehensiveness and coverage of its social protection system, including in relation to the provision of social protection for children. Indeed, there is no program in Iraq anchored in law that specifically aims to provide income protection for this population group. The only social assistance program providing income support that households with children may access is the Social Safety Net program, a poverty-targeted scheme that is inefficiently targeted, stigmatizing and does not streamline child wellbeing in its design. This limits the programs’ potential impact on child wellbeing, data on which remains concerning. In order to effectively support households with children and promote access to education, it is important to adopt a child-sensitive approach that ensures inclusivity, targets the underlying vulnerabilities faced by children more explicitly, and enhances human capital.

Figure 16: Child and family social protection (cash transfer) anchored in law, by type of scheme, 2023 or latest available data

Source: (ILO and UNICEF, 2023)

In so doing, Iraq’s social protection system can incorporate lessons learnt and emerging evidence from other countries’ experience that have demonstrated positive impact on school enrollment. Social protection programs providing income support to households with children are implemented throughout the world to meet a myriad of objectives, from reducing child poverty to promoting nutrition or enhancing fertility rates. Partly as a result, the design of such programs can also take many forms, with differences in terms of the eligibility criteria and target coverage rates, transfer amounts, or integration of conditionalities or complementary services. Regardless of objectives or design, evidence from across the globe consistently points to the positive impacts of child benefits and cash transfers covering households with children on child poverty and vulnerability (ILO and UNICEF, 2023). In so doing, such programs can also address many of the financial barriers to education, including
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in relation to the direct costs of enrolment or attendance (e.g. the cost of school fees or materials for example) and the opportunity costs of attending school (e.g. lost income from working school-aged children continuing or returning to school) (See (UNICEF, 2021) for a comprehensive overview of the channels of impact on girls’ education). Thus, global evidence strongly points to the powerful contribution that social protection programs make on school enrolment and school attendance, while evidence of positive (and significant) impacts on learning outcomes and cognitive development is more limited but growing (UNICEF and ODI, 2020).

Lesson 1: The design of programs matters

The evidence points to certain design features that are found to strengthen impacts of social protection program on children’s wellbeing, including in terms of access to education and reducing prevalence of child labor (see UNICEF and ODI, 2020; ILO and UNICEF, 2022; ILO and UNICEF, 2023; ILO, 2013) upon which the below is drawn). For example, higher transfer amounts tend to have stronger impacts on a range of outcomes, including those related to children’s education and child labor, as they make greater contributions to reducing poverty, which is often a driver of child labor and low educational enrolment. Programs with larger coverage (e.g. universal or affluence tested as opposed to means tested or poverty targeted) are also likely to have stronger impacts, as they reach a larger share of the child population by reducing exclusion errors. The regularity of the payments is also associated with stronger impacts, as regular transfers allow recipient households to budget and plan more effectively. Programs with longer participation duration were also found to have stronger impacts on education outcomes and cognitive development, and stronger reduction in child labor. Programs that are anchored in legislation are also considered more sustainable than programs that are not, provide recipient households with a better ability to plan and budget as well as greater rights to recourse. Integration of complementary interventions aimed at addressing non-financial drivers of non-enrolment or child labor can also strengthen impacts, depending on their quality, duration, and relevance. In the case of child labor for example, messaging around the negative long-term impacts of hazardous work among children was found to play a positive contribution. Importantly, investments in quality and availability of education and child protection services are also essential, as social protection interventions (which typically affect demand for services) will have limited effect in supporting access when the supply is inadequate. On the other hand, the evidence of the inclusion of conditionalities on education and child labor outcomes is more ambiguous, with limited evidence to date pointing to significant contributions of conditionalities to program impacts, which tend instead to be considerably outweighed by the costs (for program administrators, in terms of monitoring compliance with the conditions; for recipient households upon whom such requirements may place significant time costs and entrench traditional gender roles; and for program outcomes, where failure to meet conditions - including when resulting from gaps in supply - lead to exclusions that may subsequently accentuate inequalities).
Lesson 2: Social Protection can keep secondary-school aged girls in school

There is a subset of social protection interventions that are specifically designed to support secondary-school aged girls to remain in school, in response to prevailing gender inequities in educational outcomes. In some cases, supporting girls to remain in school is also designed as a means of addressing other gender-based issues, including child or early marriage.

Such programs can take multiple forms. For example, in 2018 multiple states in India introduced a child benefit targeted specifically at girls to combat gender inequality, providing up to $738 over several payments made at specific points in the life course, including birth, completion of secondary education and university graduation (ILO and UNICEF, 2023). Pakistan the Taleemi Wazaif program introduced in 2020 that provides an “education supplement” to recipients of existing social protection programs. Here, recipients of the Benazir Income Support cash transfer receive additional payments for their children in school, with the value of the transfer increasing with the level of education attended by the child and is higher for girls than it is for boys (ibid).

Another type of approach is the introduction of conditional cash transfer programs that are specifically targeted at girls of secondary school age, where regular payments are made as long as recipients remain in education (whether secondary education, TVET, or any other education to which recipients are eligible). Such programs include the Female Secondary School Assistance Program (FFSAP) implemented in Bangladesh. Implemented since 1994, the FFSAP targeted secondary-school aged girls living in rural areas, where monthly payments were made directly to the participating girls on the condition that they achieved at least 45% in their class-level test scores, attended 75% of school days, and remained unmarried until completion of secondary school. Tuition subsidies were also paid.
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to the schools which eligible girls attended. In the short run, the program increased secondary-school enrolment among girls, and extended participating girls' education by two years, while age at first marriage rose (Hong & Sarr, 2012; Khandker, Samad, Fuwa, & Hayashi, 2021). Evidence in the long-run also indicates that the program had much larger social and economic impacts on recipients, including by increasing the probability of recipients engaging in self-employment and non-farm employment (among those employed) (Khandker et al., 2021). That same study estimated that the social and economic benefits of the program outweighed the cost by over 200%, highlighting the considerable investment that such a program represents.

Elsewhere, programs aimed at increasing enrolment and attendance among girls in secondary education have taken the form of cash plus programs, wherein regular income support is integrated with one or more social interventions designed to address non-financial barriers to education. Indeed, it has often been observed that social protection programs and other social services are mutually reinforcing in supporting children's wellbeing. In Malawi for example, the program Keeping Girls in School combined a regular cash transfer to the participants' caregivers with interventions to improve the school experience and environment, including training Female Teacher Role Models, training male champions, and strengthening child protection committees. Payment was softly conditioned on school attendance, but participants dropping out were referred during this period to specific groups to identify and try to address the underlying causes of the drop-out. The program, was found to reduce school dropouts while increasing the likelihood of participants' sitting post-secondary examinations (Save the Children, 2020). Similarly, in Kenya, a pilot program was implemented to study the effects of multisectoral interventions in support of girl's education, economic situation, protection, and reproductive health. In the pilot, which lasted two years, the 7'000 participants aged 11 to 14 were divided into four groups, each receiving a different package of support. Two years after the program ended, the positive effect of combining multi-sectoral interventions was demonstrable, with stronger effects on school enrolment and attainment seen in the groups in which social and health services were combined with a cash transfers (Austrian, et al., 2022). The cash transfer also increased recipients' motivation to study and their ambition to attend university (ibid).

What is important is that, while social protection programs covering households with children do impact education, having explicit objectives in relation to gender, and streamlining these through the program design parameters with clear intention has been found to produce strongest impacts for girls (ILO and UNICEF, 2023).

Lesson 3: Social protection programs can be designed to reduce prevalence or intensity of child labor

Social protection programs have also been found to be powerful instruments to combating child labor – when carefully designed (ILO, 2013). Yet there are few social protection programs implemented worldwide that are designed specifically to address child labor, with only a few in which this is a secondary objective. The Child Labour Elimination Program (or Programa de Erradicação do Trabalho Infantil (PETI)) in rural districts of Brazil, is one of the few examples (ILO, 2013). Implemented in 1996 and merged with the Bolsa Familia program in 2006, the PETI combined a conditional cash transfer (requiring a minimum of 80% school attendance) with compulsory attendance in an after-school program which effectively doubled the length of the school day. An evaluation found that participation in the program decreased the time spent in economic activities among children by between 4.5 and 25 percentage points, depending on the location, whilst also increasing school attendance by between 5 and 50 percentage points (again, depending on the location) (Yap, Sedlacek, & Orazem, 2009).
Lesson 4: Taking a life-cycle approach

While there are many design options for programs targeted at children, it is also essential to recognize and ensure the wellbeing and income security of the families of which they are a part. Most children live in family settings and rely on them for their survival, and the wellbeing of the family therefore strongly determines that of the child. For instance, where the breadwinner loses their employment and income, their entire family risks falling into poverty if they do not have access to adequate social protection. Similarly, efforts to support working age adults living in poverty to access decent employment with stable incomes can also support their family to sustainably exit vulnerability and poverty, with sustainable positive effects on education.

This points to the crucial importance of strengthening the social protection system more comprehensively and ensuring a full package of adequate social protection for families, including benefits for working-age adults, older persons as well as pre-school aged children. Strengthening linkages with complementary services – including healthcare, childcare, and employment support – is also crucially important to maximize impacts on poverty and, by extension, access to education. In the case of Iraq, this involves extending social security coverage to the millions of workers currently unprotected; filling gaps in coverage for those outside the labor market; filling gaps in provision, including in relation to unemployment insurance; and strengthening the quality and availability of wider social and employment policies and linking these to social protection to promote access.
Reference


ILO and UNICEF. (2023). *One billion reasons: The urgent need to build universal social protection for children.* ILO and UNICEF.


