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DJIBOUTI

Human Capital Review

MENA HUMAN DEVELOPMENT

WORLD BANK GROUP

DJIBOUTI

Human Capital Review

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immunodeficiency syndrome
COVID	Corona Virus Disease 2019
DGETFP	Direction Générale de l'Enseignement Technique et de la Formation Professionnelle
DHI	Difficulty of Hiring Index
DJF	Djiboutian Franc
DPT	Diphtheria, Tetanus & Pertussis Vaccine
ECD	Early Childhood Development
ECE	Early Childhood Education
EDAM	Enquête Djiboutienne Auprès des Ménages
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessments
EWI	Employing Workers Index
EYS	Expected Years of Schooling
FGM	Female Genital Mutilation
FLFP	Female Labor Force Participation
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
HC	Human Capital
HCI	Human Capital Index
HCP	Human Capital Project
HCR	Human Capital Review
HD	Human Development
HIC	High Income Country
HIV	Human Immunodeficiency Virus
HLO	Harmonized Learning Outcomes
HOA	Horn of Africa
ICT	Information and Communications Technology
IGAD	Intergovernmental Authority on Development
IGME	United Nations Interagency Group for Child Mortality Estimation
IMF	International Monetary Fund
IMR	Infant Mortality Rate
JME	Joint Malnutrition Estimates
KG	Kindergarten
LAYS	Learning Adjusted Years of Schooling
LFP	Labor Force Participation
LIC	Low-Income Country
LMIC	Lower Middle-Income Country

MASS	Ministères des Affaires Sociales et des Solidarités
MEFI	Ministry of Economy and Finance, in charge of Industry
MENA	Middle East and North Africa
MENFOP	Ministry of Education and Vocational Training
MFF	Ministry of Women and Family
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
NCD	Noncommunicable Diseases
NEET	Not in Education, Employment, or Training
NGO	Non-Governmental Organization
ONARS	National Office for Assistance to Refugees and Displaced Persons
PAPFAM	Pan Arab Project for Family Health
PASEC	Programme d'analyse des systèmes éducatifs de la CONFEMEN
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PPG	Public and Publicly Guaranteed Debt
PPP	Purchasing Power Parity
PRODA	Expanding Opportunities for Learning Project
RMNCAH-N	Reproductive, Maternal, Neonatal, Child, Adolescent Health, and Nutrition services
SDG	Sustainable Development Goal
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SOE	State Owned Enterprise
SP	Social Protection
SRH	Sexual and Reproductive Health
SSN	Social Safety Nets
TFP	Total Factor Productivity
TIMSS	Trends in International Mathematics and Science Study
TNER	Total Net Enrollment Ratio
TVET	Technical and Vocational Education and Training
UAE	United Arab Emirates
UMIC	Upper Middle-Income Country
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations office of the High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNPD	United Nations Population Division
US	United States
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
WASH	Water, Sanitation and Hygiene
WB	World Bank
WDI	World Development Indicators
WFP	World Food Program
WHO	World Health Organization

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This Djibouti Human Capital Review (HCR) is a part of the Human Capital Project of the World Bank Group, a global effort that supports countries through data, policies, and research to encourage more and better investments in people for greater equity and economic growth. It highlights the state of human capital in Djibouti, including the country's main achievements and challenges, and outlines specific priority interventions and investments to increase human capital accumulation, protection, and use and, in turn, drive Djibouti's sustainable growth and economic development.

A team led by Rianna Mohammed-Roberts (co-Task Team Leader, Program Leader, Human Development) and comprising Bridget Sabine Crumpton (co-Task Team Leader, Senior Education Specialist), Manjula M. Luthria (co-Task Team Leader, Senior Economist), D. Priyanka Kanth (co-Task Team Leader, Economist, Health), Alex Kamurase (Senior Social Protection Specialist), Abdo Said Abdo (Education Specialist), Nicholas Buhne (Human Development Consultant), Yi Ning (Junior Professional Associate), and Nevine Sameh Salaheldin Elnahass (Early Learning Fellow Consultant) prepared the report, which has benefitted from the guidance and supervision of Keiko Miwa (former Regional Director, Human Development, Middle East and North Africa), Marina Wes (Country Director, Egypt, Yemen and Djibouti), Boubacar-Sid Barry (Resident Representative, Djibouti), and the Human Development Practice Managers for the Middle East and North Africa: Rekha Menon (Health, Nutrition and Population), Andreas Bloom (Education), and Anush Bezhanyan (Social Protection and Jobs).

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EXECUTIVE SUMMARY

KEY MESSAGES

- **Based on a Human Capital Index (HCI) simulation, it is projected that a Djiboutian born in 2022 will achieve only 41 percent (HCI of 0.41) of their full human capital potential by the age of 18.** This means that 59 percent of talent in Djibouti remains untapped, highlighting a missed opportunity to enhance productivity and exploit human capital as a vehicle for growth and development.
- **Dividing Djibouti's HCI into its three components (child survival, education, health) shows that poor child survival and learning outcomes are the main drivers of the score.**
- **Increasing investment in the early years is the best investment Djibouti can make in building its human capital and laying the foundations for the future well-being and productivity of its children and citizens.** Early childhood development (ECD) interventions in Djibouti are in their early stages but are expanding and can be catalyzed through incremental increases in financing to increase access, coverage, and quality of essential services for families with young children and improve ECD outcomes.
- **The adolescent years also present an opportunity for increasing human capital accumulation and use.** This is a critical period during which interventions and investments in adolescent girls could harness this potential and yield higher returns on investments.
- **Human capital is a key determinant of labor productivity and plays an essential role in determining a country's long-term development path.** Djibouti must move toward a more-competitive, productivity-fueled economy.

I. COUNTRY CONTEXT

Djibouti is a small lower-middle-income country (LMIC) with a geostrategic location. It has a population of less than 1 million, of which more than 80 percent resides in urban areas. Its strategic location in the Horn of Africa along the Gulf of Aden has shaped the country's development trajectory and goal of becoming a hub for trade and logistics. Construction of new port facilities and transport links to the large Ethiopian market has been the main drivers of its rapid, stable growth. The budget deficit is low at 1.5 percent of GDP (World Bank 2023a), but the risk of debt distress is high, which has left limited fiscal space to address poverty. A series of external shocks has weighed heavily on the economy and added to already-significant budget pressures as debt service has tripled. Urgent action is needed to restore debt sustainability and promote inclusive growth, including by creating fiscal space for additional social spending.

Djibouti remains a relatively poor country, with high levels of inequality. Using the World Bank poverty line for LMICs of US$3.65 a day (2017 purchasing power parity), appropriate for an economy at Djibouti's level of development, the extreme poverty for 2022 is estimated to be 39 percent (World Bank 2023a). Inequality in Djibouti is among the highest in the Middle East and North Africa, with an estimated Gini coefficient of 0.42 in 2017.[1] The highest income decile of the population consumes approximately 16 times as much as the lowest decile and twice that of the ninth decile (World Bank 2019a). Extreme poverty in rural areas of the country is estimated to be 62.6 percent (INSTAD 2017).

Djibouti's location, sociopolitical stability, and sociocultural similarity to many neighboring countries makes it susceptible to influxes of refugees fleeing conflict. Djibouti hosts more than 31,400 refugees and asylum seekers (UNHCR 2023), accounting for approximately 2.8 percent of the country's population.[2] The country also hosts an estimated 150,000 undocumented residents in urban centers. More than 80 percent of registered refugees are hosted in three refugee camps in isolated, underserved border regions, where health and other basic services are delivered through a parallel delivery system that the United Nations High Commissioner for Refugees (UNHCR) funds and the National Office for Assistance to Refugees and Displaced Persons coordinates. There are often significant inequalities in access to services between refugees and host communities. Displaced women and girls, who account for 49 percent of refugees, are vulnerable to sexual and gender-based violence, female genital mutilation (FGM), early marriage, and limited income opportunities.

Djibouti's LMIC status is at odds with its low human capital. Poor human capital is observed throughout the lifecycle, beginning in early childhood, with high rates of infant mortality and stunting. In later years, inadequate learning outcomes and skills; limited labor force participation for men and women; and poor health outcomes for women, including high rates of female genital mutilation and poor maternal health outcomes, are critical obstacles to human capital accumulation. Private sector surveys indicate a shortage of appropriate skills in the labor supply. The situation is worse for women because of entrenched social norms and structural barriers to self-employment and entrepreneurship as measured by the Women, Business, and the Law index (World Bank 2022a).

The aim of this Human Capital Review (HCR) is to identify key obstacles to human capital accumulation in Djibouti and recommend a set of priority actions and policy interventions to help achieve equitable, efficient human capital development. The HCR takes a lifecycle approach to understanding factors that hinder accumulation of human capital during different stages of life. Investing in human capital is critical for increasing individuals' earnings, countries' incomes, and societal cohesion. Human capital accumulation is a continuous process that requires investment at every stage of life. This HCR focuses on three life transitions: early childhood, adolescence, and adulthood. Concurrently, the team engaged in multisectoral consultations with government counterparts to discuss human capital and both data limitations and measurement capacity constraints, which are essential for measuring and tracking human capital.

1 See World Development Indicators (database), World Bank, Washington, DC (May 3, 2023), https://databank.worldbank.org/source/world-development-indicators.

2 See World Development Indicators (database), World Bank, Washington, DC (May 3, 2023), https://databank.worldbank.org/source/world-development-indicators.

II. STATUS OF KEY HUMAN CAPITAL OUTCOMES IN DJIBOUTI

The government of Djibouti has identified human capital as a key driver of sustainable growth and development and has established clear institutional arrangements to lead and drive key policy priorities. These are underpinned by national and sectoral strategies and policies. For instance, Vision 2035 recognizes that, for the country's economy to become more diversified, it must have a productive workforce with diverse skill sets. By expanding the economic base to rely more on human capital, Djibouti can create more-equitable growth trajectories that benefit a wider segment of the population.

Djibouti's health outcomes have improved over the last two decades. Delivery of health services for Reproductive, Maternal, Neonatal, Child, Adolescent Health, and Nutrition (RMNCAH-N) services has increased substantially over time in certain regions because health service providers and medicines have become more available, and management capacity has increased. In 2019, the country achieved a 56 percent score on the universal health coverage index for RMNCAH-N interventions,[3] although improvements are lagging those in other Middle Eastern and North African countries, and the COVID-19 pandemic has disrupted health service delivery in an already challenging environment. Adolescent girls are at a higher risk of maternal death and complications than older women. Hence, empowering girls, and improving access to critical life-skills training and reproductive health education, to delay marriage and childbirth, are essential.

ECD interventions in Djibouti are in their early stages but are expanding. Djibouti is working to create an enabling policy and legal environment for an effective ECD system, providing an entry point to catalyze improvements in ECD status and yield cumulative human capital gains by investing in the early years. Current efforts focus on promoting healthy, well-nourished children and early learning. Opportunities to promote social protection and responsive caregiving are limited and fragmented. Although the government's commitment to expanding preschool education helped double enrollment between 2015 and 2021, enrollment remains low (13.2 percent).

School enrollment rates at all levels have been increasing in Djibouti over the last two decades, particularly at the primary and lower-secondary levels, although expected years of schooling remains at 9.2 years (World Bank 2023b). This is lower than the averages for the Middle East and North Africa and for lower middle-income countries (LMICs). **Gender disparities in school enrollment ratios between girls and boys become more pronounced at each educational level.**

Learning outcomes in Djibouti are generally low, particularly in numeracy and literacy. A lack of learning data makes it difficult to measure progress and identify areas for improvement. There have been recent improvements in students' reading skills, as the results of the Early Grade Reading Assessment indicate, and progress in assessing learning outcomes. The assessment revealed significant progress between the baseline and mid-term evaluations, making Djibouti one of the

3 See World Development Indicators (database), World Bank, Washington, DC (accessed May 3, 2023), https://databank.worldbank.org/source/world-development-indicators.

few countries to show improvement in learning outcomes during the COVID-19 pandemic. These developments reflect ongoing reforms designed to enhance learning (USAID 2022).

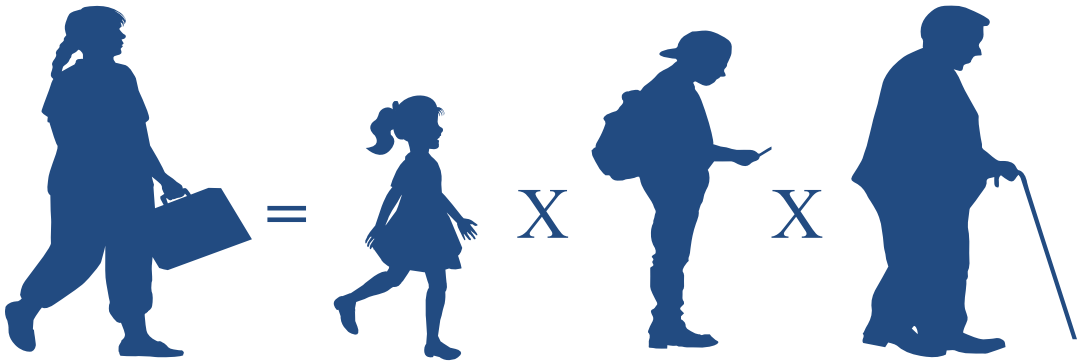
Djibouti's working-age population faces a triple challenge: high wages, higher unemployment among more-educated workers, and low employment outcomes overall. High wages result from public sector employment, which provides a wage premium well above the market clearing equilibrium based on education and skills, thereby segmenting the labor market. Higher unemployment among the skilled workforce results from the limited number of public sector jobs, which seems endemic in the Middle East and North Africa, particularly in resource-rich and rentier economies. Djibouti could be described as the latter. Low overall employment has resulted from the low rate of job creation, which is not unusual for a small, undiversified economy where one sector (transport and logistics) dominates, and capital accumulation contributes more to economic growth than labor or productivity.

Five overarching factors influence Djibouti's human development outcomes. First, the country's small size, its vulnerability to disasters, and spillover effects of regional fragility and insecurity pose inherent challenges. Diseconomies of scale, in particular, make private sector–led growth difficult and limit human capital formation and use. Second, poverty is pervasive, with significant geographic and socioeconomic disparities in welfare. Based on estimates from 2017, a bit more than one-fifth of the Djiboutian population lives in extreme poverty, unable to cover basic needs. Poverty and distance, particularly in rural areas, make it difficult to access health and education services. Third, food insecurity, leading to undernourishment, is present in certain areas and affects nutrition outcomes throughout the lifecycle. The effects of a poor diet carry through intergenerationally and hamper skills accumulation. Fourth, expenditures on education, health, and social protection systems are low. Djibouti's social protection system, for example, is inadequate to shield poor and vulnerable people from adverse lifecycle impacts or encourage investments in human capital. The system is fragmented and provides limited coverage. Fifth, limited data and low measurement capacity are major obstacles to measuring and tracking key human capital indicators accurately, and hinders the ability to assess the state of human capital in the country holistically.

III. DJIBOUTI'S HUMAN CAPITAL INDEX

The amount of human capital that a child born today can expect to attain by the age of 18 is measured using the Human Capital Index (HCI), which compares the productivity of the next generation of workers with a benchmark of workers with complete education and good health. This outcome-based index considers the stages of life at which knowledge and skills formation are most critical. It consists of five indicators, across three components, with a clear narrative regarding human capital accumulation across the lifecycle: at birth, children must survive; during childhood, they must be well nourished; at school age, they must complete all schooling at adequate learning levels; and in adulthood, they must stay in good health. The HCI combines mortality and stunting rates, expected years of schooling, harmonized learning outcomes, and adult survival rates (Figure ES1).

FIGURE ES1. Components of the Human Capital Index



HUMAN CAPITAL INDEX
Production of a person born today when 18 year old

CHILD HEALTH
Survival rate of children under the age of five and not stunting

EDUCATION
Learning-adjusted years of school

HEALTH
Adult survival rate

The HCI is a prospective, output-oriented measure of the expected productivity of the next generation of workers if current circumstances continue. Higher HCIs indicate higher future labor productivity. Rather than relying on ad hoc aggregation with arbitrary weights, the HCI uses the estimated earnings associated with an additional unit of health and education to translate these into contributions to worker productivity, relative to a benchmark of complete education and full health. The result is the HCI score, which ranges from 0 and 1. The link between indicators, their aggregation, and productivity is based on a rigorous evidence base (Appendix A). For instance, research suggests that a 1-centimeter increase in adult height raises productivity by 3.4 percent (World Bank 2020a).

The report's simulation of Djibouti's first HCI score is a major achievement. The score of 0.41 indicates that a child born in Djibouti in 2022 will achieve only 41 percent of their full potential in productivity that they would have with full education and health.[4] Table ES1 outlines Djibouti's simulated HCI score, disaggregated according to component. Scores for schooling are low in Djibouti. A child is expected to spend 1.3 fewer years in school than the LMIC average, and 1.6 years more than Intergovernmental Authority on Development (IGAD) countries in 2020. When adjusted for the amount that students learn while in school, the years of schooling component drops from 9.2 to 5.0 years. Limited schooling in Djibouti reflects a combination of low transition from primary to secondary school and low scores from the first internationally comparable learning assessment data. The schooling component's contribution has the most significant effect on potential productivity.

4 This HCI simulation is based on the HCI methodology, uses the standard data sources across HCI components up till 2022, involved the global HCI team, and is derived from the HCI calculator, although it is not considered an official HCI score because a global HCI update, to which Djibouti can be added, will not be done until 2024. The official HCI score for Djibouti, when it is released, may be different from what is presented, given the possibility of new or updated data, related to, for example, school enrollment.

TABLE ES1. Djibouti's Simulated Human Capital Index

	Total	Male	Female
Component 1: Survival			
Probability of survival to age 5 (0-1)	0.95	0.94	0.95
Contribution to productivity as future worker (A)	***0.95***	***0.94***	***0.95***
Component 2: School			
Expected years of schooling (0-14 years in total)	9.2	9.7	8.5
Harmonized test score (300-625)	340	344	336
Contribution to productivity as future worker (B)	***0.49***	***0.50***	***0.47***
Component 3: Health			
Fraction of children under 5 not stunted (0-1)	0.79	0.78	0.80
Fraction of 15-year-olds who survive to age 60 (0-1)	0.73	0.69	0.78
Contribution to productivity as future worker (C)	***0.88***	***0.87***	***0.90***
Human Capital Index (A x B x C)	**0.41**	**0.41**	**0.40**

Source: UN Interagency Group for Child Mortality Estimates 2021, World Bank staff calculations supplementing administrative data from Djibouti 2021, World Bank staff calculations supplementing USAID 2022, UNICEF-WHO-World Bank joint malnutrition estimates 2019, UN Population Division 2022

Gender variations in the simulated HCI for Djibouti are largely consistent with global trends, although driven differently by individual components. Boys have a higher HCI (0.41) than girls (0.40), in contrast to the global average where girls have a higher HCI. Girls in Djibouti score higher on all individual components except school. The global trend is that girls achieve higher grades in school. The pattern in Djibouti is more similar to trends in the poorest countries and is less common in LMICs. Girls in Djibouti have a lower Harmonized Test Score and lower number of expected years of schooling (8.5 years) as more girls drop out of school and there are fewer girls at each level, especially at the secondary levels. For instance, according to administrative data, the gross enrollment rate for boys was 101.6 percent and 90.2 percent for girls in primary school; 83.4 percent and 69.2 percent respectively, in lower secondary; and 49.6 percent and 42.4 percent in upper secondary in 2021 (MENFOP 2023).

Djibouti has risen to become an LMIC, but its simulated HCI for 2022 remains lower than the LMIC average of 0.48 in 2020.[5] The LIC average was 0.38, and the Middle Eastern and North African regional average (excluding high-income countries) was 0.51 (Table ES2). Djibouti has better outcomes for expected years of schooling but lower harmonized test scores than its income and regional peer averages, similar probability of survival to age 5 and better health outcomes than regional peers.

5 The simulated HCI for Djibouti is for 2022 as this was the first-year learning quality data became available. All other countries' HCI is for 2020 using pre-pandemic data. This limits the comparability of Djibouti's simulated HCI, as it uses pre and post pandemic data while other countries only use pre pandemic data.

TABLE ES2. Djibouti's Simulated Human Capital Index with Comparators

Component	Djibouti 2022	Middle East and North Africa (excluding high-income countries[a])	Intergovernmental Authority on Development[b]	Low-income countries	Lower-middle-income countries
Component 1: Child Survival					
Probability of survival to age 5	0.95	0.98	0.94	0.93	0.96
Component 2: Schooling					
Expected years of schooling	9.2	10.5	7.6	7.6	10.4
Harmonized test scores	340	384	383	356	392
Component 3: Health					
Fraction of children under 5 not stunted	0.79	0.82	0.68	0.65	0.75
Survival rate from age 15-60	0.73	0.89	0.75	0.75	0.80
Human Capital Index	**0.41**	**0.51**	**0.40**	**0.38**	**0.48**

Source: UN Interagency Group for Child Mortality Estimates 2019 and 2021, World Bank staff estimates supplementing United Nations Educational, Scientific and Cultural Organization's Institute for Statistics 2019, World Bank staff calculations supplementing USAID 2022, UN Population Division 2019 and 2021, UNICEF-WHO-World Bank joint malnutrition estimates 2019, World Bank staff calculations supplementing MENFOP administrative statistics 2023.
(a) Excluding Bahrain, Israel, Kuwait, Malta, Oman, Qatar, Saudi Arabia, United Arab Emirates.
(b) Data available for Ethiopia, Kenya, Sudan, Uganda. Data not available for Djibouti, Eritrea, South Sudan.

The basic utilization adjusted HCI for Djibouti is 0.09,[6] which indicates that only 9 percent of the full potential of human capital is being harnessed. The utilization-adjusted HCI adjusts the HCI for labor market underuse of human capital based on the employment to population ratio (fraction of people aged 15–65 who are employed). Economic gains from human capital can be realized only if people can use their skills and ingenuity in productive activities, such as working. This means that the benefits that Djibouti can realize from its human capital are even lower than its HCI of 0.41 would suggest, because conditions do not exist for citizens to put their human capital to work. The utilization adjusted HCI for women is even lower (0.05) due to ILO estimates of an 11.3 percent employment to population ratio for women in 2022.[7] **From 2005 to 2015, labor as a factor of production grew by only 2 percent and contributed less than 1 percentage point to growth, whereas physical capital grew, on average, by more than 21 percent and contributed 12 percentage points to growth** (World Bank 2018a)**.**

The HCR provides an overview of human development outcomes throughout the lifecycle, with particular focus on three periods: early childhood, adolescence and youth, and the working years.

6 Utilization-adjusted HCI=employment rate of working-age population (15-65) × HCI.
Utilization-adjusted HCI_{women}=employment rate of working-age women (15-65) × HCI.

7 See World Development Indicators (database), World Bank, Washington, DC (May 5, 2023), https://databank.worldbank.org/source/world-development-indicators.

These periods are important transition periods during the lifecycle and on the human capital accumulation trajectory. They also allow for the design of effective, cross-sectoral interventions. The reproductive choices of youth, for instance, are strongly linked back to early childhood. Labor market outcomes are closely linked with quality of education and skills, and human capital and human development outcomes in these periods are particularly low in Djibouti. Although poor learning outcomes and limited years of schooling have the most significant effect on potential productivity, they were not included as deep dive areas because interventions needed in the school years are largely education-sector specific. On-going education reform efforts, which focus on improving quality and increasing access and years in school, however are highlighted in chapter 2, together with an overview of education outcomes in Djibouti.

CHAPTER 1: INTRODUCTION

KEY MESSAGES

- **The government of Djibouti is committed to improving human capital as a driver of sustainable growth and development, despite limited fiscal space for social spending.** As a small state with limited capacity, political buy-in is critical.
- **Five key factors influence human capital accumulation:** the country's small size, widespread poverty and significant geographic and socioeconomic disparities, food insecurity, limited social spending, and very low data and measurement capacity.
- **The HCR will do deep dives into three key areas of the lifecycle: early childhood, adolescence and youth, and the working years.** These are important periods of life transition in the human capital accumulation trajectory and provide critical entry points for the design of cross-sectoral policy interventions and policy actions.

I. COUNTRY CONTEXT

Djibouti is a small lower-middle-income country (LMIC) with a geostrategic location. It has a population of less than 1 million, of which more than 80 percent resides in urban areas. The country is multiethnic, with Afar, Arabs, and Somalis. Djibouti City accounts for about 70 percent of the country's population, with the remaining population spread across the five administrative regions, where the rural population varies from 40 percent (in Ali Sabieh) to 77 percent (in Tadjourah).

Djibouti's strategic location shapes its development trajectory and its goal of becoming a hub for trade and logistics. It is the main passageway for Gulf oil to reach North America, and more than 20,000 ships transit through Bab al-Mandeb each year, accounting for about 30 percent of the world's maritime trade, estimated at more than US$700 billion. Imports to and exports from Ethiopia account for approximately two-thirds of the port's activities.

Djibouti's growth has been rapid and stable, despite disruptions from the COVID-19 pandemic. Real gross domestic product (GDP) growth averaged 6 percent per annum between 2000 and 2019, with GDP per capita increasing from less than US$800 in 2000 to more than US$3,360 in 2021, putting Djibouti's economic growth performance ahead of its structural peers (Belize, Cabo Verde, Comoros, Malaysia, São Tomé and Príncipe). Construction of new port facilities and transport links to the large Ethiopian market has driven much of this growth. It hosts military bases for several

foreign countries, evidence of its important security role in the Horn of Africa, but it has a narrow and unsustainable growth based on debt-financed physical infrastructure investment. Key transport links have expanded trade capacity but nearly doubled the ratio of public debt to GDP from 2013 (35 percent) to 2019 (66 percent). The budget deficit is low (1.5 percent), but the risk of debt distress is high, and has left limited fiscal space for social spending.

Djibouti is a relatively poor country, with high inequality. About 21 percent of the population is extremely poor based on the official poverty line of US$2.17 a day using 2011 purchasing power parity (World Bank 2023a). Extreme poverty in rural areas is significantly higher (~62.6 percent) (INSTAD 2017). Using the World Bank poverty line for LMICs of US$3.65 a day (2017 purchasing power parity), the extreme poverty rate was estimated to be 39 percent in 2022 (World Bank 2023a). Inequality in Djibouti is among the highest in the Middle East and North Africa, with an estimated Gini coefficient of 0.42. The highest income decile consumes approximately 16 times as much as the lowest decile and twice that of the ninth decile (World Bank 2019a).

Djibouti's location, sociopolitical stability, and sociocultural proximity to neighboring countries makes it vulnerable to waves of refugees fleeing conflict from those countries, which has been ongoing since the mid-1970s. Djibouti hosts more than 31,400 refugees and asylum-seekers (UNHCR 2023), accounting for approximately 2.8 percent of the country's population;[8] these come mostly from Eritrea, Ethiopia, Somalia, and more recently, Yemen. The country is also believed to host close to 150,000 undocumented residents in urban centers according to government figures. More than 80 percent of registered refugees are hosted in three refugee camps in isolated, underserved border regions, where health and other basic services are delivered through a parallel delivery system that the United Nations High Commissioner for Refugees (UNHCR) funds and the National Office for Assistance to Refugees and Displaced Persons coordinates. There are often significant inequalities in access to services between refugees and host communities and urban areas. Displaced women and girls, who account for 49 percent of refugees, are vulnerable to sexual and gender-based violence, female genital mutilation (FGM), early marriage, and limited income opportunities.

Djibouti has set a positive example of fostering and recognizing the value of refugees' human capital through a range of inclusive policies, including piloting the Global Compact on Refugees[9] and the Comprehensive Refugee Response framework.[10] Djibouti also accessed funds from the International Development Agency sub-window for refugees.[11] Support to refugees extends beyond access to schooling, health care, and social protection systems and includes efforts to adapt services to refugees' needs. For example, during the COVID-19 pandemic, school kits comprising basic learning materials were distributed to refugees given constrained access to digital distance learning

8 See World Development Indicators (database), World Bank, Washington, DC (December 22, 2023), https://databank.worldbank.org/source/world-development-indicators.

9 The Global Compact on Refugees was affirmed by the United Nations General Assembly in December 2018. It is a framework for more predictable and equitable responsibility-sharing, recognizing that a sustainable solution to refugee situations cannot be achieved without international cooperation. It provides a blueprint for governments to ensure that host communities get the support that they need, and that refugees can lead productive lives.

10 The Comprehensive Refugee Response Framework is an initiative called for in the UN resolution known as the New York Declaration for Refugees and Migrants designed to create a coherent, robust response to refugee crises through complementarity of programming and resourcing.

11 The Window for Host Communities and Refugees supports countries that host significant refugee populations to create medium- to long-term development opportunities for refugees and host communities.

tools. Although the number of refugees joining the formal labor market is limited, they have the legal right to obtain formal employment, unlike in many other countries.

Djibouti has limited natural resources and is prone to natural hazards. Floods, recurring droughts, and locust outbreaks, have damaged pastoralist livelihoods. Djibouti has the fourth highest vulnerability rating in the Middle East and North Africa for climate shocks and ranks 122nd globally on the Notre Dame Global Adaptation Initiative Index, which measures vulnerability and readiness to address climate impacts.[12] It was assessed as having greater risk to the food supply (due largely to scarce precipitation, which does not support an agricultural base), ecosystems, human habitat, and health than the Middle Eastern and North African average, with adverse impacts arising from high temperatures, aridity, lack of precipitation, and rising sea levels. Saltwater intrusion into aquifers through coastal erosion, for instance, threatens water quality. These risks disproportionally affect children, with knock-on effects on education, health care, livelihoods, and intergenerational transmission of human capital. The United Nations Children's Fund (UNICEF) Children Climate Risk Index[13] highlights the potential impact of climate impacts on children. The country score of 5.8 (out of 10), which is the second-highest risk in the Middle East and North Africa, after Yemen, indicates that climate risks prevent children from building human capital through good health and education. Children are more vulnerable to climate and environmental shocks than adults because they are physically less able to withstand shocks, physiologically more affected by pollution, and more at risk of death from climate-induced diseases, which limit learning outcomes and increase mortality and stunting.

The government is committed to improving human capital, as efforts to implement sectoral strategies that address human capital challenges, and the establishment of clear cross-sectoral institutional arrangements indicate (Figure 2). Djibouti 2035 Vision, for instance, prioritizes human development by focusing on expanding social safety net coverage and enhancing the effectiveness and efficiency of the delivery systems; reforming the health care sector, including by using results-based financing to bring decision making closer to the point of care and expanding the community health care system; reforming the education system to enhance learning by improving quality, teachers' professional development and expanding pre-primary education; and developing skills to make Djibouti a regional digital hub. Although, as shown in Figure 2, there exists a clear institutional structure to lead and drive the human capital agenda. Engagement and operationalization of the steering and technical committees will however require continued effort.

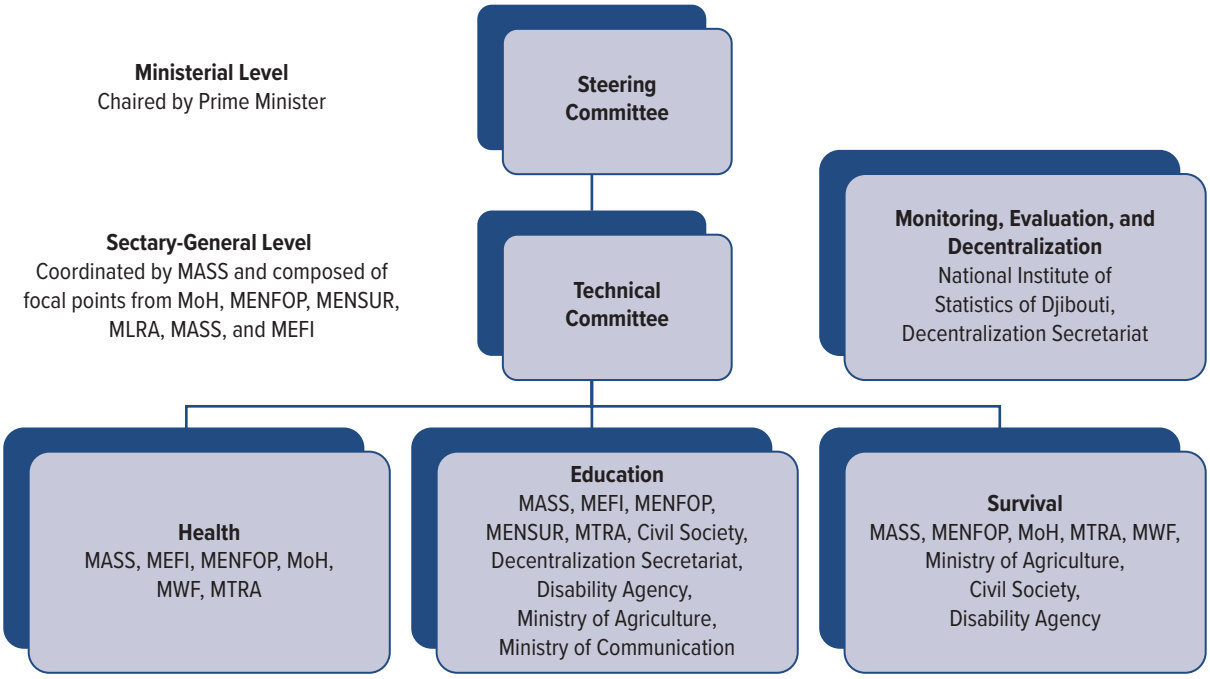
Gender equality is central in the design of Djibouti 2035 Vision. The government has implemented several national plans and programs that promote gender equality, women's empowerment, and eradication of all forms of exclusion, and in doing so, has acknowledged that, despite national efforts, harmful gender norms persist and increase the disease burden for women, with negative impacts on the health care system. Despite adoption of a special law criminalizing FGM and government efforts to fulfill its national, regional, and international commitments to eradicate

12 See Country Index (database), Notre Dame Global Adaptation Initiative, Notre Dame, IN (April 12, 2023), https://gain.nd.edu/our-work/country-index/.

13 The Children's Climate Risk Index provides a comprehensive overview of children's exposure and vulnerability to climate change. It ranks countries based on children's exposure to climate and environmental shocks, such as cyclones and heatwaves, and their vulnerability to those shocks, based on their access to essential services.

this crime, efforts have had to start from a high level of 93% in 2006.[14] One of the five priorities in the Djibouti 2035 Vision is to increase access to and quality of health care, including sexual and reproductive health, and ensure full and equal access to reproductive rights.

FIGURE 2. Institutional Structure of Djibouti's Human Capital Efforts



Note: MASS, Ministry of Social Affairs and Solidarity; MEFI, Ministry of Economy and Finance; MENFOP, Ministry of Education and Vocational Training; MENSUR, Ministry of Higher Education and Research; MoH, Ministry of Health; MTRA, Ministry of Labor and Administrative Reform; MWF, Ministry of Women and the Family.

II. OVERARCHING BOTTLENECKS OF HUMAN CAPITAL OUTCOMES

Human capital—the stock of accumulated knowledge, experience, and attributes that people accumulate over their lifetime, enabling them to realize their potential as productive members of society—is a central driver of sustainable, equitable growth and economic development. It is a key determinant of labor productivity and plays an essential role in determining a country's long-term development path. More human capital is associated with higher earnings for people, higher incomes for countries, and greater cohesion in societies. Investments in human capital accumulate (Figure 3) and are needed at each stage of life. Education and developing skills proficiency, for example, provide substantial returns on investment. It is estimated that 1 additional year of schooling increases earnings by 8 percent a year. Moreover, a highly skilled workforce is a prerequisite for a country to compete in the global economy. Meanwhile, inclusive, cost-effective health care systems are needed to ensure healthy, productive lives and avoid impoverishment from health shocks, and effective

14 See Djibouti Country Page (database), United Nations Population Fund, New York (May 7, 2023), https://www.unfpa.org/data/DJ.

social protection and employment programs protect people from falling into a trap of poverty and joblessness. Human capital depreciates with long periods of unemployment and subsequent inability to keep up with improvements in technology and innovation.

FIGURE 3. Cumulative Effects of Investments in Human Capital

Five factors influence Djibouti's human capital outcomes: the country's small size, which poses inherent challenges; substantial geographic and socioeconomic disparities and widespread poverty; food insecurity, leading to undernourishment during critical periods of the lifecycle that hampers future skills accumulation; limited social spending; and limited data and low measurement capacity, which makes it difficult to determine the state of human capital in Djibouti and take necessary action.

Djibouti is a small state that is vulnerable to disasters and spillover effects of regional fragility and insecurity. Climate stressors and weather shocks can affect the security of a state by amplifying social stress and competition for scarce resources. If these dynamics exceed the adaptive capacity of a country, it can create or aggravate instability (Boyer, Meijer, and Gilligan 2020). Despite substantial infrastructure investment by state-owned enterprises over the last decade, the country's strong, sustained economic growth has not been inclusive, with limited private sector contribution. Like many other small states, the public sector in Djibouti plays a large role in the economy, and there is a small donor community, without a formal coordination framework. With a small population and land area, small states usually have limited human capital and face labor market and capacity constraints because of diseconomies of scale, which makes private sector–led growth difficult. Djibouti is no exception.

The private sector in Djibouti is embryonic, and high costs of doing business and low human capital constrain it. The informal sector comprises mainly small and medium-sized enterprises in services and retail commerce that provide limited employment opportunities. In addition, like many small states, the country has limited information and communications technology connectivity, which hampers the services sector. In Djibouti, this is because the information and communications technology sector is uncompetitive, with high prices and low penetration of mobile broadband and internet.

Poverty is pervasive, with significant geographic and socioeconomic disparities in welfare. Based on estimates from 2017, based on the national poverty line, slightly more than one-fifth of the Djiboutian population lives in extreme poverty, unable to cover basic needs. The extreme poverty rate is 13.6 percent in Djibouti City, and in rural areas, it is more than four times as high

(62.6 percent). Rural areas contain 15 percent of the population but 45 percent of the poor population (World Bank 2020b).

Poverty and distance, particularly in rural areas, present significant barriers to accessing health care and education. The location of individuals also correlates with their human capital outcomes. For example, literacy rates tend to decline as distance to a primary school increase, affecting rural more than urban populations. There are also large variations in school enrollment patterns based on poverty and the rural-urban divide. School enrollment is systematically lower for poor and rural populations than for nonpoor and urban populations. Stunting is also more prevalent among rural (34 percent) than urban (19 percent) children. Nationwide, households' fulfillment of the four-food-group minimum diet criterion varies according to socioeconomic status and location. Dikhil and Tadjourah, which are largely rural, have the lowest levels of diet fulfillment. Furthermore, people living in rural areas are more likely to have health problems, which increase with distance to a community health center.

Geographic and socioeconomic disparities are also clearly reflected in access to water, sanitation, and hygiene services, particularly in rural areas (Table 3). Having access to a clean water source is crucial to preventing infectious diseases. In rural areas, where malaria, fever, and diarrhea are more common than in urban areas, the source of water and living conditions (e.g., type of toilet) are strongly correlated with the prevalence of diseases. The 2017/18 household survey showed a correlation between poor water and sanitation and episodes of sickness. The urban rural disparity extends to schools, with gaps in access to sanitation and basic drinking water.

TABLE 3. Urban and Rural Access to Water, Sanitation, and Hygiene for 2020 and 2021

	Urban	Rural
	%	
Population access to basic drinking water (2020)	84	47
Population access to safely managed sanitation (2020)	42	21
School access to basic drinking water (2021)	96	83
School access to basic sanitation (2021)	91	75
School access to basic hygiene (2021)	100	100

Source: UNICEF and WHO 2021

Djibouti imports 90 percent of its food because it has limited arable land and rainfall. Although this has been possible because of its location, it is not a sustainable model for meeting consumption needs and poses a threat to overall food security. The prolonged drought that recently hit Djibouti exposed at least 20 percent of the population of Djibouti City and 75 percent of rural households to food insecurity. These shocks to livelihoods can interrupt human capital accumulation, damaging human capital stock and its intergenerational transmission.

Food insecurity is widespread and has negative effects on nutritional outcomes throughout the lifecycle. Households facing economic hardships, especially poor households, often cope by switching to more-processed, less-nutritious foods and reducing the number or size of meals. Within sampled Djibouti City, for example, 41.4 percent of children under the age of 5 did not have a minimally acceptable diet that contained four food groups. This lack of dietary diversity contributes to poor nutrition outcomes in early childhood. The 2019 Standardized Monitoring Assessment for Relief and Transitions survey showed that close to three-quarters of women in Djibouti did not consume a diverse diet, which predisposed them to micronutrient deficiencies, including iron-deficiency anemia (INSTAD 2019). The effects of a poor diet carry through intergenerationally, with 18.6 percent of women of reproductive age classified as malnourished based on proxy measurements of mid-upper arm circumference (23.1 percent in rural vs 16.7 percent in urban areas). Stunting also varies according to location, with higher rates in lagging regions, including Obock (40.2 percent), Dikhil (33.3 percent), and Tadjourah (32.6 percent).

Lack of spending on health care and social protection is a concern. Only 5 percent of the budget is dedicated to health care, and 3 percent to social protection, compared with more than 30 percent for public infrastructure. According to the Education Orientation Law 2000, education is a right for all children without distinction according to sex, age, social status, ethnic origin, or religion. As such, the state guarantees free basic education from 6 to 16 years old. 20 percent of the budget is allocated to education, compared to 2018 when Djibouti allocated only 3.75 percent of GDP to education, compared with the small state average of 4.8 percent.[15] Health spending was even lower (1.8 percent of GDP), compared with the small state average of 5.0 percent.[16]

Djibouti's social protection system is inadequate to shield poor and vulnerable people from adverse lifecycle impacts or encourage investment in human capital. The system is fragmented and provides limited coverage. Social safety net coverage was 9.5 percent in 2012, with government social safety net spending 0.18 percent of GDP, compared with the Middle Eastern and North African average of 1 percent and the world average of more than 1.5 percent. As of 2019, nine safety net programs covered different groups, leading to fragmentation. Social safety net systems are critical in protecting and building the human capital of children threatened by adverse impacts on livelihoods such as environmental shocks. This support is particularly important for the 21 percent of Djiboutians who are extremely poor and have no capacity to smooth consumption and protect their human capital.

Limited data and measurement capacity is a major obstacle to measuring and tracking key human capital indicators accurately, which in turn hinders the ability to assess the state of human capital in the country holistically. Several factors contribute to this problem: first, data are scarce because household income and expenditure surveys are administered infrequently, and the impact of public policies are not assessed frequently; second, poor data quality in the health sector makes it difficult to measure important health outcomes such as stunting; and third, access to existing data is limited. Despite adoption of a national plan for statistics, data collection and use are often externally driven

15 See Sustainable Development Goal 4 Indicators (database), United Nations Education, Cultural and Scientific Organization, Paris, France Paris, France (accessed April 18, 2023), http://data.uis.unesco.org.

16 See Global Health Expenditure Database, World Health Organization, Geneva, Switzerland (May 3, 2023), https://apps.who.int/nha/database.

and funded, leading to infrequent measurement and limited evaluation capacity. These data-related challenges make it difficult to measure and track key human capital indicators accurately over time. There is no robust data collection strategy to measure progress accurately and regularly. The importance of generating data on the effectiveness of public policies is becoming increasingly recognized, as the Ministry of Education and Vocational Training's (MENFOP's) efforts to prioritize expansion of learning data through classroom, national, and international assessments such as the Early Grade Reading Assessment demonstrate.

III. REPORT ORGANIZATION

The Simulation of Djibouti's Human Capital Index (HCI) is a major achievement of this report that will be discussed in detail in Chapter 2. Djibouti's simulated HCI score is 0.41, which indicates that a child born in 2022 will achieve only 41 percent of the full potential human capital that they would have achieved with full education and good health. The HCI, which compares the productivity of the next generation of workers with a benchmark of complete education and full health, was calculated using the HCI methodology, used standard HCI data sources updated for 2022, and was derived from the HCI calculator. This HCI is higher than the low-income country (LIC) average of 0.38 in 2020 and lower than the Lower Middle Income Country average of 0.48. Dividing Djibouti's HCI into its three components (child survival, education, health) and indicators provides an important starting point in understanding the drivers of this score and potential levers for policy action throughout the lifecycle.

Djibouti has worse outcomes on all HCI components and at all stages of the lifecycle than its income peers (except for under 5 stunting), **and comparable to IGAD.** Three particularly important stages that have been prioritized for deep dive analysis in this Human Capital Review (HCR) are early childhood, adolescence and youth, and the working years. These stages are important periods of transition in the human capital accumulation trajectory, with human development outcomes influenced by cross-sectoral policy interventions and policy actions. Through a review of existing data and analysis, this HCR will devote a chapter to each of these lifecycle periods. Focus will be on achievements; key bottlenecks to human capital accumulation; and priority actions and policy interventions that can support equitable, efficient accumulation of human capital.

Chapter 3 discusses the value of investing in early childhood development (ECD) in terms of achieving the highest cumulative returns. To attain full development potential, people require nurturing care in their early years, including access to quality health care and nutrition services (e.g., pre- and postnatal care); early cognitive stimulation and learning opportunities (e.g., caregiver programs and preschool classes that structure learning around age-appropriate and play-based activities that stimulate child development and early socioemotional skills); and a nurturing, secure, safe environment. ECD is a fundamental entryway to learning, and health care, with early interventions in the critical first 1,000 days of life, vital in mitigating risks and promoting protective factors that enable healthy brain development and yield cumulative gains for future well-being and productivity. ECD also brings greater benefits to children from disadvantaged groups. While the government has made significant strides in creating an enabling environment through the promotion of integrated policies, strategies, and laws, such as the national policy for integrated early

childhood development, there is still more that needs to be done regarding the implementation and coordination.

ECD outcomes in Djibouti are limited and unequally distributed across children, reflecting socio-economic and geographic disparities. This means that many children will not have an opportunity to reach their full potential. Although Djibouti is taking steps to create an enabling policy and legal environment for an effective ECD system, there are significant weaknesses in terms of access, coverage, equity, and quality of delivery of essential services for families with young children. Multisectoral interventions, in the areas of health, nutrition, social security and education, lay the foundations for success in preschool and the transition to primary school. For instance, access to and availability of preschool classes, from 28 in 2017 to around 80 in 2021, is incrementally expanding to urban and rural areas, and the preschool enrollment rate is rising but still low (13.2 percent). Obstacles to expanding access include lack of financing, classroom space, and qualified preschool teachers.

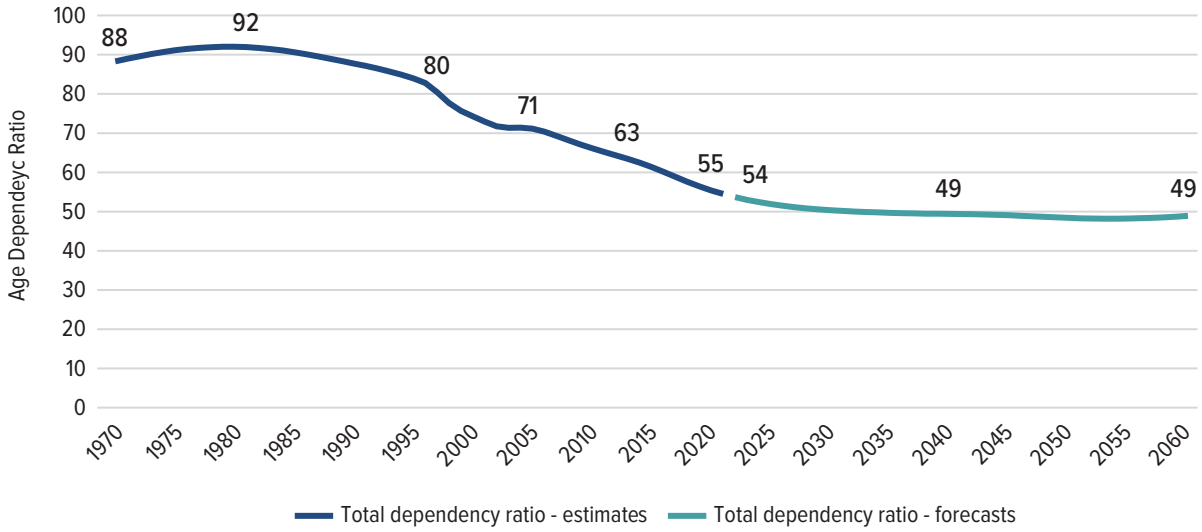
Chapter 4 focuses on the adolescent and youth transition periods, entry into the labor market, and reproductive choices made during this period. In these formative years, human capital interventions are likely to yield high returns on investments. Outcomes in this period are impacted by, and reflect, the quality of RMNCAH-N, ECD and school services, as young women make reproductive decisions that affect their own health and that of the next generation. Meanwhile, schooling affects both entry into the labor market, and productivity. When youth become parents, it also shapes the transition, because young adults with children tend to have the highest rates of school dropout and are often not employed or in school or training. Young women in particular enter this period with less education, have often been subjected to FGM, are married earlier, and have less intergenerational social mobility.

Chapter 5 focuses on the working years, providing an overview of labor market outcomes and opportunities to pivot toward a more competitive, productivity-fueled economy. Growth in Djibouti has not provided more and better employment opportunities for the expanding working-age population. Djibouti is expected to reach its lowest age-dependency ratio in 2050, with about 48 percent of Djiboutians being of working age (Figure 3).[17] Only 32.1 percent were in the workforce in 2019—less than structural and regional peers.

Labor force participation of women, young people, and rural dwellers is particularly low. Low labor force participation (FLFP) increases dependence on the working population and decreases growth prospects. In 2017, FLFP was 32 percent, compared with 59 percent for men, less than 33 percent for individuals aged 15 to 24, 55 percent for those aged 25 to 39, and 53 percent for those aged 40 to 60. Low FLFP is linked to early marriage and pregnancy, which interrupts human capital accumulation. In addition, low lifetime skills acquisition, along with inadequate demand for skills and the need for more flexibility in the labor market, leads to a circular low-skill equilibrium with inadequate incentives to break the cycle of low skills and low demand for these skills in the labor market.

17 See Age Dependency Ratio Projections, Djibouti, 1950 to 2100 (database), Our World in Data, Oxford, UK (May 5, 2023), https://ourworldindata.org/grapher/age-dependency-ratio-projected-to-2100?country=-DJI.

FIGURE 4. Djibouti's Age Dependency Ratio



Source: UN Population Division 2022

Chapter 6 outlines key policy actions and interventions to help Djibouti improve its human capital outcomes. Actions are designed to develop a healthy, skilled, resilient population as a driver of sustainable, inclusive economic growth and development. The right policies and investments will ensure that more people can be made healthier, more educated, more skilled, and more productive by participating in the country's growing economy, which would generate more and better jobs. By investing in human capital now, children will be ensured a better quality of life and expanded opportunities as they reach adulthood.

CHAPTER 2: HUMAN CAPITAL INDEX

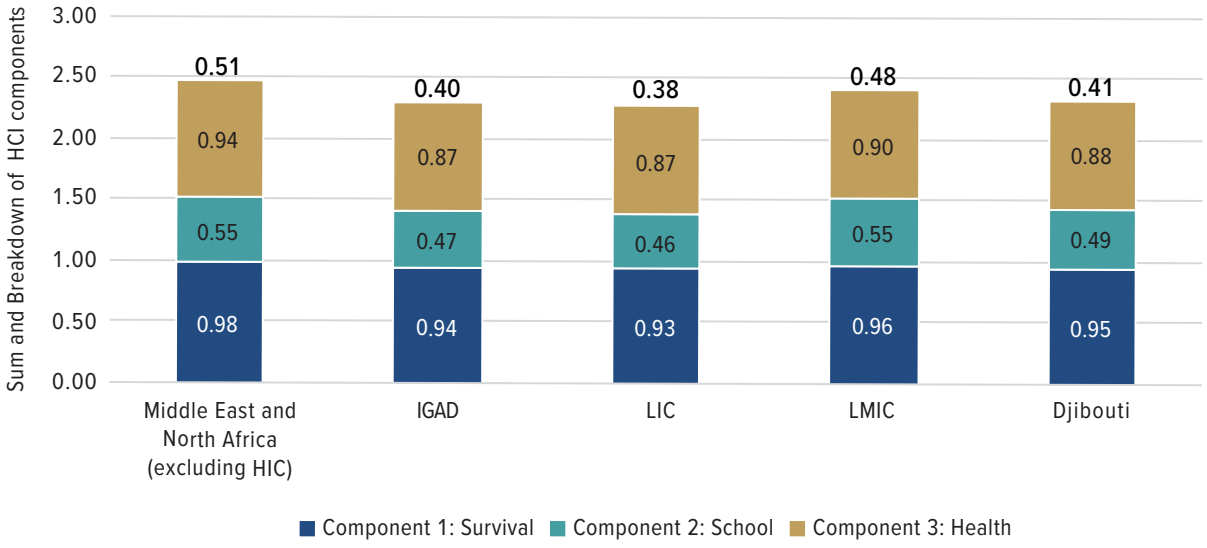
KEY MESSAGES

- **Djibouti's simulated HCI score is 0.41,** which indicates that a child born in 2022 will achieve only 41 percent of the full potential in productivity, that they would have achieved if they had full education and good health. **This HCI is higher than the LIC average of 0.38 in 2020 but lower than the LMIC average of 0.48.**
- **Djibouti has better outcomes for expected years of school but lower harmonized test scores** than LIC and IGAD averages, similar probability of survival to age 5, and better health outcomes than IGAD.
- **Djibouti's child survival rate and poor learning outcomes largely explain its HCI score**. Child survival is the starting point of becoming a future productive member of society. Lack of learning data makes it difficult to measure learning outcomes in numeracy and literacy, with missed opportunities to acquire basic knowledge in the early years limiting accumulation of human capital throughout the lifecycle.
- **Use of human capital in Djibouti is remarkably low, especially for women.** Adjusting for use, human capital drops from 0.41 to 0.09, which indicates that a child born in Djibouti in 2022 can expect to use only 9 percent of their human capital potential; for women, it drops to 5 percent.

The HCI is a cross-country metric that measures the human capital that a child born today can expect to accumulate by their 18th birthday, given the risks of poor health and poor education in their country. The HCI brings together measures of different dimensions of human capital: health (child survival, stunting, and adult survival rates) and the quantity and quality of schooling (expected years of schooling and quality of education). Using estimates of the economic returns to education and health, the components are combined into an index that captures the expected productivity of a child born today as a future worker, relative to a benchmark of complete education and full health. In the poorest countries, children face significant risks of not surviving to their fifth birthday. Even if they reach school age, there is a risk that they will not start school or complete a full 14-year cycle of schooling, from preschool to grade 12, as is typical in High Income Countries (HIC). Their time spent in school may not always translate to learning, depending on factors such as the quality of the teachers and schools they encounter. By the time they turn 18, they may carry the lasting effects of poor health and nutrition during childhood, which could limit their physical and cognitive abilities as they transition to adulthood. Appendix B provides an overview of the HCI methodology and calculation.

Despite improvement on various human capital indicators over the past two decades, Djibouti's simulated HCI score is 0.41, which indicates that a child born in 2022 will achieve only 41 percent of the full potential human capital they would have achieved with complete education and full health. This score lags the LMIC average of 0.48, the Middle Eastern and North African average (excluding HICs), of 0.51, but is higher than the IGAD average of 0.40. Understanding Djibouti's performance across HCI components is an important first step in improving human capital outcomes. Notwithstanding, it is important to note that the HCI for every country, and country grouping references data from 2020 or before. In the case of Djibouti, the simulated score is for 2022 and combines pre- and post-pandemic data

FIGURE 5. Comparison of Djibouti's Simulated Human Capital Index (HCI)



Source: UN Interagency Group for Child Mortality Estimates 2018, World Bank staff estimates supplementing United Nations Educational, Scientific and Cultural Organization's Institute for Statistics 2019, UN Population Division 2019 UNICEF-WHO-World Bank joint malnutrition estimates 2019. UN Interagency Group for Child Mortality Estimates 2021, World Bank staff calculations supplementing Annex Annuaire 2021-2022, World Bank staff calculations supplementing USAID 2022, UNICEF-WHO-World Bank joint malnutrition estimates 2019, UN Population Division 2022

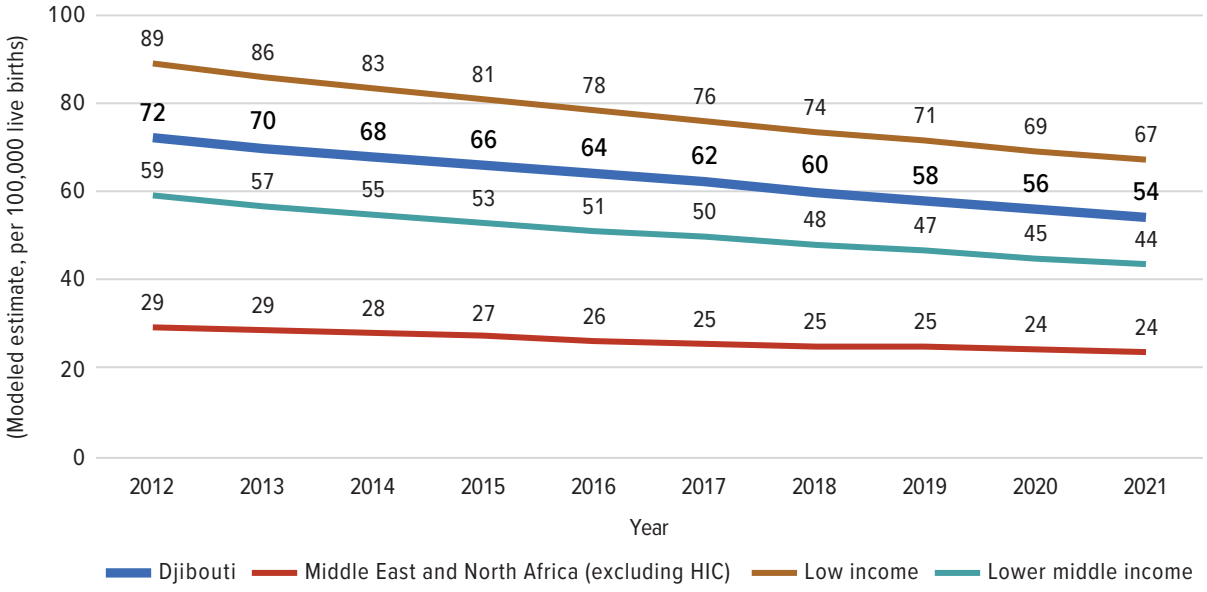
I. COMPONENT 1: CHILD SURVIVAL

Component 1, child survival, is considered the starting point of becoming a future productive member of society. It assesses the probability that a child will survive to age 5 if current age-specific mortality rates prevail in relation to the benchmark of all children surviving. Mortality in the early years of life is widely used as a proxy for future human capital. It acts as a multiplier, with a significant effect on the overall score. Djibouti's child survival rate (0.95), which is lower than the Middle Eastern and North African (0.98; excluding HICs) and LMIC (0.96) rates, partially explains its simulated HCI, as this indicator acts as a multiplier. Its child survival rate is higher than that of the IGAD (0.94) and LIC average (0.93)

Djibouti's health outcomes have improved over the last two decades. Greater availability of health service providers and medicines and greater management capacity have substantially improved health service delivery for certain services, particularly RMNCAH-N, and related health outcomes in some regions. The country, for example, increased its universal health services coverage index score from 27 in 2000 to 48 in 2019.[18,19]

Health care system improvements have steadily reduced Djibouti's under-5 mortality (54 deaths per 1,000 live births) over the past decade, although it is higher than the Middle Eastern and North Africa (excluding HIC) (24 per 1,000 live births) and LMIC (44 births per 1,000 live births) averages (Figure 6) (IGME 2019). Estimates are based on 2019 data, providing a pre-COVID-19 baseline. Under-5 mortality is high for girls (50.8) and boys (60.8). **Djibouti's infant mortality is the highest in the region (47.2 per 1,000 live births) and accounts for 84 percent of deaths under 5, underscoring the importance of addressing health care needs at the earliest stages of life.**

FIGURE 6. Comparison of Under-5 Mortality



Source: IGME 2019

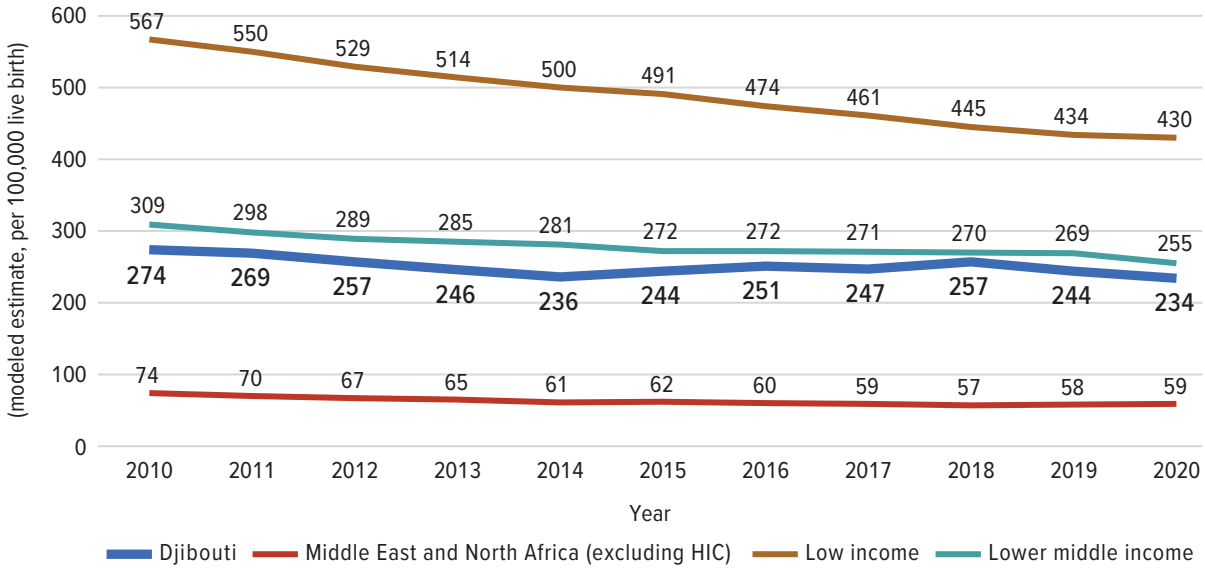
Maternal mortality is a main cause of death in Djibouti and, similar to under-5 mortality, is significantly higher than the Middle Eastern and North Africa (excluding HIC) average of 62 per 100,000 live births (Figure 7). The causes of maternal mortality in Djibouti are systemic and include postpartum hemorrhage, obstructed deliveries, abortion complications, hypertensive disorders, and infections. Although these are preventable with good-quality care, access to

18 This index measures the coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage.

19 See Global Health Observatory (database), World Health Organization, Geneva, Switzerland (May 7, 2023), https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834.

prenatal care has not kept pace with improvements in institutional delivery. Only 12 percent of pregnant women in Djibouti have four or more prenatal care visits, and 54 percent receive postnatal care, with disparities according to income quintile (UNICEF 2022). Approximately 29 percent of health facilities in Djibouti can provide emergency obstetric care—an estimated eight facilities per 500,000 population.[20]

FIGURE 7. Cross-Country Comparisons of Maternal Mortality Ratio



Source: WHO, UNICEF, UNFPA, World Bank Group, and the UN Population Division 2022

Demand and supply-side barriers limit health and nutrition outcomes in Djibouti. On the demand side, poverty and financial barriers, lack of knowledge, limited community engagement, and harmful sociocultural beliefs influence health-seeking behaviors. On the supply side, there are few adequately trained health care and nutrition workers—an estimated 10 skilled health care professionals per 10,000 population and a total of seven nutritionists (World Bank 2018a). Quality improvement opportunities such as accreditation, licensing, training, supportive supervision, and clinical audits are also lacking.

II. COMPONENT 2: SCHOOLING

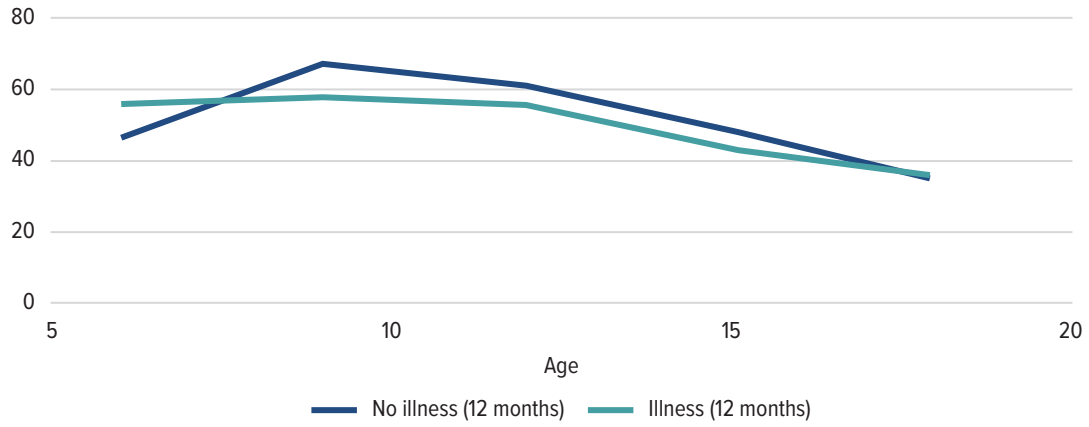
Component 2 of the HCI assesses learning-adjusted years of schooling, combining information on a child's expected years of schooling with harmonized test scores to assess how much students learn relative to the number of years they attend school. Quantity and quality of education is an important element of human capital formation.

20 See Djibouti Country Page (database), United Nations Population Fund, New York (May 7, 2023), https://www.unfpa.org/data/DJ.

School enrollment rates in Djibouti have been increasing at all levels over the last two decades, especially at the primary and lower-secondary levels, but expected years of schooling is still low (9.2 years)—lower than the Middle Eastern and North African (excluding HICs) average of 10.5 years, the LMIC average of 10.4 years, but higher than the LIC average of 7.6 years. Gross enrollment rates increased at all levels from 2005 to 2021: from 44 percent to 96 percent at the primary level, 28 percent to 76 percent at the lower secondary level, and 16 percent to 46 percent at the upper secondary level.[21] Repetition and dropout rates were high, especially for girls (INSTAD 2017).

School enrollment is closely linked with student health. The enrollment rates for 2017 were consistently lower among children who reported ongoing or recent (within 12 months) health problems or illness (Figure 8). The enrollment gap widens as early as age 9. Individuals aged 15 to 18 with health problems or illness who retrospectively reported age of school dropout (11.8), dropped out 1.1 years, earlier on average than those who did not (12.9).

FIGURE 8. School Enrollment According to Health Status



Source: INSTAD 2017

Learning outcomes are low in numeracy and literacy. A lack of learning data makes it difficult to measure the extent of the problem, and design appropriate solutions to address these. Reforms by MENFOP to improve foundational learning and bridge gaps in learning data are showing promising results, albeit from a low base. Results of a recent Early Grade Reading Assessment demonstrate significant improvements in student learning outcomes in reading between baseline and mid-term assessment, making Djibouti one of only a few countries to show an increase in learning during COVID-19. In November 2020, students were assessed as being able to read an average of 17 letters and 5 words of an age-appropriate text. This had increased 1 year later to 40 letters and 20 words. **This progress and momentum for reform efforts (Box 1) must be maintained and, where possible, accelerated. Missed opportunities to acquire basic knowledge in the early years limits accumulation of human capital throughout the lifecycle.** Djibouti's low adult literacy

21 See MENFOP (Ministry of Education and Vocational Training). Annexe Annuaire 2021-2022. Djibouti, Djibouti: MENFOP. http://www.education.gov.dj/index.php?option=com_k2&view=item&id=647:annexe-annuaire-2021-2022&Itemid=1700&lang=en.

rate (60.1 percent for men, 39.5 percent for women) is a significant obstacle to acquisition of skills needed to enter the labor market.

There are geographic variations in capacity constraints in the education system and home learning environment, which makes it difficult to improve learning outcomes. The primary school pupil-to-teacher ratio is 27.7:1,[22] higher than the median ratio of 27:1 for LMICs. All teachers are recorded as qualified, yet the ratio of teachers to school-age children is low. The share of female teachers is also disproportionately low (30 percent) and decreases with education level. Rural-urban inequalities in the physical school infrastructure and enabling environment compound teacher challenges. Rural teachers, for instance, are less likely to receive pedagogical support from coaches. Meanwhile, access to electricity varies according to location, with 100 percent access in Djibouti inner city and suburbs but only 50 percent in other regions. In terms of the home environment, only 7.6 percent of students reported having books and magazines at home—22.6 percent in the inner city and 1.9 percent in other regions (USAID 2022). Preschool attendance, which is discussed in some detail in the following chapter, is low (13.2 percent) but expanding and is a government priority. **Lack of access to an enabling environment that facilitates learning can worsen outcomes for children, in particular those who are already falling behind, such as girls, children with special needs, and children in families with fewer resources to support learning outside of school.**

Gender gaps are wide and increase at each level. In grade 2, girls achieve proficiency in oral reading fluency, reading comprehension, and listening comprehension almost identical to that of boys (USAID 2021), but only 71 percent of girls reach the final grade of primary school, compared with 80 percent of boys. The primary-to-secondary transition rate is similarly low: 75 percent for girls and 77 percent for boys. Girls are at higher risk of not enrolling or of dropping out because of norms and cultural barriers that limit their access to education and other social services, especially at the secondary level. Early marriage, FGM, and pregnancy also affect maternal health and have knock-on intergenerational effects on the health of children.

III. COMPONENT 3: HEALTH

Component 3 is composed of two proxy indicators for health: (i) adult survival rate (percentage of 15-year-olds that will survive to age 60) and (ii) proportion of children who are not stunted (fraction of children under 5 whose height is at least 2 standard deviations below the reference median in the height growth curve for their age). Life expectancy in Djibouti has improved after a sharp decline between 1990 and 2000. In 2020, a person born in Djibouti was expected to live an average of 63 years, compared with 72 years in the Middle East and North Africa (excluding HICs).[23] The adult survival rate in Djibouti is 80 percent, which is on par with the LMIC and Middle Eastern and North African averages (excluding HICs) and higher than the Intergovernmental Authority on Development and LIC (75 percent) averages.

22 See MENFOP (Ministry of Education and Vocational Training). Annuaire Statistique 2021-2022. Djibouti, Djibouti: MENFOP. http://www.education.gov.dj/index.php?option=com_k2&view=item&id=647:annexe-annuaire-2021-2022&Itemid=1700&lang=en.

23 See World Development Indicators (database), World Bank, Washington, DC (May 7, 2023), https://databank.worldbank.org/source/world-development-indicators.

BOX 1: Education Reforms

Over the past two decades, the government has placed education at the center of its development policies. The MENFOP is implementing a comprehensive education reform focused on increasing quality, access, and relevance. These reforms are being introduced as an integrated package to improve learning in several ways:

- **Expanding preschool education to promote school readiness.** Provision of preschool education is being targeted at rural areas and vulnerable children, where the return on investment is highest. The commitment to provide 1 year of preschool to all children by 2030 represents a concerted effort to ensure that all children can benefit from early development of cognitive and socioemotional skills.
- **Revising the curriculum in primary and lower secondary** to make it more focused on life skills, foundational learning, and relevant content.
- **Providing continuous professional development for teachers, pedagogical advisers, and school leaders** to strengthen relevant, interactive teaching practices.
- **Conducting learning assessments to measure progress and identify priority areas to strengthen teaching practices and continuous professional development**. MENFOP is prioritizing reforms to the exam system and focusing on formative assessments complimented by national learning assessments to monitor foundational learning. As part of this, MENFOP is participating in its first international assessment through the Program of Analysis of Education Systems for the Ministers of Education of French-speaking States and Governments (PASEC).
- **Focusing on inclusion and equity, which includes support for refugee education,** including making curriculum and learning materials available in key refugee languages; programs to enhance girls' enrollment and retention in school; and strategies to support education for children with special needs.
- **Focusing on education technology to enhance learning, build digital skills, facilitate online professional development** adapted to the pace of teachers and education leaders, and strengthen distance learning and resilience of the system to respond to crisis and shocks.

These reforms, supported by the Bank and other development partners, are yielding promising results in foundational learning, as reflected in recent learning assessments. Sustaining these reforms across and embedding them into the education system will be critical in building core life skills and laying the foundations for human capital accumulation.

Djibouti faces a double burden of communicable and noncommunicable diseases, with health challenges throughout the lifecycle. The Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS) is a key cause of mortality, and noncommunicable diseases such as ischemic heart disease, stroke, cirrhosis, and diabetes increased significantly between 2009 and 2019. Obesity rates are also on the rise among women (18.3 percent), men (8.6 percent), and children (5.0 percent). Nutrition and health deficiencies accumulated in early childhood are part of the cause of the high levels of noncommunicable disease. As noted previously, demand- and supply-side barriers affect health and nutrition outcomes, including health care infrastructure gaps; limited infectious disease surveillance capacity; lack of qualified health care workers, medicines, and equipment; harmful sociocultural beliefs and practices; and unequal access to good-quality health care services in such areas as sexual and reproductive health. Data from an April 2021 phone survey revealed that, although 96 percent of the 47 percent of urban respondents who indicated that they had needed health care services in the past 30 days were able to access it (World Bank 2021), in underserved regions, demand for services outstrips supply.

The rate of stunting among children under five decreased from 28.0 percent in 2013 to 20.9 percent in 2019 but remains a major concern, affecting an estimated 33,000 children per year. The stunting rate is below the modelled LMIC average of 29.9 percent[24] but is ranked among the top 15 percent in the world. Stunting is the result of a cumulative process that starts in pregnancy and continues in infancy and early childhood and is due to repeated experiences of illness (e.g., diarrhea, malaria, acute respiratory infection) and insufficient dietary intake, which limit a child's growth. The 2019 Standardized Monitoring Assessment for Relief and Transitions survey shows that boys' growth is more likely to be stunted (27.4 percent) than girls' (23.8 percent). This could be linked to biological or social causes (Thurstans et al. 2020). Stunting is associated with cognitive delays and lack of educational attainment. Stunted children are more likely to do poorly in school, limiting their lifelong earning potential and labor force productivity. Conversely, children who are not stunted are 33 percent more likely not to be in poverty as adults, with early nutrition programs increasing adult wages by 5 to 50 percent and school completion by 1 year (Hoddinott et al. 2011).

Poor nutrition outcomes for children are pervasive across the country and are often linked to poor infant and young child feeding practices, diarrheal diseases in childhood, and risk of noncommunicable diseases in adulthood. Undernutrition, which is widespread, accounts for 57 percent of deaths in children under five (World Bank 2022). An estimated 17 percent of children under 5 are underweight (down from 29.6 percent in 2013), with no gender difference (INSTAD 2019). Undernutrition is linked to food insecurity and malnutrition (which are linked to frequent droughts); regular measles and acute diarrhea outbreaks; lack of access to adequate water, sanitation, and hygiene; high food prices; and limited safety net coverage. In children under 5, fever, malaria, cough, cold, and diarrhea are the main health problems. Diarrhea is the leading health condition for children under 1, accounting for more than 33 percent of children with recent health problems. Diarrhea was reported as the main health problem of an estimated 4.4 percent of children under 1.

24 See World Development Indicators (database), World Bank, Washington, DC (May 7, 2023), https://databank.worldbank.org/source/world-development-indicators.

IV. IMPACT OF COVID-19 ON HUMAN CAPITAL IN DJIBOUTI

In Djibouti, as in almost every country in the world, the COVID-19 pandemic affected efforts to build, protect, and employ human capital (Figure 9). A lesson from past pandemics and crises is that the effects of the pandemic are rarely limited to those directly affected but ripple across populations. Human capital takes generations to accumulate, but the pandemic disrupted and reversed human capital outcomes throughout the lifecycle: in childhood, in the workforce, through health disruptions and learning losses, and through intergenerational transmission.

In Djibouti, the most obvious and measurable impact of COVID on human capital has been death and illness. From January 2020 to May 10th, 2023 there were 15,690 confirmed cases of COVID-19 and 189 deaths.[25] The COVID-19 vaccination rate in Djibouti is lower than in the region, with only 30.3 percent of the population having received at least one dose (Johns Hopkins 2022). Vaccine hesitancy, large numbers of unvaccinated health personnel, and the less-than-expected impact of the pandemic in Djibouti have driven this low rate (UNICEF 2021). Early government action to enforce measures to limit the spread of the virus (e.g., physical distancing, rapid testing, tracing, isolation of positive cases) which allowed for rapid control of the epidemic, coupled with population demographic characteristics (i.e., a younger population), led to this less-than-expected impact. Between March 17 and May 16, 2020, for example, **Djibouti performed the most tests per capita in Africa and isolated, treated, and traced the contacts of each positive case (Elhakim et al. 2020).**

The government's proactive measures to promote learning continuity in response to disruptions to schooling limited learning losses and, by extension, increased future potential productivity. In response to school closures from March to August 2020, MENFOP implemented a system of distance learning, with targeted support for refugees. For those unable to access distance learning through television and to address digital learning gaps, school supply kits with basic learning materials were distributed with the support of recent graduates in rural schools. Rapid learning diagnostics to inform remediation, coupled with teacher training and psychosocial programs, complemented this intervention. The response to COVID-19 increased the ability of the education system to build and protect human capital in a crisis context, including through cross-sectoral interactions with other relevant sectors. The school feeding program, for example, provided fresh and dried foods to rural children to address nutritional gaps during the first few months of the pandemic. It is thought that this program increased attendance once schools re-opened and improved child nutrition and household well-being. Against the global trend of lower school enrollment and higher school dropouts linked to COVID-19, Djibouti is among only a few countries that recorded no change in the ability of children to return to and remain in school post-pandemic (World Bank 2022).

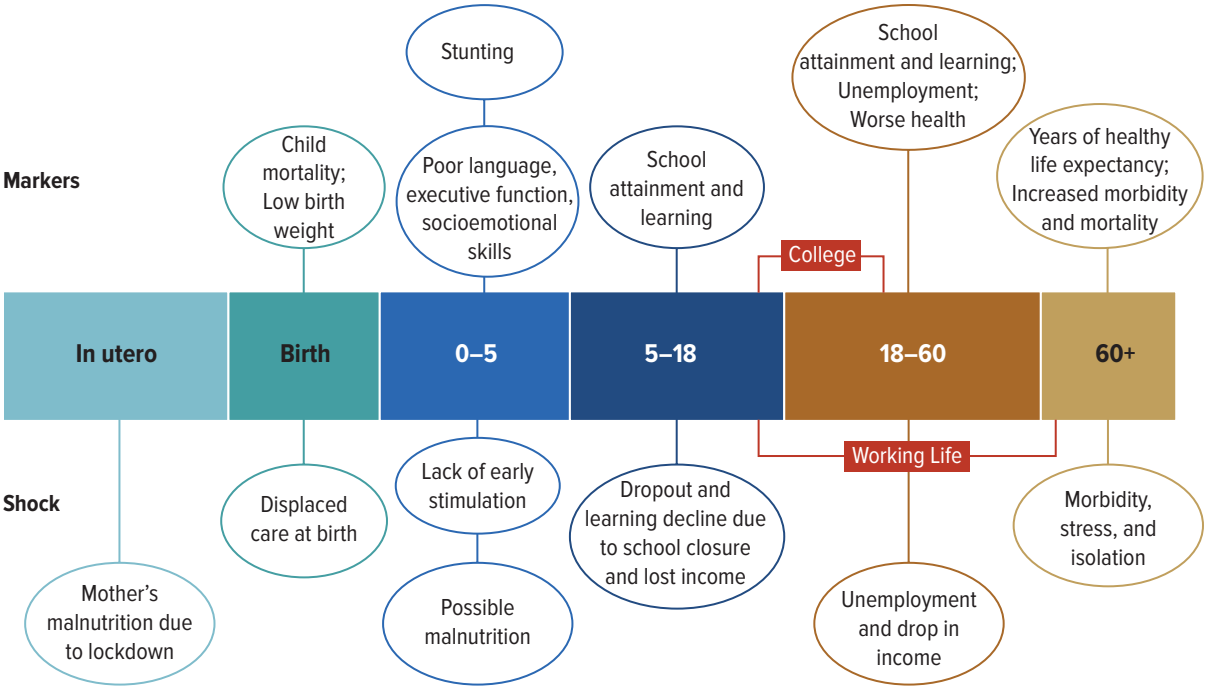
The COVID-19 pandemic disrupted health care service delivery in an already-challenging environment. Globally, it is estimated that disruptions in maternal and child health care services have increased child mortality by 45 percent in 118 low and middle-income countries by reducing access to food and health care (Roberton et al. 2020). In Djibouti, 37 percent of households who needed health care in June 2020 were unable to access it, mostly due to a lack of money

25 See global health emergency dashboard (database), WHO, Geneva. (May 10, 2023), https://covid19.who.int/region/emro/country/dj.

(World Bank 2020b). COVID 19 increased health care system pressures, including chronic shortages of qualified health care workers, medicines, and equipment. Modeling from 2021 predicted that service disruptions in Djibouti left 14,600 children without oral antibiotics for pneumonia; 20,800 children without a diphtheria, tetanus, pertussis vaccine; 4,300 fewer births in health care facilities, and 13,500 fewer women benefiting from family planning (World Bank 2021). Although immunization rates had been declining before the pandemic, it is thought that the pandemic further decreased immunization rates.

The pandemic led to income shocks, particularly among poorer populations, 47 percent of whom work informally. By June 2020, an estimated 19 percent of household breadwinners had lost their jobs, and 42 percent were working less or not at all (World Bank 2020b). As a small country with a limited production base and heavy reliance on trade flows, early restrictions limiting movement and supply chain disruptions of food imports affected livelihoods. Phone surveys from July 2020 show that, shortly after the first restrictions, 79 percent of households had limited access to fresh vegetables (World Bank 2020). Overall, 26 percent of households lacked food during the 30 days before the survey. Although this effect decreased and was almost eliminated by March 2021, global evidence shows that poor nutrition in utero and in the first 1,000 days of life can have long-lasting effects on chronic health and cognitive attainment in adulthood (Almond and Currie 2011). An expansion of assistance to vulnerable households mitigated income disruptions; 154,000 people in Djibouti City and Balbala received food vouchers over 3 months. This evolved into cash transfers to 12,300 households. These interventions became a lifeline for many households. In June 2020, 26 percent of households received public assistance, making it the most common source of income (World Bank 2020b).

FIGURE 9. Human Capital Accumulation Throughout the Lifecycle and Effects of COVID-19



Source: World Bank 2020b

CHAPTER 3: EARLY CHILDHOOD DEVELOPMENT

KEY MESSAGES

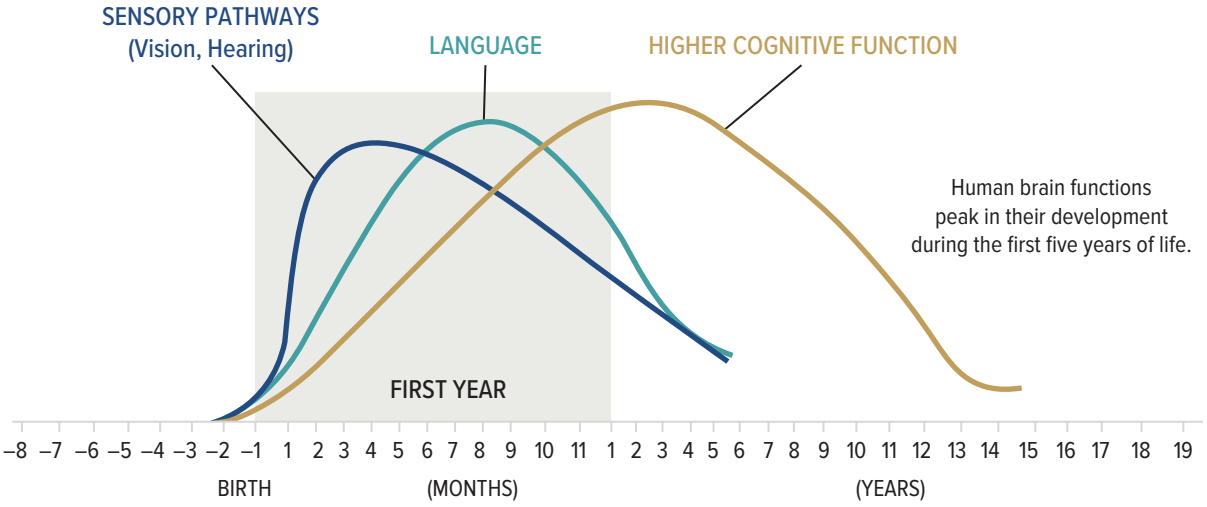
Promoting early childhood development is the best investment Djibouti can make to build its human capital:

- **Despite recent progress on key ECD indicators, ECD outcomes are both low and unevenly distributed,** reflecting weaknesses in terms of access, coverage, and quality of delivery of essential services for families with young children. Constraints include a lack of public funding, weak quality assurance and data systems, and limited capacity of ECD providers.
- **ECD interventions are nascent and expanding in Djibouti.** Current ECD interventions are centered on promoting healthy and well-nourished children. Opportunities to promote social protection, responsive care-giving, and early learning are limited and fragmented. The Government's commitment to expanding one-year preschool education has contributed to a doubling of enrolment between 2015 and 2021, but is still low at 13.2 percent.
- **Djibouti is taking steps to create an enabling policy and legal environment for an effective ECD system, opening an entry point to catalyze improvements in ECD** through: an incremental increase in public financing and public private partnerships; low-cost, high-impact interventions such as early psychosocial stimulation programs; and strengthened institutional and inter-ministerial collaboration.

I. GLOBAL IMPORTANCE OF ECD IN HUMAN CAPITAL ACCUMULATION

ECD is the process of physical, cognitive, linguistic, and socioemotional development during a critical period in human development. Investing in the early years of life gives children a head start and has positive effects throughout the lifecycle, including individual, economic, and social advancement in the short and the long term (World Bank 2018b). Early childhood covers three age periods: "the first 1,000 days (from conception to age 2), the early and preschool years (age 2 to 5 or 6), and school years (age 6 to 8)" (UNICEF 2017). This chapter will focus on the first two periods: from conception to school entry.

FIGURE 10. Human Brain Development



Source: World Bank 2018b

The early years are globally recognized as the key period of rapid development and growth of the brain. This short period offers an opportunity for building learning capacity, psychological resilience, and adaptability (Figure 10). Children who do not have nurturing care opportunities may encounter long-term difficulties in learning and life outcomes (World Bank 2018b).

Investments in ECD are most effective when they target all relevant sectors (e.g. health, nutrition, early learning, security and safety, responsive caregiving) and use all available platforms (Figure 11). Returns on investment in early childhood are high for individuals and societies (World Bank 2020c). Expected impacts of key ECD interventions and expected return on investment are outlined in Table 4.

FIGURE 11. ECD Service Delivery Platforms

Health and nutrition	Education	Community	Protection
• Health centers and clinics. • Nutrition counseling centers • Hospitals	• Preschools • Schools	• Child care centers (health, child protection, and education) • Work place	• Social protection platforms • Home visiting • Social welfare system

Source: UNICEF 2017

Prioritizing ECD for vulnerable and disadvantaged children and families is effective for reducing inequality, breaking the cycle of poverty, and increasing equity and inclusion for children and families, with potential benefits for women's empowerment. Good-quality ECD programs targeting vulnerable groups in the United States, for example, led to higher school attendance and 60 percent higher earnings for women (Rolnick and Grunewald 2007). Expansion of childcare, for example, is correlated with an increase in women's chances of joining the workforce, with the potential to increase family incomes and economic well-being (Devercelli 2020). Globally, childcare

TABLE 4. Impact of Key Early Childhood Development Interventions

Dimension	Intervention	Indicated impact	Return on investment
Nutrition	Access to iodized salt by pregnant women	10-20% higher developmental scores, higher birth weight	Benefit-to-cost ratio as high as 30:1
Health	Immunization	Reduce child morbidity and mortality (depends on many variables)	Benefit-to-cost ratio as high as 20:1
Early learning	Early education programs	0.13 to 2.68 effect size on child development measures	Lifetime earnings gain of US$14-34 billion
Responsive caregiving	Two-year home-based intervention to improve interactions between mothers and stunted children	14% greater college enrollment	37% higher earnings

Sources: Denoba et al. 2014; Gertler et al. 2021

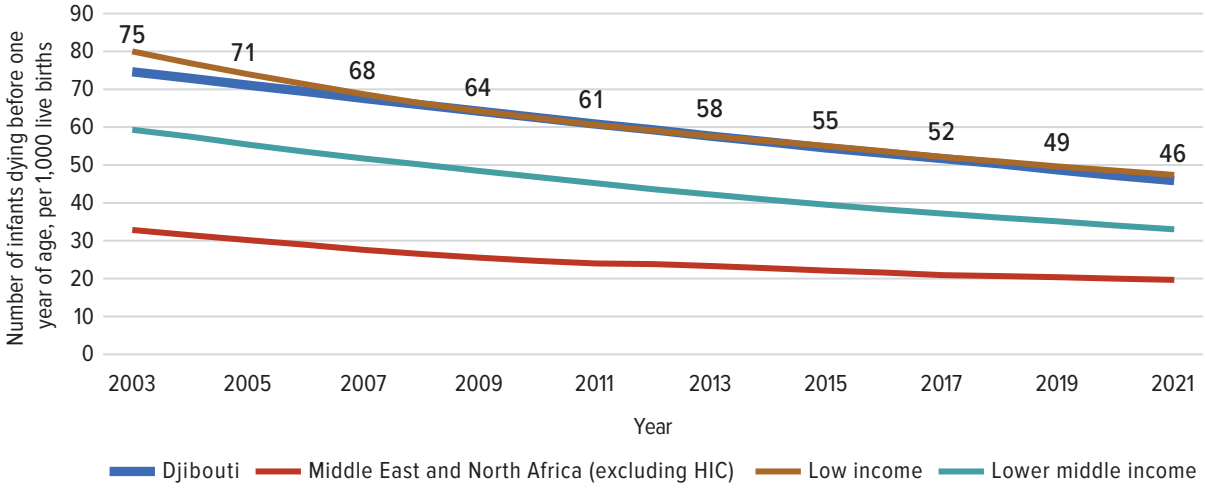
responsibilities fall primarily on women, which hinders their ability to join the formal labor market or pushes them into informal or poorly paid jobs. A positive externality of increasing the availability of affordable, good-quality childcare is that it helps create an enabling environment for women's employment and increases earnings and benefits. In Mexico, for example, 100 percent childcare coverage of children aged 1 to 3 would increase maternal labor force participation by 15 percent, and in Kenya, offering childcare vouchers increased mothers' monthly earnings by 24 percent (Halim, Perova, and Reynolds 2021).

II. STATUS OF ECD IN DJIBOUTI

In Djibouti, ECD programs are emerging, and overall coverage is limited but expanding. This is not just the case in Djibouti, but reflects the situation in the Middle East and North Africa that continues despite increasing investment and reform efforts. Progress is slower than in other regions and starts from a lower base. Despite improvements, Djibouti's infant mortality remains above Middle Eastern and North African and global averages (Figure 12). **An estimated 10 percent of Djibouti's population (~11,690) is under 5.** Djibouti scores 56 percent on the universal health coverage index for reproductive, maternal, newborn, and child health, which is considered an average score. (WHO and World Bank 2021). An estimated 13.2 percent of 5-year-old children had access to preschool in 2021 (MENFOP 2023).

Poor early childhood health, nutrition, and education outcomes in Djibouti reflect structural and sectoral challenges that are similar across sectors. For example, limited public financing, gaps in infrastructure and equipment, inadequate human resources, and limited training access to services. There are 3.2 maternity beds for every 1,000 pregnant women, compared with the World Health Organization recommendation of 10. Insufficient data and information for all sectors make planning and budgeting difficult, limiting the availability of reliable data for effective decision making, monitoring, and evaluation.

FIGURE 12. Infant Mortality ratio



Source: UN Interagency Group for Child Mortality Estimates 2022

Household wealth is a key determinant of ECD outcomes and is linked to disparities in access to and quality of ECD services. This is clearly indicated in Table 5 which shows the status of three key ECD indicators: access to preschool, stunting, and prenatal care, in the richest and poorest quintiles.

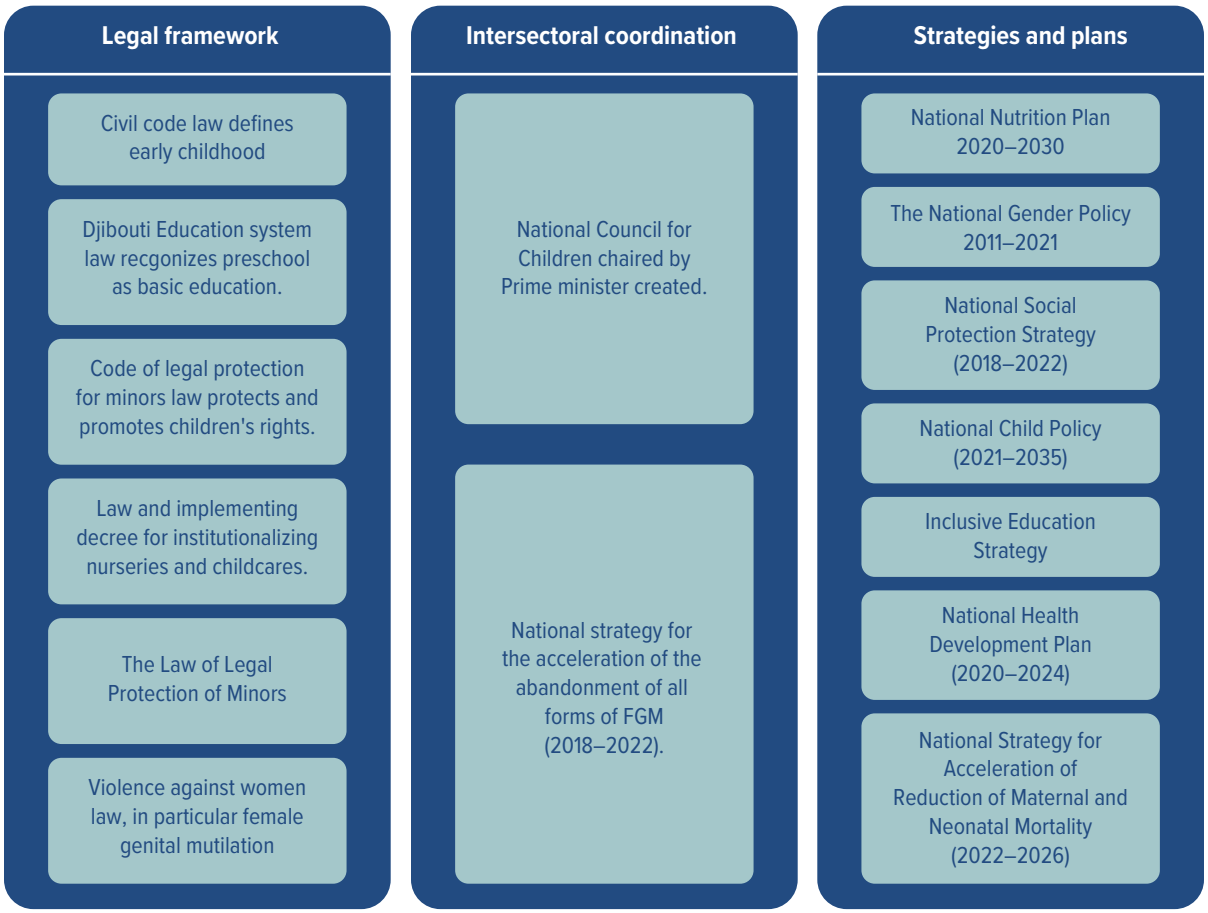
TABLE 5. Access to Services and Outcomes According to Quintile

ECD Indicators	Richest (Q5)	Poorest (Q1)
Access to preschool	21%	2%
Stunted children under 5	23%	41%
Antenatal care (4+ visits)	24%	17%

Source: INSTAD 2019

Djibouti is laying the foundation for an effective ECD system by focusing on three key areas to improve the enabling environment. First, a regulatory framework has been established that defines early childhood as younger than 6, per the law no 31/AN/18/8ème supporting "the institutionalization of nurseries and daycares" (Law). One year of preschool was included as part of the provision of basic education in the education system law in 2000. Second, there are well-defined institutional arrangements with weaknesses in effective implementation. Responsibility for children aged 18 months to 4 years has been assigned to the Ministry of Women and the Family (MWF), with those older than 4 years per the law being the responsibility of MENFOP. The National Council for Children, chaired by the Prime Minister, was created by decree in 2012, modified in 2017, and then updated in 2021 to monitor and intensify the ECD activities. Third, Djibouti has developed a series of strategies for efficient implementation of ECD interventions.

FIGURE 13. Djibouti's Early Childhood Development Enabling Environment



Efforts are being made to increase equity and inclusion, with a focus on refugees. Refugees and asylum seekers account for approximately 3.2 percent of the population (UNHCR 2023); 9.3 percent of these are under 4 (UNICEF 2018). In 2019, MENFOP and the Ministry of Health ratified a memorandum with UNHCR for progressive inclusion of refugees in the national education system and equal access to health care services (UNHCR, 2017). There is also an increasing focus on promoting inclusion of children with special needs across sectors, spearheaded by the President.

Numerous frameworks are available to guide analysis of interventions that affect ECD. Analysis of ECD in this chapter is based on the Nurturing Care for Early Childhood Development framework (Figure 14), which provides a multisectoral outline of the most effective policies and services. This was developed in partnership with the World Bank, World Health Organization, and UNICEF in 2018. **The analysis focuses on interventions that affect ECD in Djibouti using a lifecycle approach.** This chapter focuses on ECD health, nutrition, and education outcomes for which data on key indicators are available.

FIGURE 14. Nurturing Care for Early Childhood Development

Source: WHO, UNICEF, and World Bank 2018

A. Promoting Healthy, Well-Nourished Children: Child and Maternal Health

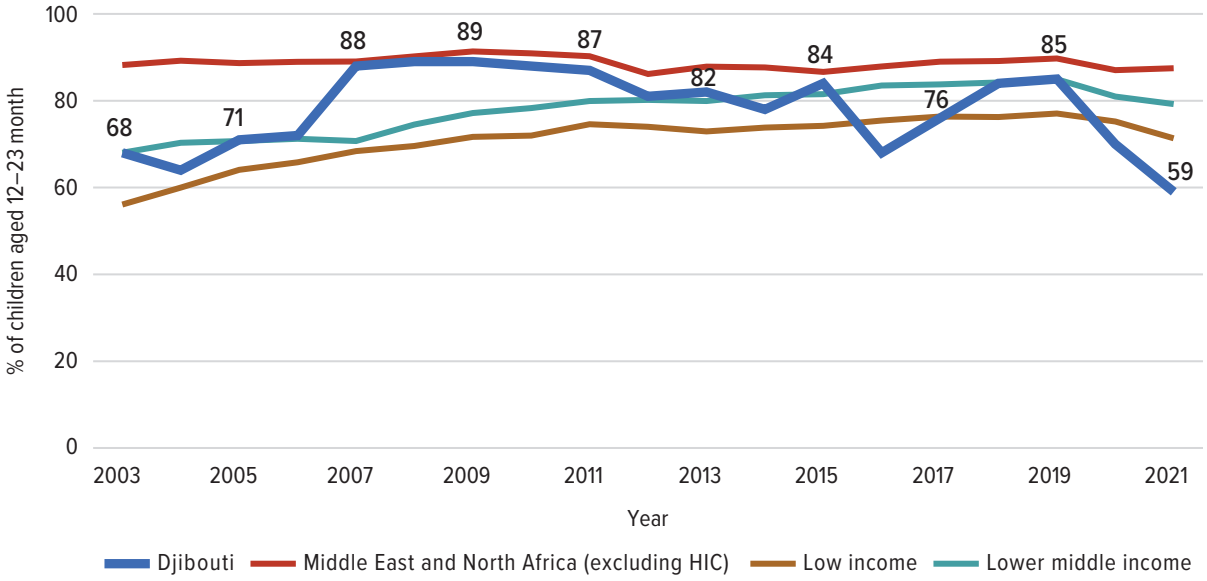
Health care and nutrition interventions are core components during the first 1,000 days of life and are mainly delivered through the health care system. Evidence from low- and middle-income countries suggests that, together with early stimulation and good water and sanitation, these are essential interventions to prevent stunting and support brain development. There have been improvements in the well-being and survival of mothers and newborns, along with noticeable gains in child health. The maternal mortality ratio declined from 262 maternal deaths per 100,000 live births in 2012 to 248 in 2017 (Figure 7), and the neonatal mortality ratio declined from 36.3 neonatal deaths per 1,000 live births in 2012 to 30.4 in 2020.[26] These declines are associated with an increase in deliveries attended by skilled professionals to 87.2 percent from total deliveries (UNICEF 2022). Djibouti has also made marked progress in reducing infant mortality from 59.3 per 1,000 live births in 2012 to 47.2 in 2020 (IGME 2022). At the same time, routine childhood vaccinations have increased slightly with the percentage of children aged 12 to 23 months immunized for diphtheria, tetanus, and pertussis rising from 81 percent in 2012 to 85 percent in 2019.[27] Diarrhea, fever, malaria,

26 UN Interagency Group for Child Mortality Estimates (database), UNICEF, Washington, DC (accessed December 10, 2022), https://databank.worldbank.org/source/world-development-indicators.

27 See Global Health Observatory (database), WHO, Geneva, (accessed November, 24, 2022), https://www.who.int/data/gho/data/indicators/indicator-details/GHO/diphtheria-tetanus-toxoid-and-pertussis-(dtp3)-immunization-coverage-among-1-year-olds-(-)

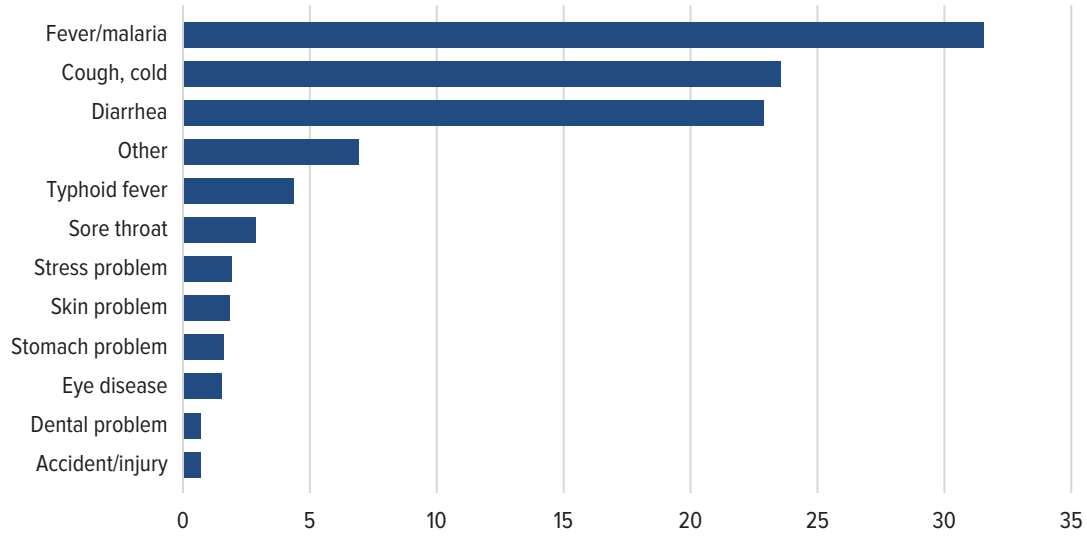
colds, and cough were the main health problems that children under 1 experienced in 2017. The main health problems for children under 5 were fever and malaria (Figure 16). These health problems are indicative of the challenges that remain in improving access and quality of care.

FIGURE 15. Immunization Rates: Diphtheria, Tetanus, and Pertussis



Source: WHO and UNICEF joint estimates 2021

FIGURE 16. Main Health Problems of Children Under 5 in Djibouti



Source: INSTAD 2017

The COVID-19 pandemic disrupted services and affected health outcomes (e.g., access to basic immunizations, with a decline in diphtheria, tetanus, pertussis vaccination coverage from 2019 to 2021) (Figure 15). In 2021, World Bank modeling showed that service disruptions due to the pandemic led to 4,300 fewer births in health care facilities and left 14,600 children without oral antibiotics for pneumonia (World Bank 2021).

Djibouti is acting at the policy level to improve early child and maternal health outcomes A national strategy to reduce maternal and neonatal mortality from 2022 to 2026 was recently launched. Djibouti also launched a health insurance law in 2014 for provision of free health care up to the age of 5, which covers preventive and curative care services as prescribed by a medical specialist. In addition, there are efforts to prioritize access to antenatal care for poor households with children.

Nutrition, especially from conception to age 2, plays a critical role in brain development. Breastfeeding is a key nutrition-specific intervention and is of critical importance because it acts as a natural first vaccine for babies. The government began to regulate the supply of breastmilk substitutes in 2010. A Standardized Monitoring Assessment for Relief and Transitions survey in 2019 indicated that 49.7 percent of women in Djibouti exclusively breastfed their children for up to 6 months; the world average is 48 percent (UNICEF 2021). Only 20 percent of children aged 6 to 24 months receive the minimum dietary diversity. Micronutrient supplementation is low overall, with only 53.3 percent of children aged 1 to 5 receiving vitamin A supplementation (INSTAD 2019). The country is making some progress in fortifying domestic wheat flour with iron, zinc, and folic acid by mandating that 95 percent of wheat flour be fortified.

The nutrition status of children under 5 reflects a continuum of poor nutrition in the critical first 1,000 days. 37 percent of pregnant women were anemic in 2019,[28] which has long-lasting effects on children's health, nutrition, and cognitive outcomes. Table 6 summarizes the main nutrition outcomes of children under 5 in Djibouti, in particular, high levels of stunting and wasting. These can be partly attributed to food insecurity and interrelated factors of reliance on food exports, limited domestic food production, and regular drought, exacerbated by current increases in food prices. Poor feeding practices and knowledge can compound difficulties with access. Other factors include limited provision of nutrition services due to a shortage of specialists, weak coordination of nutritional activities, and low financing of the national nutrition program, which does not have its own budget line and depends on support from development partners (MoH 2018).

28 See Global Health Observatory (database), World Health Organization, Geneva (accessed October 24, 2023), http://www.who.int/gho/en/.

TABLE 6. Nutrition Outcomes in Children Under 5

Outcome	2013	2019
	%	
Stunting	29.7	20.9
Wasting	17.8	10.3
Underweight	29.6	17.0
Overweight	0.8	2.0

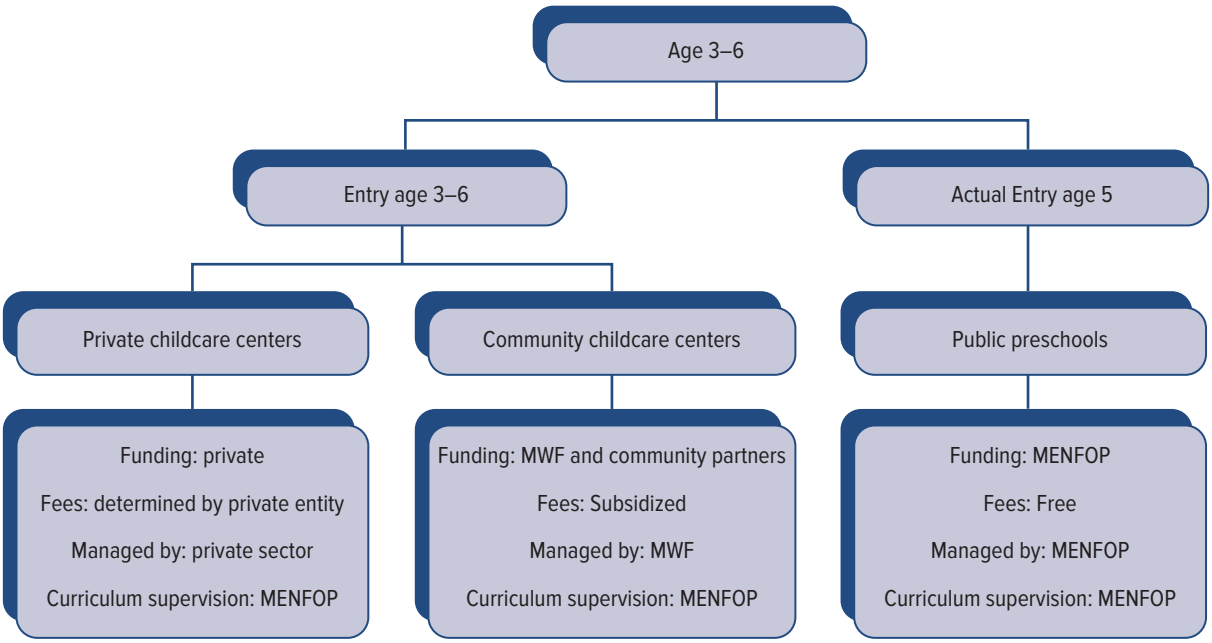
Source: INSTAD 2019

B. Promoting Responsive Caregiving and Opportunities for Early Learning

Early stimulation and interaction with caregivers are essential for young children to develop cognitive and socioemotional skills and reach their full potential. In Djibouti, early stimulation is largely the responsibility of parents and caregivers. There is no evidence of formal programs to support parents and caregivers in promoting early stimulation activities at home and no reliable data on local practices. Several innovative pilots are underway to determine how early learning at home can be adapted to the social and cultural context of Djibouti. This lack of early stimulation for babies and young children could be overcome with cost-effective, high-impact programs that include storytelling, singing, and other interactive activities. Bangladesh adopted a cost-effective method of promoting early stimulation efforts to parents and caregivers during home visits by existing community health workers newly trained in psychosocial skills, at a cost of US$6 per child and an effectiveness of 0.67 on cognition, 0.97 on expressive language, and 0.85 on language (Verguet et al. 2022).

In Djibouti, children aged 18 months to 4 years have some opportunities for early learning through private or community childcare centers or home programs. MWF focuses on children in this age group. The early education system in Djibouti is diagrammatically represented in Figure 17. The private or community sector is the predominant provider of childcare for this age group, which is limited, with fees and limited availability constraining access. At the community level, MWF helps communities develop subsidized community childcare centers, often supported by development partners through in-kind support and capacity building for teachers, targeted to give children from disadvantaged families the opportunity to prepare for learning. In 2020, there were 24 community daycare centers with total enrollment of 720 children (Mingat, Mahdjoub, and Seurat 2020). One of goals of community nurseries is to keep children so that mothers can engage in income-generating activities to meet their needs. There is also provision through religious schools, with no data on size or enrollment. Limited regulation at this level adds to fragmentation and concerns about the quality of programs. Collaboration between the MWF, MENFOP, and UNICEF is underway on harmonization of curriculum and teaching guides of various providers for children under 4 to promote a standardized approach rooted in international good practice.

FIGURE 17. Early Education Mapping, Aged 3 to 6



Note: MENFOP, Ministry of Education and Vocational Training; MWF, Ministry of Women and the Family

There has been a breakthrough in political recognition of the effect of preschool education on school readiness and cognitive development, reflecting global trends in the education sector. The government of Djibouti formally recognized preschool education in the education system law in 2000, which stipulates that "basic education includes preschool and primary education." Article 20 specifies that preschool education be "provided in specialized structures for the benefit of children from the age of 4-5 years." Djibouti opted to expand early learning services across three types of establishments: public, private, and community (Figure 17). Preschool enrollment is optional, reflecting supply-side limitations in service provision. Public provision is for a single year, only for 5-year-olds, with the goal of being mandatory for all 4- and 5-year-old children by 2030 (MENFOP 2022).

Djibouti is committed to establishing and accelerating expansion of a good-quality preschool education system and will need to ensure that financing keeps pace. MENFOP is taking proactive steps to lay the foundations of preschool policies designed to promote quality and regulation so as to institutionalize a standardized approach to provision across different providers. As part of this, a quality standards framework was launched in 2020, the preschool curriculum was revised to promote a more play-based approach, together with a competency framework for preschool teachers, and teacher training is underway. Development of a quality assurance mechanism, classroom observation tools, and introduction of a single identification number for tracking children

starting at preschool age are part of MENFOP's ongoing efforts to strengthen the management information system, help fill data gaps, and inform decision making.

An inclusive approach is important when expanding provision of preschool. Djibouti is prioritizing inclusion of rural areas and disadvantaged groups as part of preschool expansion and taking steps to integrate children with special needs into mainstream schools, complemented by special schools depending on the type and level of the disability. Inclusion extends to refugees, with approximately 365 refugees enrolled in preschools in refugee villages in 2021 (MENFOP 2021).

Although still low, the gross preprimary enrollment rate increased from 10.9% percent in 2019 to 13.2 percent in 2021 (MENFOP 2023). Improvements in quality are progressing incrementally, albeit below the MENFOP 2016 target of 17 percent. Achieving the recently established target of universal preschool by 2030 will require concerted effort to address constraints in public financing balanced against the high initial costs of expansion of infrastructure, equipment, and professional training and lack of professional capacity to increase the cohort of preschool teachers to meet the standard of a 25:1 pupil-to-teacher ratio (MENFOP 2021).

C. Promoting Security, Safety and Social Protection

Birth registration is an essential ECD social protection service, ensuring that the state recognizes children and that they can access services. The national birth registration rate is approximately 92 percent in Djibouti, with the most vulnerable children the least likely to be registered. In 2013, Djibouti began issuing birth certificates to children born to refugees and asylum seekers residing in refugee settlements, whereas refugees living in urban areas must initiate the birth registration process. Not all children born to refugees are registered in Djibouti because of lack of awareness and financial barriers (UNHCR 2017).

Social benefits protect children and households. Mothers in Djibouti are disadvantaged in terms of social protection, with only 5 percent reported as being effectively covered by a social protection mechanism (ILO 2020). Even fewer children, 3.5 percent, were effectively covered by a social protection mechanism in 2020. Despite legal and institutional frameworks to promote social protection and prevent violence against minors, 36 percent of children aged 2 to 5 were reported as violently disciplined, and an estimated 19 percent of 5-year-olds were engaged in child labor (El-Kogali and Krafft 2015). Limited formal psychosocial care provided to victims of violence compounds the situation (UNICEF 2018 The Djiboutian government prioritizes protection against domestic violence and training for the legal system and has created a national child protection platform by Presidential Decree No. 2021-194. Djibouti has also launched a preliminary unified social registry system that has potential to increase investment and promote a more standardized approach to facilitate access and prioritize vulnerable and poor children. See Box 2 for the evolution of social protection sector in Djibouti.

BOX 2: Evolution of the Social Protection Sector

Djibouti's social protection system has evolved significantly over the last 10 years with the introduction of a medium-term **Social Protection Strategy (2017-2022),** a targeted cash and in-kind transfer program, interventions for strengthening delivery systems based on the Social Registry of beneficiaries, a pilot of productive inclusion activities, and a set of well-crafted accompanying measures designed to promote behavior change practices that improve human development outcomes. In addition, community-driven subprojects have been funded in underserved areas to facilitate basic service delivery in health, education, water, and other sectors that communities prioritize. The policy lead for social protection is the Ministry of Social Affairs and Solidarity, which coordinates implementation in collaboration with other government agencies and local governments.

The World Bank has collaborated with the Ministry of Social Affairs and Solidarity across all the above areas. The **Djibouti Integrated Cash Transfer and Human Capital Project** is designed to support an expanded and enhanced social safety net system and access to basic services in targeted poor communities, including for refugees. The **Social Protection Emergency Crisis Response Project** was launched in 2022 to provide safety net transfers to targeted households affected by the multiple crises recently experienced by Djibouti and strengthen adaptive social protection mechanisms to respond to future crises.

The World Bank support for social protection from both projects in Djibouti provides targeted transfers to approximately 22,500 households and 2,200 students and promotes their economic empowerment and human capital development through economic inclusion activities that impart soft skills and provide livelihood grants to poor and vulnerable households to implement income-generating activities. The support also enables implementation of community-level behavior change sessions that constitute the soft conditionality for the conditional cash transfers. These community sessions center on themes related to human capital development, particularly those linked to the early years and the early childhood development agenda. By funding community subprojects that facilitate access to basic service delivery in hard-to-reach areas to promote human development, the Bank is funding 130 community-prioritized subprojects at the local level in sectors including education, health, and water and sanitation and in local markets.

A new medium-term Social Protection Strategy (2023-2027) is being developed and is expected to address the sustainability of safety nets by providing opportunities for dialogue on fiscal space and financing for social protection, among other topics. Its objectives include increasing coverage for the most-vulnerable populations, enhancing efficiency of social protection mechanisms to be adaptive to shocks, encouraging solidarity and social inclusion, strengthening basic social services, and increasing financial inclusion of poor and vulnerable households. Strategic orientation that the strategy will complement current efforts of Bank-supported programs to enhance **adaptive social protection systems,** implement productive inclusion initiatives, and increase the economic empowerment of vulnerable segments of communities by providing livelihood grants that support recovery from current crises and preparedness for future crises. Efforts to advance the social protection agenda in Djibouti will draw from lessons learned from responses to current crises and benefit from donor coordination and alignment.

III. CONSTRAINTS ON ECD

Constraints on provision of and access to adequate health care, nutrition, caregiving, early learning, and safety and protection from danger, pain and emotional stress are mutually reinforcing. Likewise, their negative impacts are cumulative and limit the well-being and cognitive development of children in the critical early years. This section identifies constraints in terms of provision of ECD services and their quality. Constraints cut across the ECD sectors **including (e.g., health, nutrition, early learning, security and safety, responsive caregiving)** and highlight intersectoral bottlenecks affecting efficient, equitable provision and use of limited resources.

ECD budgets are expanding but are inadequate to achieve access to good-quality services. The national budget for human development is largely spent on recurrent expenditures such as salaries, leaving little room for investment to expand services, infrastructure, or quality reforms. The preschool sector illustrates this challenge, with the current MENFOP plan to add approximately 40 preschool classrooms each year contributing to a financing gap of approximately 11 percent (MENFOP 2022). A rising concern is the impact that current fiscal constraints will have on the overall national budget and to what extent allocations to human capital can keep pace with additional costs associated with rising demand, reforms, and demographic trends. A strong focus on efficiency, prioritization, and targeting will be important.

Lack of data and quality assurance mechanisms decreases the efficiency of services provided and consequently ECD outcomes. This is even more pronounced in the health care and nutrition sectors. ECD quality assurance mechanisms have been designed to regulate and standardize the quality of ECD services by different providers (public, private, community). Data on ECD status are incomplete, mainly qualitative, and largely missing on caregiving and learning opportunities for children under 4.

Weaknesses in institutional arrangements lead to fragmentation in delivery and effort, limiting the efficiency and effectiveness of ECD programs and their reach to vulnerable populations. The approach to ECD services is fragmented, and institutional arrangements to encourage cross-sectoral collaboration and a whole-of-government approach are limited.

Human capacity and skills in key ECD areas are limited in quantity and quality. Limited availability of skilled health workers makes it difficult to increase access to and quality of health care and nutrition services. (Djibouti has 10 health workers per 10,000 people; the World Health Organization recommendation is 23.) Meeting the 2030 universal preschool goal will require six times as many preschool teachers as there currently are. Similarly, a lack of awareness of the value of early stimulation and learning-by-play practices limits early socioemotional skill development. This is reflected in lack of data and limited interventions to encourage positive stimulation practices of parents, caregivers, and communities.

IV. RECOMMENDATIONS ON HOW TO EXPAND GOOD-QUALITY ECD

ECD services in Djibouti are emerging and overall coverage is limited and inequitable but expanding. Constraints on provision of and access to adequate health care, nutrition, caregiving, early learning, and safety and protection from danger, pain and emotional stress are mutually reinforcing and can mainly be attributed to lack of public funding, lack of quality assurance systems, limited capacity of ECD personnel, fragmented and limited institutional arrangements, and inequity in access to services.

Growing government commitment to expanding ECD in Djibouti, as reflected in a series of new strategies and targets, creates a window of opportunity to expand ECD provision with a focus on increasing access to good-quality services and equity. This effort can harness cost-effective benefits through synergies derived from cross-sectoral collaboration and programming at the same time as it leverages innovative approaches and partnerships with private, community, and nongovernmental actors. A focus on the most-efficient interventions for each age group would be and effective than diffuse objectives. The recommendations build on actions underway and highlight areas where further effort and investment in the early years can improve the well-being, health, and cognitive development of children. They are presented throughout the lifecycle and address key constraints.

- **Promote incremental increases in public financing for ECD services, boosted by innovative, cost-effective solutions** that harness partnerships with the private sector, communities, parents, and civil society organizations. A review of current ECD plans (national ECD plan, inclusive education strategy, national strategy for reduction of maternal and neonatal mortality, national nutrition program) should be considered to link plans to budgets, leverage opportunities for cross-sectoral collaboration, and expand the role and effectiveness of public-private partnerships.
- **Increase the quality, consistency, and equity of ECD services through better-coordinated data collection and targeting of vulnerable groups to enhance effective use of limited resources.** Data collection systems offer a good starting point for cross-ministerial collaboration to identify vulnerable children and track child development outcomes. For example, digital information systems that MENFOP, MWF, and the Ministry of Social Affairs and Solidarity have developed could be coordinated for data consolidation and more effective use of data to target vulnerable children for access to preschools or provision of school materials. Establishing regulatory standards can improve standardized provision of pre-schools, with good practice emerging from the development of a quality assurance mechanism for preschools.
- **Support the government's commitment to expand preschool provision with quality, complemented by support to early psychosocial stimulation programs for parents, caregivers, and community actors.** The policy foundations of a preschool curriculum, competency framework, and standards are in place. Expansion will require rapidly adding classrooms, equipment, and teachers, with a focus on quality and mobilization of additional resources through public financing and innovative public-private partnerships. Providing psychosocial stimulation will fill a gap as a low cost, high impact intervention to enable parents to enhance communication skills that are effective in improving child development.

- **Strengthen inter-ministerial collaboration to reduce fragmentation in ECD provision and spearhead joint ECD programming, implementation, and monitoring.** With limited resources, this is an area where inter-ministerial collaboration can yield cost savings, better provision, and better ECD outcomes for children who stand to benefit most. Strengthening existing mechanisms such as the National Children's Council, headed by the cabinet, could be a powerful catalyst for multisectoral collaboration and commitment. Morocco provides a good example of prioritizing ECD investment for vulnerable children in rural areas (Box 3).
- **Promote strategic workforce planning to address the rising need for training in early childhood nutrition, health, education, and social protection.** Given the scarcity of training in ECD in Djibouti, an effective approach can be to identify priority skills needed for each sector (e.g., health, nutrition, early learning, security and safety, responsive caregiving) and coordinate training and sharing of skilled personnel where feasible.

BOX 3: Morocco's Commitment to Invest in the Early Years to Build Human Capital

Morocco's commitment to ECD provides a good example of prioritizing human capital in the national development model alongside multisectoral approaches to expand ECD interventions.

Morocco has made significant progress on its human development indicators over the past 30 years, although large inequalities remain in early childhood development (ECD) outcomes, including a high level of stunting in rural areas (20.5 percent) and inequitable access to early childhood education (with 25 percent of children without access to any form of early childhood education, 33 percent in rural areas]. With a Human Capital Index (HCI) of 0.5, Moroccans born today will reach only 50 percent of their productive potential as adults. Morocco's social and economic trajectory is therefore conditioned on its ability to accelerate progress in human capital by making more and better investments in ECD.

The National Initiative for Human Development (INDH) is a flagship program launched in 2005 that places human capital front and center of Morocco's development model. Spearheaded by the King of Morocco, the Ministry of Interior is responsible for its implementation and delivery in close collaboration with decentralized entities. INDH focuses on rural areas, aiming to improve the living conditions of poor and vulnerable groups and increase their inclusion through enhanced economic opportunities, greater access to basic services, and better governance. The initial phases resulted in improvements in basic infrastructure in rural areas but had a modest impact on human capital outcomes. In its current phase, INDH has gone through a deep transformation, from an infrastructure-heavy, disjointed set of interventions to a multisectoral program that seeks to "Invest Softly and Early," including in priority ECD interventions. The two goals for ECD services are 1) to improve maternal and child health and nutrition by supporting the Ministry of Health to reduce maternal, neonatal, and child mortality and improve the status of nutrition, targeting young children in the highest-impact, rural areas, and 2) to promote child cognitive and social development by supporting the Ministry of Education to universalize preprimary education by increasing access to good-quality preschool services in rural and remote areas in partnership with associations and raising stakeholder awareness of the importance of preschool.

(Continued)

BOX 3: Morocco's Commitment to Invest in the Early Years to Build Human Capital *(Continued)*

The features that make INDH particularly well-suited to support accelerated progress on human capital include:

- **Visibility and convening power** through a whole-of-government approach and dedicated mechanisms at the regional and local levels to strengthen coordination and coherence in ECD implementation.
- **Implementation capacity through decentralized bodies,** ensuring close supervision and monitoring at the local level.
- **Strong focus on quality, measurement, and evaluation,** increasing the quality and integration of services, including ECD services, and improving data collection and monitoring ECD outputs and outcomes.
- **Innovation and incubation** increased agility of INDH in piloting and rigorously assessing initiatives and engaging with line ministries to scale up innovation.

CHAPTER 4: ADOLESCENCE AND YOUTH

KEY MESSAGES

The adolescent years offer another opportunity to accumulate and use human capital. Critical life decisions are made in adolescence, so interventions then can have strong returns on investment.

- **Djibouti must invest in empowerment of adolescent girls**, who have untapped productive potential; facilitate their entry into the labor market; and provide them with critical life skills and reproductive health training to delay marriage and child bearing.
- **Djibouti could structure youth organizations to create safe spaces for adolescent girls and boys,** particularly those out of school, where they could be provided vocational training and cognitive and noncognitive skills to improve their human capital and make them more competitive in the labor market.
- **Investing in health education for adolescents could have positive multiplier effects** by reducing maternal and infant mortality. Adolescent girls are at much higher risk of maternal death and complications than older women, and outreach to young adolescents before they make critical life decisions is crucial.

I. ADOLESCENCE: KEY LIFECYCLE TRANSITION PHASE

Adolescence (and the overlapping youth period[29]) is a critical phase of transition during which an individual goes through biological, psychological, and social changes to transition to adulthood (Molyneux 2020). Most people start assuming adult responsibilities such as making decisions regarding participation in the labor force, their civil status, and reproduction between the ages of 15 and 29. Around this age, they typically stop being dependent and become heads of households and parents[30] (ILO 2019).

The transition to adulthood is also a phase of school-to-work transition, with most persons entering the labor market after they finish school. The education and skills acquired during and after finishing school determine the success of the school-to-work transition. The transition

29 Adolescence is defined as age 10 to 19 and youth as age 15 to 24. This chapter covers age 10 to 24, referring to adolescence or youth according to the context.

30 According to International Labor Organization research, in many countries, young adults continue to live in extended family households even after marriage, but generally transition to head of household around the age of 30.

to parenthood that often occurs at this age also affects the transition to the labor market. For instance, young adults with children are the most likely to drop out of school early and not have a job, especially women. In countries where social norms restrict women from participating equally in society and where labor force participation is low for men and women, youth employment policies should consider the degree to which parenthood interferes with timing of labor market entry and think of mitigation policies to ensure parenthood is not a deterrent to long-term labor force participation.

One important determinant of adolescents' ability to use their human capital fully as they transition to adulthood and into their roles as parents and their participation in the labor market is the quality of public services available to them. Poor-quality education limits their ability to develop the skills necessary to participate in the labor market, and poor-quality health services affect overall well-being, particularly for women of childbearing age.

New research on how adolescents respond to different targeted interventions, building on greater awareness of changing lifecycle needs, shows that well-designed interventions to help adolescents at this critical time of their lives can have major positive impacts. In Ethiopia, in the Afar and Somali populations, which are the two largest ethnic groups in Djibouti, with 35 and 60 percent of the population, respectively, several interventions targeted to adolescents, including reducing harmful practices such as FGM, delaying marriage and childbearing, increasing voice and agency by fostering development of adolescent and youth networks through sports, mitigating the negative effects of conflict and fragility on education, and investing in skills and supporting adolescent and youth involvement in income-generating activities, have had positive impacts (Nicola et al. 2019).

This chapter examines key factors regarding adolescent transitions in Djibouti. It describes barriers to accumulating and using human capital in the school-to-work transition and the transition to parenthood; provides an overview of systemic supply-side bottlenecks, particularly related to health and education, that affect these transitions; and proposes potential policy measures in these sectors and social protection policies that could support adolescents in this journey. The chapter considers adolescence (age 12 to 19) and the overlapping youth phase (age 15 to 24), which are marked by family formation, reproductive decisions, and entry into the labor market.

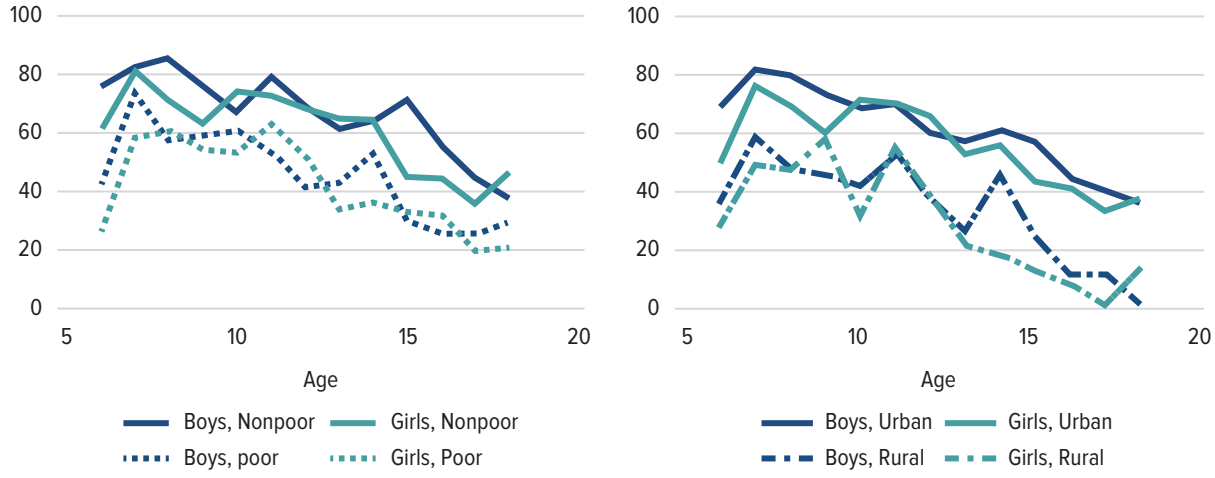
While this chapter utilizes existing data to better understand adolescent and youth transitions, the overall lack of data affects the depth of analysis. Most of the analysis presented in this chapter is based on data from the 2017 Djibouti Household Survey. Several key elements of transitions to the labor market and the status of adolescent girls as they enter reproductive age is not well understood due to data paucity issues. It is difficult to understand what cognitive and noncognitive skills adolescents have acquired as they start transitioning to the labor market. Similarly, for adolescent girls, with the absence of data, it is difficult to understand their health and nutritional status (e.g., underweight, anemic), which will affect the next generation. Thus, what is presented is a very broad snapshot.

II. ADOLESCENT TRANSITIONS

There are stark gender differences in school enrollment patterns and large variations based on poverty and the rural-urban divide. The quantity of education received (expected years of schooling) reflects the rate of retention of children along the education pathway. The 2017 Djibouti Household Survey provides a detailed picture of school enrollment and dropout according to age. Net enrollment rates are relatively high for primary education but decrease progressively throughout lower and upper secondary education (Figure 18). They also mask variation according to poverty and urban-rural status. Nonpoor boys have the highest school enrollment and poor girls the lowest. School enrollment rates are significantly lower for poor children—boys and girls. The urban-rural divide is even larger, with school enrollment rates for rural children being roughly half of that of urban children. The gender gap in school enrollment appears to be less between boys and girls with the same economic status or geographic location.

The gender gap in school enrollment for 2017 was significant at all ages. Girls account for 49 percent of preschool, 46 percent of primary school, and 45 percent of lower secondary school students. Even though their participation rates are lower than boys', girls do better in school, with lower repetition rates at the primary level and slightly better scores on the national primary school examination. Girls have a higher dropout rate in the fifth grade; 38 percent of women and 57 percent of men report having completed at least primary education. It is estimated that nearly 46 percent of girls and 39 percent of boys are out of school; in rural areas, 47 percent of girls and 31 percent of boys at the lower secondary level are out of school (Figure 18).

FIGURE 18. Enrollment Rate According to Age, Sex, Poverty, and Urban-Rural Location



Source: INSTAD 2017

Poor academic performance and lack of interest are the leading reasons for dropout at all levels of school. Only for the cohort of students aged 16 to 19 does "desired education level achieved" become an important reason for dropout, although it is still substantially less common than the other two reasons. For girls, the top two reasons for dropping out are lack of interest and parents'

refusal to send them to school because they are girls. Renewed, targeted efforts are needed to reach gender parity, especially in lower secondary school.

Education is linked to social mobility, but intergenerational changes in education level are not large, especially for women. At the population level, there is evidence of positive education-linked economic and social mobility. Approximately 36 percent of the population aged 25 and older has attained more education than their parents' generation, and approximately 60 percent has attained the same 'level. There is considerable variation across population subgroups, with nonpoor men having the greatest social mobility and poor women the least.

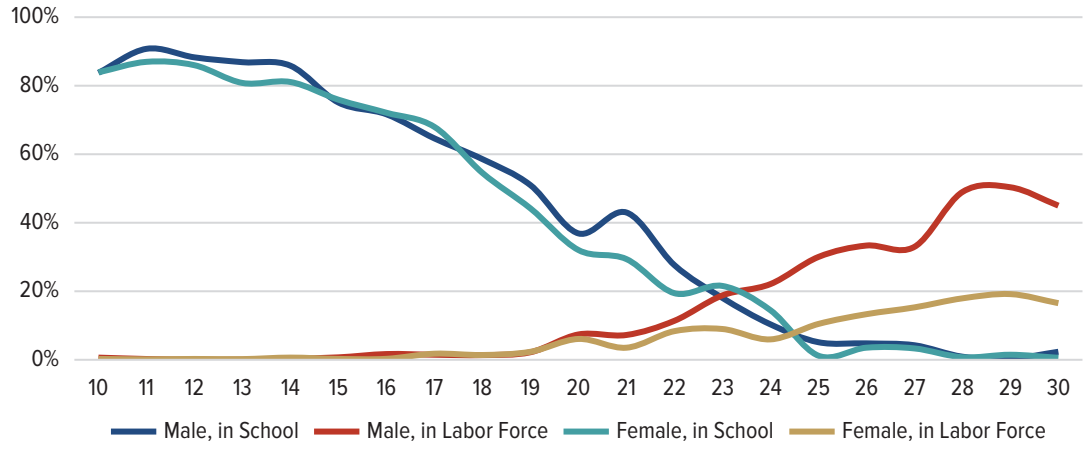
As school enrollment drops, participation in the labor market increases, particularly for boys, although at lower rates than school dropout occurs. Although school dropout begins to accelerate around age 13, entry into the labor market occurs closer to age 18 to 19 and at lower rates than school dropout (Figure 19), indicating that many adolescents and youth are not employed or in school or training, including discouraged youth and youth outside the labor force for various reasons including household responsibilities and inability to find employment because of structural problems in the labor market and lack of adequate skills. For example, only 8 percent of male students of secondary education age are enrolled in vocational programs, and just 10 percent of young men around the age of 20 and about 30 percent of 25-year-olds report participation in the labor force; age 25 to 54 is the age of peak labor force participation and activity.

For students who remain in school, academic success and indirect measures of learning decline sharply. At the end of the second and fifth grades, students take the Terminal Integration Objectives exam. To move on to secondary school, students must pass their fifth-year exam; 27 percent repeat fifth grade. Similarly, ninth-grade students must pass an exam to obtain the Basic Education Certificate; 30 percent repeat ninth grade. These exams are structural barriers to progression through the educational system, which is also undermined by the low capacities of lower and upper secondary schools themselves. An analysis of the results of the ninth-grade exam conducted in 2015 showed a large disparity in passing rates between public (58 percent) and private (79 percent) schools. Overall repetition rates in the primary and lower secondary are higher for boys than for girls. In terms of learning outcomes, although there was a slight improvement from the 2017 Early Grade Mathematics Assessment, results from the 2018 assessment showed that, on average, second graders were able to solve only 16 percent of math problems and that almost 60 percent received a score of 0 (Global Partnership for Education 2019). This poor math performance is a major concern.

Labor market outcomes for youth aged 15 to 24 are poor and indicate underuse of human capital; substantial improvement is not seen with age. The employment-to-population ratio in 2020 was 2.5 percent for youth aged 15 to 24 and 22.5 percent for the total population aged 15 and older. Gender gaps in the employment-to-population ratio were 1.3 percent for youth aged 15 to 24 and 22.9 percent for the total population because women's participation in the labor force stagnates at approximately 20 to 25 percent across older age groups; men continue to enter the labor market,

albeit at low rates, whereas women do not. Unemployment rates for age 15 to 25 are 80.3 percent for men and 82.5 percent for women.

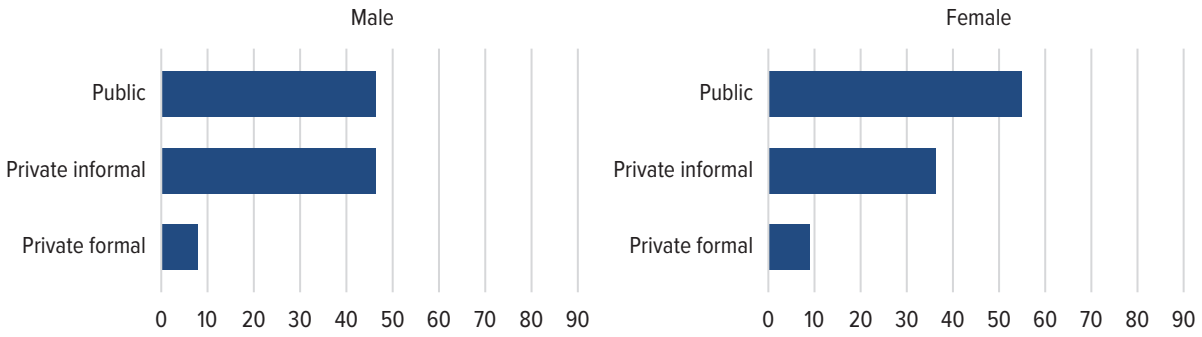
FIGURE 19. School and Labor Force Participation According to Age and Sex



Source: INSTAD 2017

The labor market is highly segmented, and the type of employment that youth self-select into is an important determinant of use of human capital and a potential driver of employment. There are three sectors in Djibouti: the formal private sector, which employs approximately 10 percent of the workforce; the bloated public sector, which employs approximately 43 percent; and the informal private sector, which employs approximately 47 percent (Figure 20). The under-30 work force is also largely employed in the public sector and in informal jobs in the private sector (36 percent of young men, 46 percent of young women in informal jobs).

FIGURE 20. Employment According to Sector and Sex



Source: INSTAD 2017
Note: Percentages are of total work force.

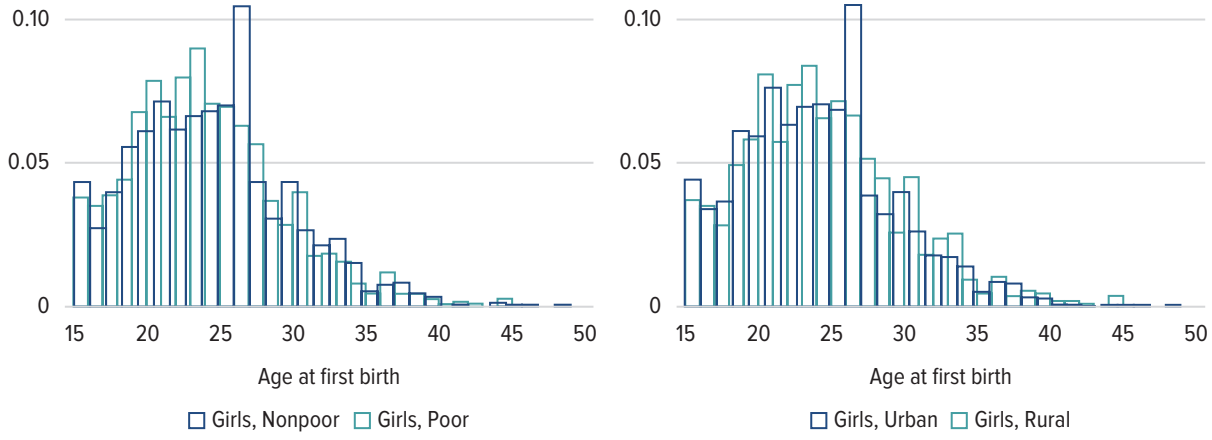
III. TRANSITIONS TO MARRIAGE AND REPRODUCTION

As school enrollment drops, the rate of marriage increases markedly for girls but not for boys. In poor households, women are likely to marry before age 20. Most ever-married women had their first marriage before the age of 22, and 5 percent of women aged 20 to 24 are married by the age of 18, although this is much lower than in neighboring Ethiopia (40.3 percent). Young women who drop out of school are likely to take up the predominant role of caregiving within the family and never enter the labor force. Most working-age women have young children in their households and only 52.2 percent have a nursery school within 5 kilometers (INSTAD 2017).

Girls are more vulnerable than boys during adolescence, particularly to early marriage, having children, dropping out of school, and not entering the formal workforce. Girls face more restrictions on mobility and autonomy as they mature, but when given the opportunity, girls often outperform boys. Girls who give birth before adulthood have greater health risks and face further social restrictions and adverse economic impacts for the rest of their lives. Pregnancy and childbirth are the leading cause of death among girls aged 15 to 19. They also face higher health risks than mothers aged 20 to 24, including complications from childbirth, which contribute to maternal mortality, low birthweight, and severe neonatal problems. Teenage mothers are less likely to continue going to school, which prevents them from realizing their full potential and finding better economic opportunities and often results in lower lifetime earnings.

Teenage girls from poor families are the main source of the gender gap in early marriage. The percentage of women aged 25 to 39 at the time of survey who were first married before 18, 20, or 25 has decreased, although marriage before 18 remains prevalent (>15 percent). Average age of first marriage is significantly lower for women aged 20 to 50 than for men of the same age. The minimum legal age of marriage is 18, but the law permits child marriage before age 18, with no minimum age, if a guardian or judge authorizes it. Setting a minimum marriage age without exceptions, could help reduce early marriage rates.

FIGURE 21. Age at First Birth According to Wealth and Urban-Rural Location



Source: INSTAD 2017

The adolescent fertility rate[31] **was 23 per 1,000 adolescent girls in 2020 and age at first child did not differ much according to poverty status,** although rural women had their first child at a younger age on average. The unintended pregnancy rate is 50 per 1,000 women aged 15 to 49, and 51.4 percent of women aged 15 to 49 reported being satisfied with modern methods of contraception in 2022. Djibouti is one of 23 countries that lack a policy or law to protect pregnant girls' and adolescent mothers' right to education, based on research by Human Rights Watch in all African Union member countries. The country's Education Action Plan outlines strategies to reduce gender disparities in education, including investment in girl-friendly spaces and community sensitization campaigns, but it does not specify how the government intends to practically address the challenges faced by students who are pregnant, are adolescent mothers, or are married.

IV. EFFECT OF POOR MATERNAL HEALTH ON ADOLESCENT GIRLS

Most adolescents have limited recourse to justice, essential health, education, and social protection services. Often this exclusion is rooted in poverty and lack of opportunities, as well as inadequate policies, laws, and budgets to respond to their rights and needs. Social norms also work against their participation and perpetuate traditional gender roles. For instance, the high prevalence of FGM affects women's health and ability to participate fully in society (Box 4). Only a fraction of adolescents whose rights have been violated seek redress or have access to justice. Of these, few, if any, receive the justice they deserve.

Maternal and neonatal disorders account for most disability-adjusted life years for children under 5 and women of all ages (Table 7). Top causes of death for male adolescents are road injury, HIV/AIDS, tuberculosis, diarrheal diseases, and lower respiratory infections; the top cause for female adolescents is maternal health-related (Table 7). Although HIV/AIDS has been curtailed, mother-to-child HIV transmission remains a problem, and the burden of HIV/AIDS as a risk factor during pregnancy remains high.

BOX 4: Impact of Female Genital Mutilation on Lives of Girls and Women

Female genital mutilation (FGM) involves partial or total removal of external female genitalia or other injury to the female genital organs for nonmedical reasons. More than 200 million girls and women alive today have been cut in 30 countries in Africa, the Middle East, and Asia, where FGM is concentrated. In the Middle East and North Africa, Djibouti and Egypt have the highest prevalence of FGM. In 2006, 93.1 percent of women aged 15 to 49 in Djibouti had been genitally mutilated.

FGM is an extreme form of gender discrimination. It is recognized internationally as a violation of the human rights of girls and women, including the right to health, security, and physical integrity

(Continued)

31 Birth rate is total number of births per 1,000 individuals in a population. Fertility rate is total number of births per 1,000 women of reproductive age in a population. Adolescent fertility rate is total number of births per 1,000 girls aged 15 to 19.

BOX 4: Impact of Female Genital Mutilation on Lives of Girls and Women *(Continued)*

and to be free from torture and cruel, inhuman, or degrading treatment. It is also an extreme form of gender-based violence, violence against women and girls, sexual assault, and child abuse.

Gender-based violence is the main type of violence affecting women and girls in Djibouti, ahead of early marriages and other types of violence, and one of the main obstacles to gender equality and women's empowerment. The World Health Organization categorizes the most prevalent form of FGM imposed on Djiboutian women and girls as Type 3 FGM, also known as infibulation—excising the clitoris and labia and stitching together the edges of the vulva to prevent sexual intercourse.

FGM has short- and long-term consequences for women's and girls' health and can lead to death. The short-term consequences of FGM are related to the procedure itself. There may be injury of the adjacent organs, and subsequent hemorrhaging may lead to shock or death. Chronic infections, intermittent bleeding, abscesses, and small tumors of the nerve, which can result from clitoridectomy and excision, may cause disability, discomfort, and extreme pain. Infibulations may have long-term effects such as chronic urinary tract infection, infertility, excessive scarring of tissue, and desmoid cysts. FGM can also affect a woman's mental health long after the procedure. Women and girls who have been subjected to FGM often show signs of psychological trauma, painful and traumatic intercourse, anxiety, isolation, somatization, depression, posttraumatic stress, and other mood disorders.

The physical and psychological impact of FGM can prevent girls from attending or succeeding in school. In the short term, after the ceremony, girls must heal and thus miss school, and in the long term, FGM-related health problems, pain, and distress can cause girls to be less focused in or absent from school and, consequently, to perform poorly and drop out.

Because her parents' level of education influences a girl's opportunity to access the labor market, the effect of FGM on her mother's level of education can limit a girl who has not been subjected to FGM or who has benefited from a level of education that allows her to compete in the labor market. Given the effects of circumstances at birth and individual characteristics regarding one's opportunity to access the labor market, it would take at least three generations of uncut mothers to mitigate the consequences of FGM on a girl's opportunity to access the labor market. Girls' education appears to be a protective factor against FGM, so girls dropping out of school may increase the risk of FGM of current and future generations. The two-way link between FGM and education—and in turn, labor force participation—can be mutually reinforcing.

The effects of FGM on a women's health limit her productivity and the types of employment she can hold. A World Bank–sponsored report attributed some of the economic costs of FGM to loss of productive labor through mortality and morbidity as direct and indirect consequences of the practice, and a decline in productivity (and income) due to FGM-related disability has been linked to the long-term health complications of the practice.

(Continued)

BOX 4: Impact of Female Genital Mutilation on Lives of Girls and Women *(Continued)*

A World Health Organization study found that women who have undergone FGM are at higher risk of dangerous and complicated childbirth. With Type 3 FGM, the risk of hemorrhage after birth is 70 percent higher, of cesarean section is 30 percent higher, and of extended hospital stay is 98 percent higher than for those who have not undergone any mutilation. FGM is associated with higher risk of obstetric fistula because FGM is also correlated with higher occurrence of early pregnancies and because the practice itself severely damages the genital organs.

In Djibouti, medicalization of FGM has become an important factor; UNICEF has reported that health personnel perform approximately 20 percent of FGM procedures in the country, even though it is against the medical code of ethics. Cross-border FGM is another increasingly troubling trend that should be paid attention to.

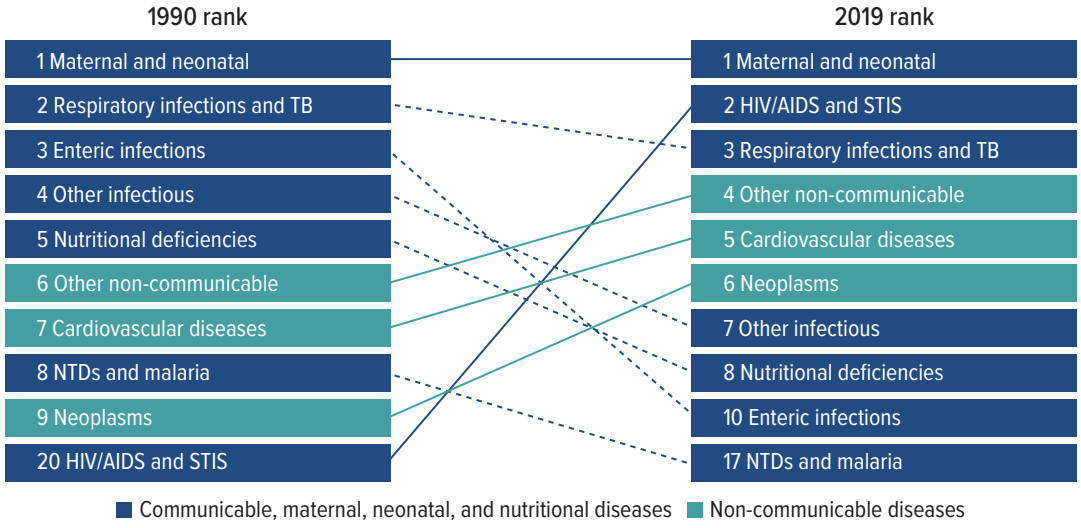
The Ministry of Women and the Family, the Ministry of Social Affairs and Solidarity, and the Ministry of Health are responsible for eradication of FGM. The National Association of Djiboutian Women is the leading community organization and represents the Inter-African Committee Against Traditional Practices in Djibouti. The United Nations Population Fund–United Nations Children's Fund Joint Programme for the Elimination of FGM has been active in Djibouti since 2008 and is the largest initiative specifically addressing FGM in the world. The National Steering Committee for the Abandonment of All Forms of Excision has been coordinating work to end FGM in Djibouti since 2009, and the government launched a National Strategy for Abandonment of All Forms of Excision in 2016.

TABLE 7. Causes of Disability-Adjusted Life Years of Children Under 5

Cause	%
Maternal and neonatal disorders	51
Respiratory infections and tuberculosis	14
Other noncommunicable diseases	11
Other infectious diseases	7
Enteric infections	5
Nutritional deficiencies	4
Human immunodeficiency virus, acquired immunodeficiency syndrome, and sexually transmitted infections	3
Unintentional injuries	1
Neoplasms	1

Source: International Health Metrics and Evaluation (IHME)

FIGURE 22. Top Causes of Disability-Adjusted Life Years for Women and Girls



Source: International Health Metrics and Evaluation (IHME)

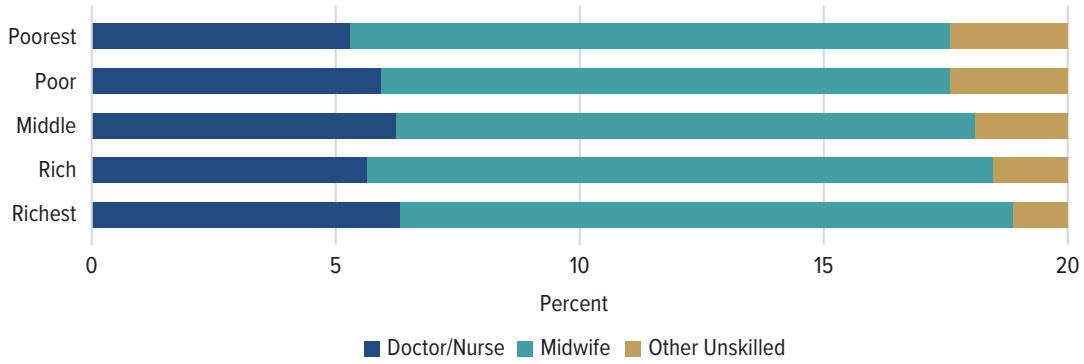
Poor health infrastructure and lack of services in part explain poor maternal health outcomes. There are severe health infrastructure gaps (especially outside of Djibouti City), and the organization of services is suboptimal. Nationally, there are 3.2 maternity beds for every 1,000 pregnant women, well below the World Health Organization recommended 10. There are 10.7 hospital beds per 10,000 inhabitants, of which only 51 percent are functional. Facilities do not have adequate basic supplies for surgeries.

Unmet demand for maternal health services is particularly high in rural regions, with most midwives, who are the main health providers assisting deliveries, concentrated in Djibouti City. Nationally, midwives attend more than 80 percent of births (UNICEF 2022). People have the most challenges accessing care in Tadjourah because travel time to the nearest hospital is long. This is particularly challenging for women who need comprehensive emergency obstetric and newborn care services, which in Djibouti are available only at tertiary-level health facilities, usually large hospitals, whereas local health facilities often do not have even basic emergency obstetric and newborn care services. In Dorra, the most populated city in Tadjoura, close to 15,000 people must travel more than 60 minutes to reach a hospital, compared with 200 people in Djibouti City. Women and children thus lack access to good-quality care at critical stages of life.

Access to health services is strongly associated with fewer health problems, and access is not homogenous across rural and urban areas. The reported prevalence of health problems is lower when the distance to the closest community health center is shorter, whether in rural or urban areas, and more health problems are reported in rural areas, indicating the inadequacy of health services available and the poorer quality of services in rural than urban areas (Figure 24). This is because distance or travel time to the closest facility is not necessarily indicative of access in Djibouti. This is partly because the basic package of services offered at health facilities is not homogenous across the different regions and across rural-urban divides, especially for RMNCAH

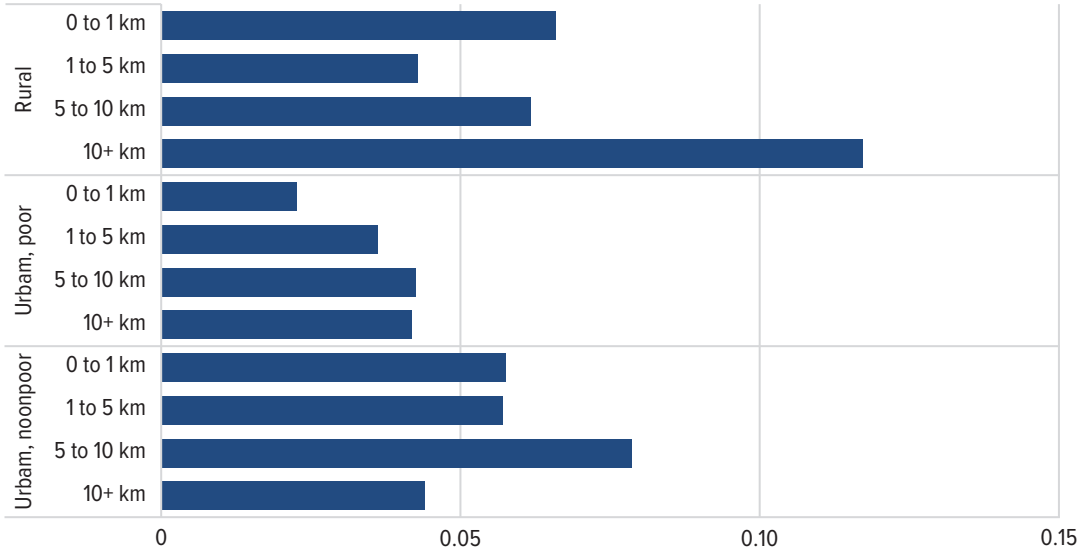
services, and because higher level care is usually only available at hospitals even if health facilities are noted as functional.

FIGURE 23. Provision of Childbirth Care According to Wealth Quintile



Source: Djibouti Nutrition Survey 2014

FIGURE 24. Prevalence of Health Problems According to Wealth, Urban-Rural Location, and Distance to Nearest Health Care Center



Source: INSTAD 2017

Although there is an implicit understanding of challenges related to quality of health care services, more complete and meaningful measurement has not been possible because of lack of data availability and data collection and management capacity. Because Djibouti does not collect periodic data using standardized, commonly used surveys such as the Service Availability and Readiness Assessment, Service Delivery Indicators, or Demographic and Health Survey, it is difficult to obtain an accurate understanding of population-level outcomes and challenges related to service delivery. Investing in data at all levels will be critical for Djibouti to improve service delivery and ultimately population-level outcomes through better measurement and monitoring.

BOX 5: Sahel Women's Empowerment and Demographic Dividend Project

Several countries in the Sahel subregion of Africa share many demographic characteristics and structural challenges with Djibouti. Exposure to multiple stresses such as food insecurity, fragility, repeated droughts, flooding, and global crises such as food and oil price crises characterizes the area. Although the region has had high economic growth, there is considerable inequality, similar to Djibouti.

Adolescents throughout the region, particularly girls and young women, face many of the same challenges as in Djibouti: high fertility rate, high maternal mortality, early marriage and childbearing, and high prevalence of female genital mutilation (FGM). Adolescent girls in particular bear extreme and disproportionate health consequences of early marriage and childbearing, exacerbated by FGM. An adolescent's chances of dying from pregnancy-related complications are twice as high as those of a woman who waits until her 20s to begin childbearing. Fistula is also more common in younger women, who are more likely to have a weak, stunted, or underdeveloped pelvis or as a result of female circumcision. Early marriage and childbearing can also limit young women's educational and economic opportunities. Women are subject to different forms of gender-based violence and in general have low levels of economic empowerment and agency.

A country's capacity to build human capital depends to a large extent on its ability to reach and increase the potential of its youth, particularly women, because they face more challenges than young men. In 10 countries in the Sahel region, approximately 80 percent of adolescent girls are at risk of child marriage, teenage pregnancy, and early school dropout.

To address these challenges, the World Bank and other partners financed the Sahel Women's Empowerment and Demographic Dividend project, a multipronged, multicounty project designed to increase women's autonomy and agency, keep girls in school, expand economic opportunities for adolescent girls and young women, and prevent gender-based violence by addressing its root causes. The project operates in Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Mauritania, and Niger.

The project has combined demand- and supply side interventions, specifically in the health sector, and yielded good results:

- Between 2015 and 2020, 160,000 girls received scholarships or other support to go to school. In Mali's project areas, dropout rates among girls fell from 53 percent in 2016 to 2 percent in 2019. In Côte d'Ivoire, 82 percent of beneficiaries receiving one school meal per day saw improvements in their grades, and 85 percent graduated on time, enabling them to move to the next level.
- More than 3,400 safe spaces were established where approximately 120,000 out-of-school girls are taught life skills and provided with essential sexual and reproductive health knowledge and, in some cases, literacy and numeracy.
- More than 20,000 young women underwent training in nontraditional professions, increasing their earning potential. In Mali, economic empowerment activities led to women earning more

(Continued)

BOX 5: Sahel Women's Empowerment and Demographic Dividend Project *(Continued)*

(from about US$5 per month in 2014 to US$110 in 2020). In Chad, thousands of adolescents and women took up nontraditional, higher-paid jobs such as installation of solar panels.

- Between 2015 and 2020, social and behavior change campaigns have reached more than 4 million people through local radio stations, religious leaders, and women's associations on topics related to positive gender roles, girls' schooling, child marriage, teenage pregnancy, and FGM.
- Between 2015 and 2020, more than 6,400 religious leaders engaged in community dialogues in favor of girls' secondary education, delayed childbearing, birth spacing, and family planning and against gender-based violence in rural communities.
- More than 24,000 husbands and future husbands were enrolled in "(future) husband schools" between 2015 and 2020, where the curriculum helped increase male participation in household tasks and healthy sexual and reproductive health behaviors and reduce violence against women and children.

V. POLICY RECOMMENDATIONS

Young people are key actors in building societies. As adults, they become the driving force for economic development. To achieve the demographic dividend (acceleration in labor-led growth) in Djibouti, the government must be able to respond to the needs of youth, offer professional training opportunities, and better prepare youth for the labor market and their productive years. Investing in job-creating policies, increasing economic productivity even in the informal sector, and human capital like education and health are essential to support youth in this process and become more economically independent. Young people, when properly trained and in good health, can achieve their potential and have a transformational impact on the living conditions of their households and communities. Empowering adolescent girls and women can reduce fertility rates, delay childbirth, and safeguard women's health. Increasing access to and use of reproductive health services, guaranteeing education for girls, and helping women acquire practical skills are key to managing fertility and reducing gender inequality.

Specific recommendations include:

- Generate demand for RMNCAH-N services by promoting social and behavioral change and empowerment of women and adolescent girls. This would support supply-side investments that the government is undertaking to improve delivery of health services, particularly RMNCAH-N services.
- Support rural midwife training programs and improve the quality and increase the number of health care professionals and other personnel involved in RMNCAH-N services.
- Reinforce advocacy and dialogue at high levels and promote policy development and project implementation.

- Improve youth labor market outcomes through targeted policies that address high unemployment and underemployment among youth and give them access to quality jobs. This should include short-term measures to address trends of high youth unemployment and underemployment and long-term measures facilitating acquisition of relevant skills and removing barriers to employment in good-quality jobs in the formal economy.
- Provide good-quality apprenticeships and internships to help youth make a smooth transition from school to work.
- Provide income support to unemployed youth who do not have sufficient capital or finances to prevent them from falling into poverty.

CHAPTER 5: THE WORKING YEARS: LABOR MARKETS IN DJIBOUTI

KEY MESSAGES

- **Wages in Djibouti are high, and the primary employer for people with formal education above the secondary school level is the public sector, which pays a sizeable premium for this level of education and above. Employment in the private sector is mostly in the informal sector.**
- **Given the small size of the economy and the usual undiversified nature of a small economy, product markets are not generating enough jobs to absorb youth into employment. Rigidities in the labor market such as regulations that increase the difficulty of hiring workers could also be limiting employment.**
- **On the supply side, improvements in the technical and vocational education and training system could help prepare workers for jobs in emerging sectors in or outside Djibouti.**

The primary function of markets is to bring supply and demand into sync and, through their interactions, arrive at a market-clearing equilibrium. As such, labor markets bring owners of human and physical capital together and create human capital utilization outcomes in the form of an equilibrium price and quantity, i.e. a certain amount of employment and a market-clearing wage associated with it. To understand the nature of labor markets in Djibouti, we describe these two outcomes and then work backward to uncover the factors at play in arriving at these outcomes.

Use of human capital in Djibouti is remarkably low, especially for women. Adjusted for utilization, the HCI drops from 0.41 to a low of 0.09, and for women it drops even lower—to 0.05,[32] which indicates that a child born in Djibouti in 2022 can expect to use only 9 percent of their human capital potential if current trends continue.

I. EMPLOYMENT OUTCOMES

Djibouti is a young country, with more than 75 percent of the population being younger than 35. Only about 45 percent of the working-age population (aged 15 and older) participates in the labor market (IMF 2019b). Economic inactivity among youth is high, with only about one-third of the population aged 15 to 24 participating in the labor force. Perhaps the most troubling statistics

32 Utilization-adjusted HCI=employment rate of working-age population (15-65) × HCI.
Utilization-adjusted HCI_{women}=employment rate of working-age women (15-65) × HCI.

regarding youth are that nearly 22 percent are unemployed and almost 28 percent are not employed or in school or training.[33] These trends are similar to those in other Middle Eastern and North African countries, with significant differences in labor force participation according to gender and high levels of youth inactivity, unemployment, and underemployment (Figure 25).

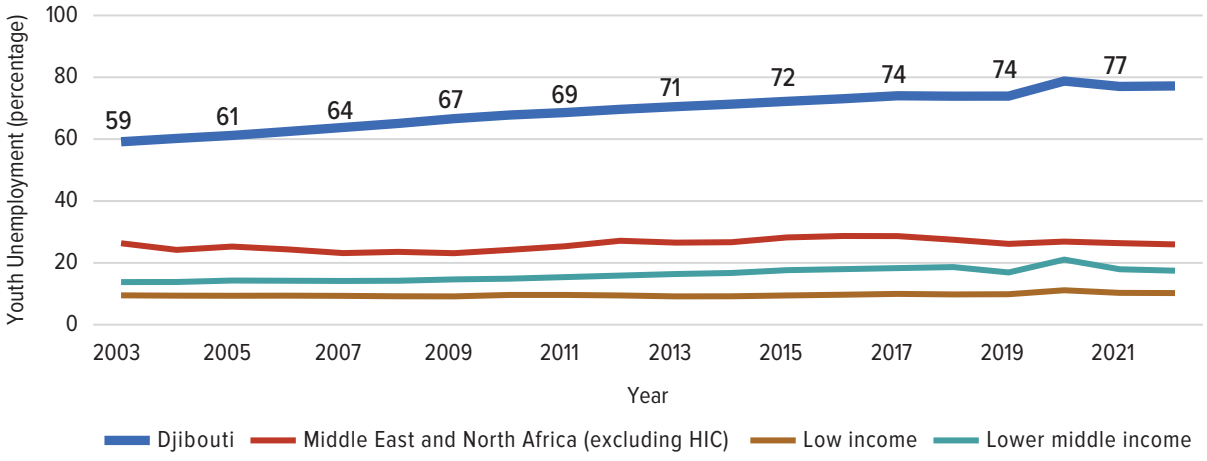
The participation rate for individuals of prime working age is 55 percent for those aged 25 to 39 and 53 percent for those aged 40 to 60. Women and youth are substantially disadvantaged in the labor market (Table 8) and less likely to be active in the labor force; most people in these two groups who participate in the labor force are unemployed.

TABLE 8. Employment in Djibouti and Low-Income Countries

	Djibouti	Low-income countries
Unemployment rate (% of total labor force)	11.1	5.6
• Female (% of female labor force)	12.0	6.5
• Youth (% of total labor force, 15-24)	21.3	10.6
• Labor force participation (% of total population age 15+)	63.0	66.4
• Female (% of female population ages 15+)	54.8	58.2
• Youth (% of population age 15-24)	45.9	47.7

Source: IMF 2019

FIGURE 25. Youth Unemployment in Middle Eastern and North African Countries

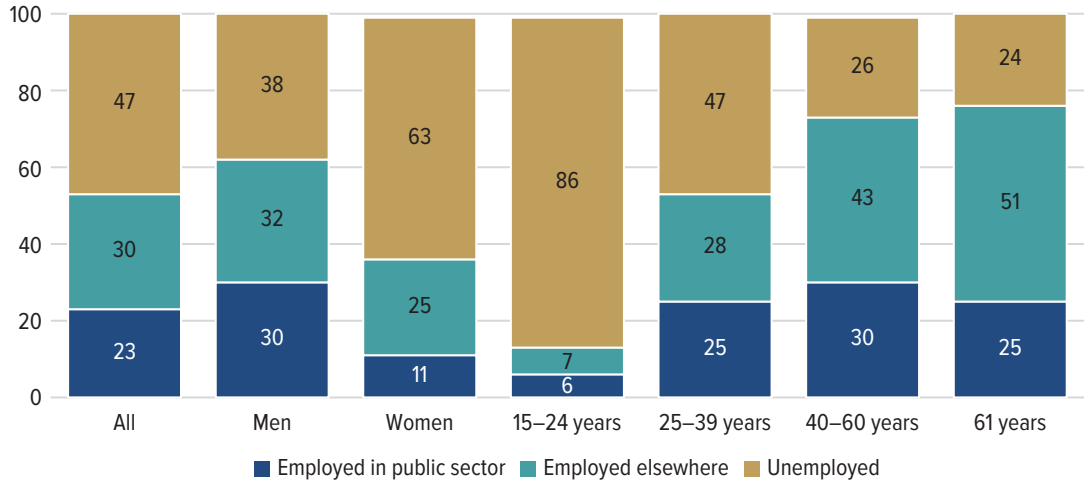


Source: World Bank 2023c

33 Labor Force Statistics database, International Labor Organization, Geneva, Switzerland.

Labor force participation varies significantly according to age, sex, and region. For example, gender inequality is substantial in the Djiboutian labor market, with an overall labor force participation rate of about 59 percent for men and 32 percent for women (IMF 2019). Table 8 illustrates the distribution of the working-age (15 and older) population according to age and sex.

FIGURE 26. Employment age cohorts and gender



Source: World Bank 2019a

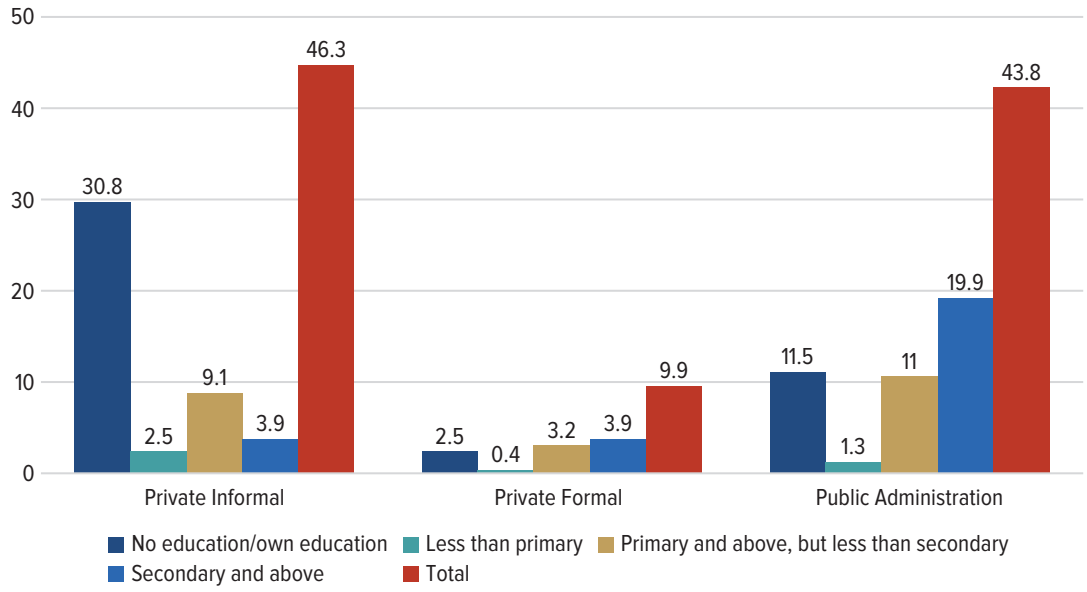
Perhaps the most striking information from this figure is that individuals aged 15 to 24, who have the highest educational attainment of all age cohorts, have the largest share of individuals trying to find a job, which indicates that, even with a relatively low HCI, human capital use is even lower, which means that Djibouti is unable to use the human capital created, bringing into focus the question of how increases in the HCI can be incentivized.

Although it may seem counter-intuitive that the most highly educated cohort also has the largest share of people trying to find jobs, the explanation likely lies in distorted incentive structures. The poorest people typically do not have the luxury of being unemployed and must work to survive, but this is less true for those who are able to attain higher levels of schooling in countries like Djibouti and typically find that there are few or limited opportunities for them in the formal labor market but also recognize that they are the academic elite in their own country. Given the ease of entry into the informal labor market, it is not uncommon for people who are relatively highly educated or trained and those with little to no schooling to compete for the same jobs in the same labor market. The market is unable to allocate individuals efficiently along the spectrum of available jobs in a way that matches their academic or skills levels. This failure to sort effectively according to academic and skill levels into the labor market results in people with higher skills being unwilling to engage in work where others with little to no formally acquired skills also participate, significantly altering incentives to work. The academic elite therefore tend to look for opportunities in the formal sector and specifically in the public sector.

Employment is highly segmented, with workers sorting themselves into three distinct markets: the small formal private sector, the sizeable informal private sector, and the large public sector.

The public sector tends to draw highly skilled individuals, and the private sector tend to draw those with lower levels of skills. Nearly one-fifth of workers in the public sector have finished secondary school or more, and nearly one-third have at least a primary school education (Figure 27). The private formal market is small in terms of employment and does not recruit highly skilled people. The informal private sector is a large employer and a large employer of those who have no education or are self-trained or educated. Formal labor market opportunities are less available for women than for men, which results in the informal private sector employing 63 percent of working women, whereas the public sector employs approximately 33 percent (in contrast to almost half of men). More than half of the country's population works in small firms that engage 10 or fewer workers, many of which are one-person retail firms or individuals working as microentrepreneurs.

FIGURE 27. Education Level According to Employment Type



Source: World Bank 2019b

II. WAGES

Wage data indicate segmentation between the private and public sectors in Djibouti's labor markets. Empirical analysis also shows that factors such as selectivity, market returns, and different human capital endowments (as mentioned above) play a smaller role in explaining these differences than a pure wage premium does. Public sector employees earn a wage premium that goes beyond their personal attributes and human capital endowments (Table 9), and the importance of this premium grows in importance once selection bias is introduced. The empirical inquiry also reveals (albeit not in Table 9) that they are more likely to be male and have parents in the public sector, indicating that the public sector's hiring and wage-setting policies distort the labor market and interfere with efficient allocation of labor and public resources.

TABLE 9. Mean Log of Wage Difference Between (Formal) Private and Public Sector

	Ordinary least squares	Selectivity controlled
Total log mean difference	0.41	0.04
Components attributable to		
Wage premium	0.21	2.86
Human capital endowments	0.34	−0.06
Market returns	−0.15	−1.80
Selection		−0.95
Total unexplained differential	0.06	1.06

Source: Anós Casero and Seshan 2006

Ahad, Tzannatos, and Diwan (2016) use information from the Gallup World Poll to estimate returns to schooling for Middle Eastern and North African countries.[34] It shows that the rates tend to be higher for women than for men in general, with a few notable exceptions being Bahrain, Oman, Saudi Arabia, and Syria, although on average rates of return for women are about 10 percent higher than for men. The highest rates can be found in Morocco and Djibouti, and the lowest returns are in Iraq, Kuwait, Saudi Arabia, and Syria.

TABLE 10. Rates of return to education by country

	MEN (%)	WOMEN (%)
Saudi	2	1
Kuwait	2	3
UAE	3	5
Qatar	5	5
Bahrain	8	7
Oman	9	5
GCC	**4.8**	**4.4**
Syria	1	0
Iraq	3	3
Palestine	4	7
Yemen	5	6

(Continued)

34 Because the survey involves information on household incomes and not individual incomes or wages, it is not ideally suited for this purpose, however by making the necessary statistical accommodations the authors present comparable estimates for MENA countries as shown above for men and women.

TABLE 10. Rates of return to education by country *(Continued)*

	MEN (%)	WOMEN (%)
Jordan	6	7
Lebanon	7	7
Middle East	**4.2**	**5.1**
Algeria	4	5
Tunisia	5	5
Egypt	5	7
Libya	5	7
Morocco	10	13
North Africa	**5.9**	**7.3**
Comoros	5	7
Mauritania	5	5
Sudan	6	7
Somalia	7	6
Djibouti	**9**	**11**
Other	**6.3**	**7.1**
All Country Average	5.2	5.8

Source: Tzannatos, Diwan and Abdel Ahad (2016)

The gender gap in terms of returns to education is not surprising given that almost all men work, whereas not all women do. The U-shaped curve for women's participation suggests that women who work occupy two ends of the spectrum, with poorer woman typically being engaged in low-renumeration work and being less educated and skilled and wealthier women engaged in higher-renumeration work and typically more educated and skilled. Also, in terms of labor supply, it is possible that the system produces too many educated people for the number of available jobs, and thus the stock of educated, unemployed people continue to rise. The growing size of the public sector relative to the private sector is evidence of this, and although it seems to negate the skills deficit argument as being one of the reasons for such low labor force participation, it suggests that opportunities in the private sector are not expanding at the rate needed to absorb the growing number of skilled workers.

Estimates of annual private returns according to educational attainment in the public and private sectors reveal a sharp spread for tertiary education and, somewhat surprisingly, for vocational training (Table 11). Public sector workers have higher rates of return to schooling than do private sector workers once they have attained secondary, vocational, and university education. For wage earners in the private sector, annual private return to education peaks at 8.9 percent after completion of lower secondary school and then declines steadily beyond that to 6.6 percent for

those who complete secondary school, 2.0 percent for those who complete vocational school, and 0.8 percent for those who obtain a university degree. In contrast, annual private returns to schooling in the public sector increase from 2.4 percent for primary to 5.8 percent for lower secondary and 9.9 percent for upper secondary before decreasing to 9.5 percent for vocational and 9.0 percent for tertiary. This clearly shows that returns to education in the public sector are much higher not only for workers with university-level education, but also for those with vocational education, which is less expected than the spread for tertiary education.

TABLE 11. Returns to Schooling

Education level	Selectivity-controlled regression	
	Public	Private
Primary	2.4	6.7
Middle	5.8	8.9
Secondary	9.9	6.6
Vocational	9.5	2.0
Tertiary	9.0	0.8

Source: Anós Casero and Seshan 2006

The World Bank Poverty Assessment (2019) estimates returns to education controlling for various attributes. Running a standard Mincerian function and controlling for such things as sector of work and years of experience, the analysis shows that every additional year of formal education increases wages by 7.8 percent. It also shows that working in the public sector is associated with higher wages and with a premium of 18 percent even after accounting for other employee characteristics (Table 12).

TABLE 12. Returns to Education

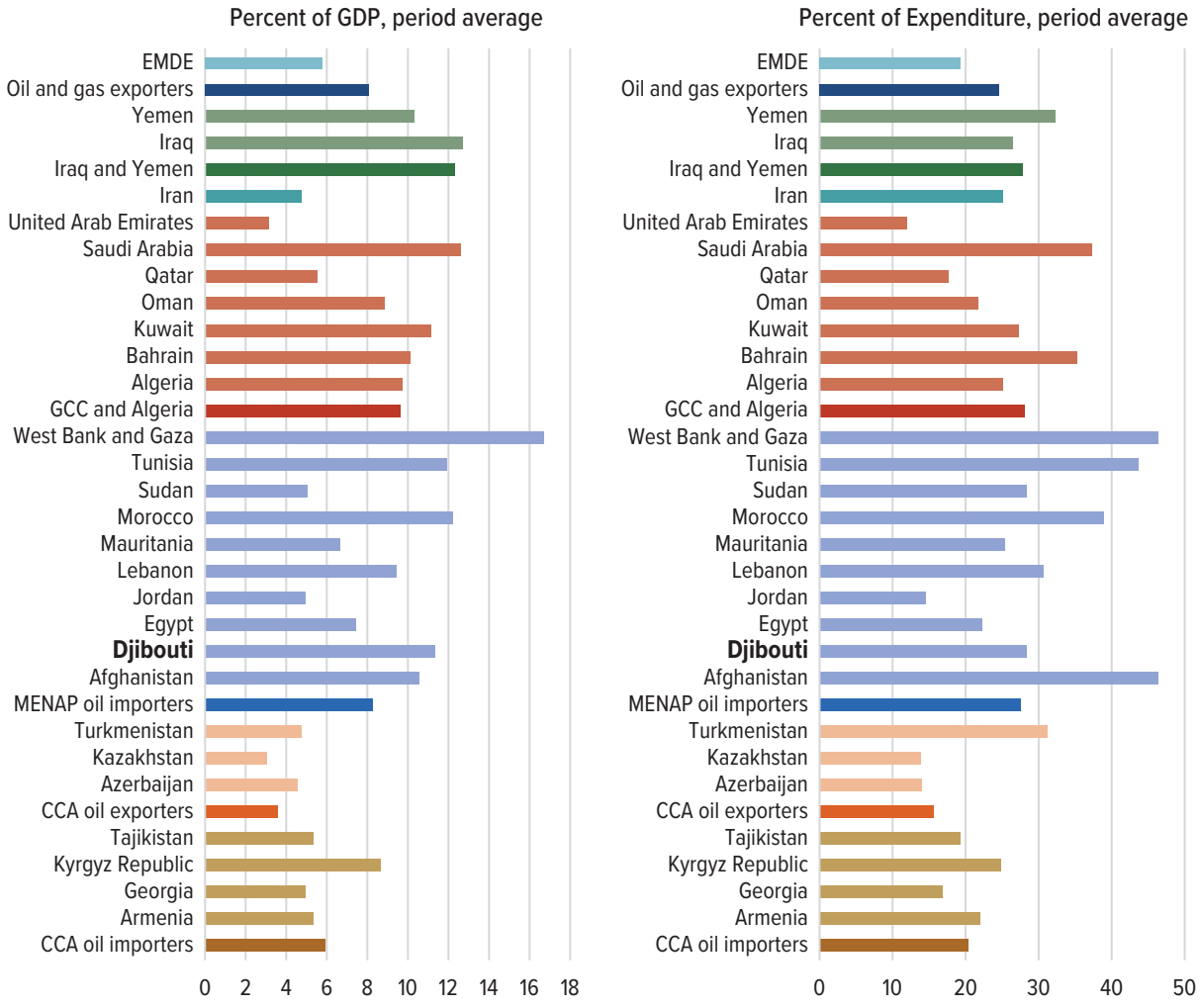
	Dependent variable: log of wages			
Variable	[1]	[2]	[3]	[4]
Years of education	0.078*** (0.001)	0.073*** (0.001)		
Works in the public sector		0.180*** (0.006)		0.184*** (0.006)
Work experience	0.018*** (0.001)	0.018*** (0.001)	0.019*** (0.001)	0.019*** (0.001)
Less than primary education			0.158*** (0.014)	0.152*** (0.014)
Primary but less than secondary education			0.386*** (0.008)	0.354*** (0.008)
Secondary education and above			1.064*** (0.009)	0.997*** (0.009)
Constant	13.008*** (0.015)	13.025*** (0.015)	13.086*** (0.015)	13.098*** (0.015)
R^2	0.214	0.225	0.214	0.225

Source: World Bank 2019b

The fact that the state is the largest employer, employing 46 percent of workers, coupled with the large wage premium (Figure 26), makes the wage bill in Djibouti a problem for fiscal stability and for the state's ability to expand service delivery, create an enabling environment for the private sector, and expand social assistance for the vulnerable. (The International Monetary Fund estimates the wage premium to be even higher—approximately 21 percent in 2018.)

Having described the salient features of employment and wage outcomes in Djibouti, the rest of this chapter attempts to shed light on the demand and supply factors that contribute to these outcomes. We begin with the demand side (the product markets that create the derived demand for labor) and discuss the sectors that have contributed to growth and its employment implications. Then we move to the supply side to explain the incentives and ability of the system to produce the skills Djibouti needs to foster inclusive growth.

FIGURE 28. Public Sector Wage Bill in the Middle East and Central Asia, 2005-2016 Period Average



Source: International Monetary Fund (2019)

III. WHAT MIGHT CONSTRAIN THE SUPPLY OF LABOR?

The evidence points to three factors that may constrain the supply of labor by withholding acceptance of employment:

First, queuing by definition delays entry into the labor market. Having established that every additional year of formal education increases income by 7.8 percent and that the wage premium for deploying this education and training in the public rather than private sector is about 18 percent, it is not surprising that it leads to encouraging the wait for a public sector job. Using the formal private sector as a steppingstone while waiting does not seem viable given the small size of the formal private sector, leaving informality as the only choice and thus delaying entry into the labor market and constraining the labor supply.[35]

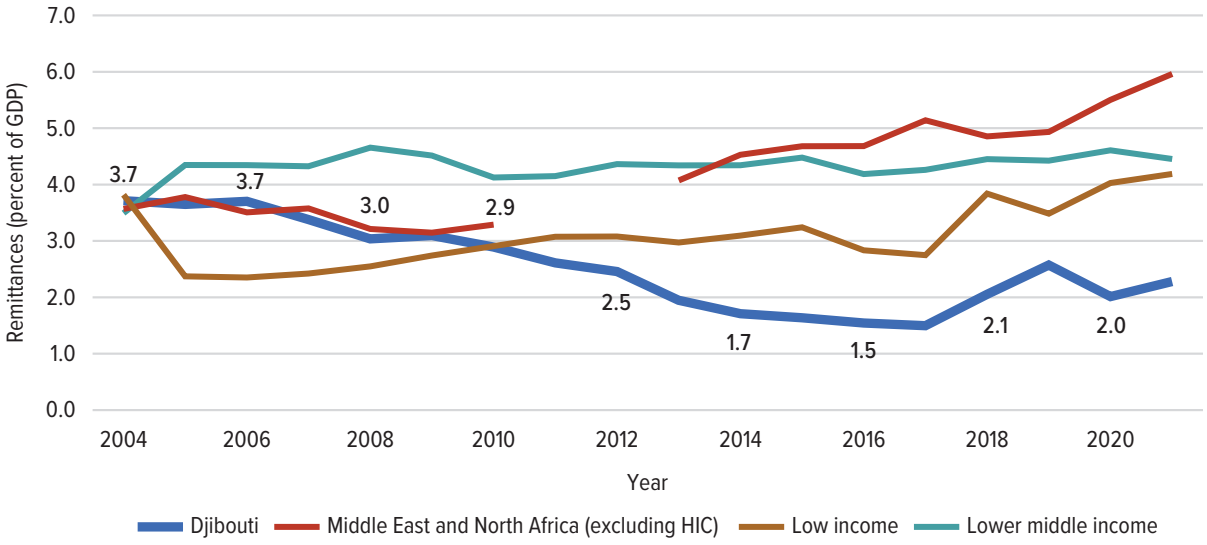
The second factor that may constrain supply is that reservation wages[36] in Djibouti are high, although the reasons why are not evident. Usually, high reservation wages are seen in countries that are large remittance receivers, but this does not seem to be the case in Djibouti, based on official records of remittance inflows (Figure 29), although it is possible that official records do not capture high levels of remittances because much of the local population and the Somali citizens and others who have large networks around the world receive much of their remittances through informal schemes. It is also possible that high wages, generous benefits, and job security in the public sector have led to higher wage expectations of all aspirants in the labor market. Although there is considerable evidence of this in Gulf Cooperation Council countries, which often leads to significant waits for the right public sector opportunity to arise, it is not clear that, in Djibouti, with much poorer safety net coverage and a more limited social contract system, people would refuse jobs in anticipation of a public sector job.

A third factor for consideration is the rigidity of the labor market. In general, the Middle East and North Africa do not have very high levels of rigidity, as the Employing Workers Index (EWI) and the Difficulty of Hiring Index (DHI) indicate. The EWI focuses on the level of rigidity of labor regulations, and although it is not a perfect way to measure rigidity, and care should be taken when reaching policy conclusions about how flexible or rigid a labor market is, it is the only source of consolidated data available on labor regulation in the Middle East and North Africa. The EWI ranges between 0 and 100, with higher numbers indicating greater rigidity, and is constructed using several subindices, including hiring difficulties, rigidity in work hours, firing difficulties, and cost of firing.

35 Informality is characteristic of the Djiboutian labor market. The informal sector is defined in many ways; a detailed taxonomy of the informal sector can be found in Benjamin et al. (2012). Typically, the informal sector refers to informal businesses or entrepreneurship. Emli and Robleh (2019) note that there are primarily three types of businesses or enterprises: those linked to the Djibouti National Security Fund, those registered at the Chamber of Commerce, and those that function as unregistered enterprises. Their research illustrates that there are at least 178 enterprises and 790 employments in the informal sector. The Ministères des Affaires Sociales et des Solidarités data shows that this sector employs approximately 20 percent of the effective work force of the country.

36 The reservation wage is the lowest wage rate at which a worker would be willing to accept a particular type of job. It is a theoretical representation of the hourly rate at which an individual values their own leisure time.

FIGURE 29. Remittances with Comparators



Source: World Development Indicators (database), World Bank

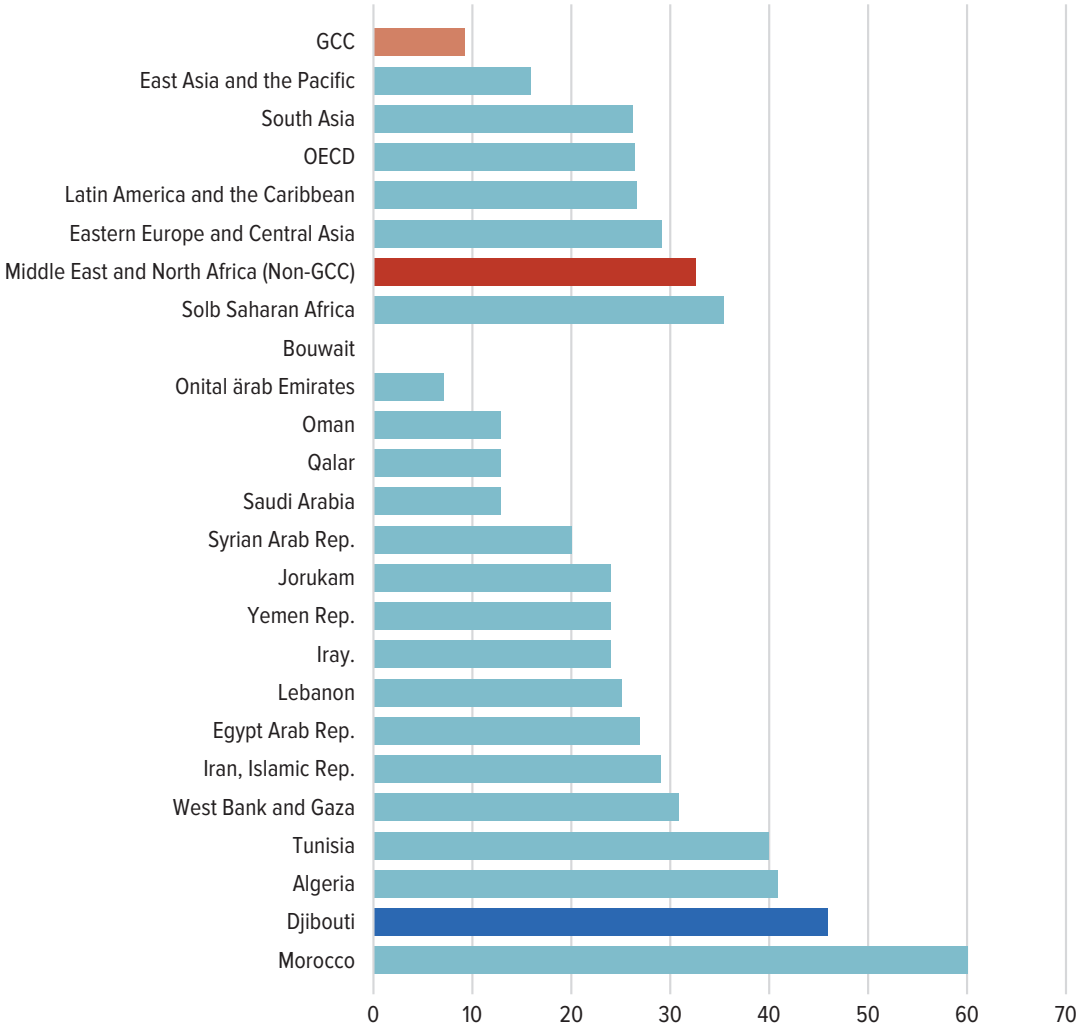
The DHI, which measures the extent to which the law restricts flexible contract types and how expensive it is for firms to hire first-time job seekers because of such laws, is embedded within the EWI. This could substantially limit the ability of students to transition to market opportunities because there is stricter legislation involving jobs in the formal sector. Although there has indeed been a general shift toward more-flexible work arrangements and organization structures on account of globalization as well as significant changes in technology which have contributed to employment contracts becoming much less standard and creating a nearly 24-hour work force in many countries. Djibouti has made significant progress on a number of Doing Business indicators and recently even on the issue of Employing Workers.

Countries in the Middle East and North Africa for which data are available have very low (e.g., Gulf Cooperation Council countries) and very high (e.g., Algeria, Djibouti, Morocco) EWIs and DHIs (Figure 30). Djibouti has made progress in recent years on some Doing Business indicators, including ease of employing workers (Table 13).

Djibouti has a high DHI according to regional and international standards, and it is important that this be addressed to increase flexibility in the labor market. For example, there are restrictions on use of fixed-term contracts for what are viewed as permanent tasks, rules on the length of single fixed-term contracts (12 months), and a 24-month maximum period of use. Guidelines on probationary period are also restrictive, requiring that companies make decisions quickly given a maximum period of 2 months. Perhaps one of the most complicated developments is widespread use of a US$200 per month minimum wage that used to be part of the country's laws and has been discarded but is still used as a benchmark for hiring in the public sector.

Djibouti has been progressive in terms of protecting workers and providing services to refugees. It has ratified all eight of the International Labor Organization's core conventions, which protect workers' rights, and is committed to providing access to services for refugees. Refugees are integrated into the national health system, and identity papers and certificates have been issued to refugees and asylum seekers, who can gain access to bank accounts, credit, and employment. Such positive measures are helpful in unlocking their human capital and lowering the fiscal burden of assisting non-nationals, although given the limited demand for labor in Djibouti, a more careful investigation of its impacts on native Djiboutians could be helpful.

FIGURE 30. Employing Workers Index Comparators



Source: Angel-Urdinola and Kuddo 2010.

TABLE 13. Djibouti's Progress on Doing Business Indicators

YEAR	DEVELOPMENTS		YEAR	DEVELOPMENTS	
2020	Obtaining credit	✓	2015	Dealing with construction permits	✓
	Protecting minority investors	✓			
	Resolving insolvency	✓	2014	Starting a business	✓
	Employing workers	✓		Obtaining credit	✓
				Resolving insolvency	✓
2019	Starting a business	✓			
	Registering property	✓	2012	Dealing with construction permits	✘
	Obtaining credit	✓		Trading across borders	✓
	Protecting minority investors	✓			
	Enforcing contracts	✓	2010	Paying taxes	✘
	Resolving insolvency	✓			
			2009	Trading across borders	✓
2018	Starting a business	✓			
	Dealing with construction permits	✓	2008	Registering property	✓
	Registering property	✓		Trading across borders	✓
	Obtaining credit	✓			
	Protecting minority investors	✓			

Source: World Bank, Doing Business Indicators database

IV. DEMAND FOR LABOR

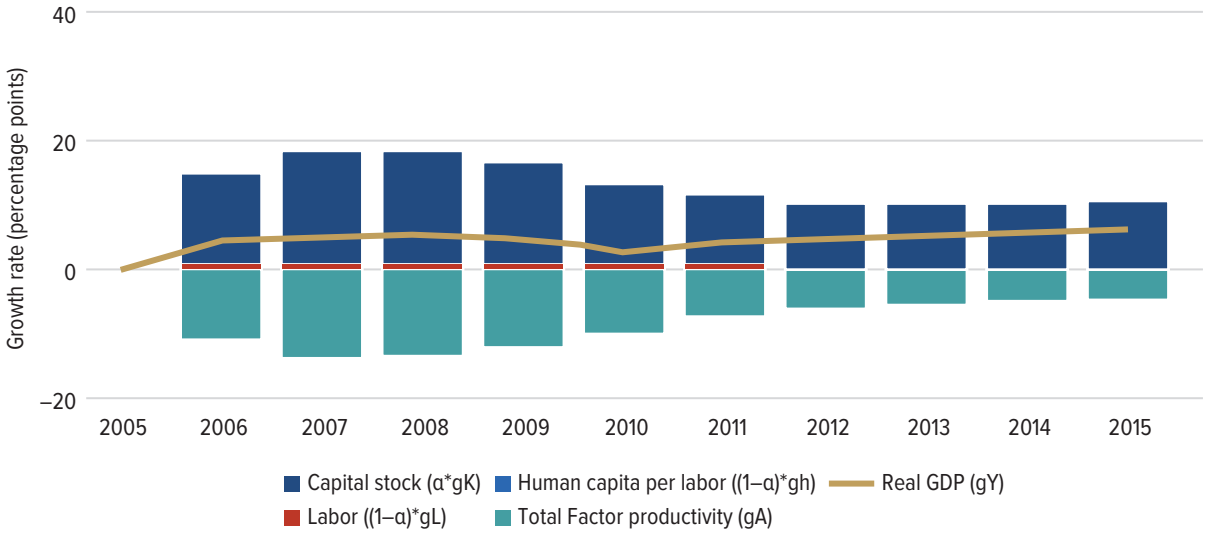
Djibouti has made remarkable economic progress since 2000 because of trade and investments. After a civil war in the 1990s, a peace agreement with a power-sharing arrangement was reached in early 2000 that continues to be maintained. The stable domestic political environment has allowed Djibouti to take advantage of its strategic location to attract investors and boost growth. The most important investments include port development and construction of an electric railway that connects the country to Ethiopia, Africa's second-most-populous country and fastest-growing economy, whose imports and exports account for more than 80 percent of Djibouti's port activities.

A. Where has growth come from in Djibouti?

Capital accumulation, increasingly debt financed, has been the main driver of growth, with little contribution from labor productivity or innovation by firms (Figure 31). Large investments over the past decade have driven strong economic growth, but the benefits have not been widely shared. Djibouti has invested heavily in infrastructure connecting Ethiopia to global markets, driving growth

to an average of 6.2 percent over 2013 to 2019, before the COVID crisis, but with investments focused on capital projects, few jobs have been created, and unemployment remains high.

FIGURE 31. Growth Composition



Source: World Bank 2018a

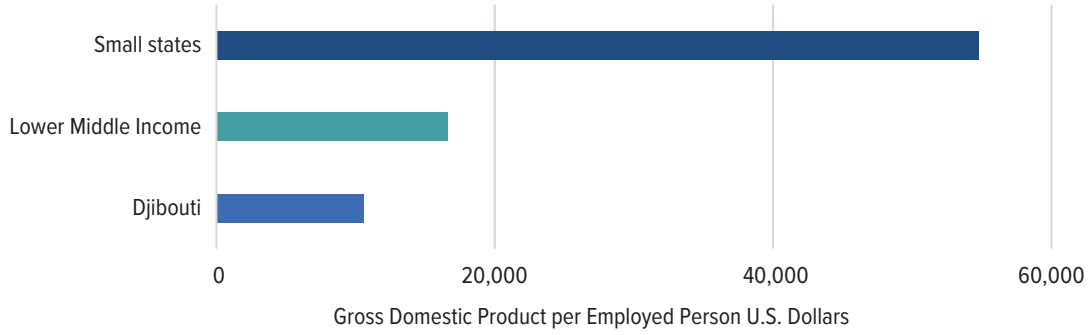
Most investments have been financed using state-owned enterprise borrowing, exacerbating fiscal vulnerabilities which rest on a narrowing tax base. External public debt increased from 34 percent of GDP in 2013 to 72 percent in 2021, with state-owned enterprises accounting for most borrowing. Debt-financed capital accumulation raises concerns about sustainability of growth, because it has led to a rapid rise in external public debt and public and publicly guaranteed debt, which rose from 57.1 percent of GDP in 2014 to an estimated 89.7 percent in 2017. The repayment burden of the fast-maturing debt is expected to constrain fiscal space and could limit much-needed spending in social sectors. Meanwhile, government revenues have been declining because of widespread exemptions, and lease payments from foreign military bases have remained unchanged since 2016.

More fundamentally, the prominent role of capital accumulation in growth, along with the limited contribution of labor or productivity, indicates a lack of economic transformation. When economic transformation underpins growth, productivity gains are unleashed through movement of workers and resources from lower- to higher-productivity activities within and between sectors. Such a transformation does not appear to have occurred in Djibouti, which has been able to grow without significant transformation because dividends from its geostrategic importance (ports and military bases) have supported this growth, which has reduced incentives to undertake reforms.

The services sector is the main engine of the economy, accounting for nearly 80 percent of growth and a significant share of employment; the agricultural sector has limited potential given Djibouti's arid climatic conditions, yet even within services, most workers in the private sector are engaged in low-value, informal wholesale and retail trade. Most of the working-age population is unemployed, informally employed, or out of the labor force. The public sector plays a dominant role

in the economy as an employer and producer of goods and services. Poor human capital outcomes, especially low literacy rates, also contribute to a low-productivity economy. Limited export activity and reliance on imports is further evidence of low value addition in the domestic economy.

FIGURE 32. Labor Productivity 2016 Estimates



Source: World Bank 2018a

Separating growth into factors of production and productivity shows that economic capital accumulation has dominated growth, with little contribution from labor. Capital grew on average by more than 21 percent from 2005 to 2015 and contributed 12 percentage points to growth. At the same time, labor grew by only 2 percent and contributed less than 1 percentage point to growth. Total factor productivity growth was negative and thus reduced growth.

Capital accumulation from large-scale infrastructure and logistics investments has low potential to create employment and mainly raises demand for skilled labor. The job creation potential of ports and the transport and logistics sectors is decreasing as port services become increasingly automated and rely less on unskilled labor. Rather than continued capital accumulation, Djibouti must shift its policy focus to expanding employment through a vibrant private sector and healthy, educated, productive workers. Increasing the productivity of the private sector and the employability of workers are two interlinked avenues for facilitating economic transformation.

B. How can the big leap into economic transformation come about?

Djibouti is an uncompetitive economy. It has an overvalued currency and extremely high utility costs, which makes it uncompetitive in general since relative costs of inputs are key to competitiveness. There is little natural agricultural and mining potential and only one major manufacturing plant — a Coca Cola bottling facility that also produces bottled water. Its small internal market and high factor costs limit its manufacturing potential.

Djibouti is a service- and rent-based, dual economy benefiting only a minority of the population based in large part on rents from several major and many minor sources, including a strategically located port and foreign military bases. The creation of an insider class with close connections to the state often characterize economic governance in a rent-based economy, and Djibouti may be no exception (USAID 2004). Djibouti's rent-based economy has mainly benefited the elite population, notably from family influence to secure jobs in the formal private sector, state-owned enterprises, and civil service.

Djibouti could position itself as the commercial hub for the region, with benefits accruing far beyond the port itself. World trade is expected to grow at 7 percent per year and double within 10 years. To handle this, the shipping industry is undergoing continual technological change. With training and preparation for the job requirements of ancillary services at the port and the increased possibilities created from the boost to the construction industry, the benefits could be widespread. A Djibouti with well-run, competitively priced electricity, telecommunications, Internet, and transportation logistics would create further economic possibilities.

V. SUPPLY OF LABOR

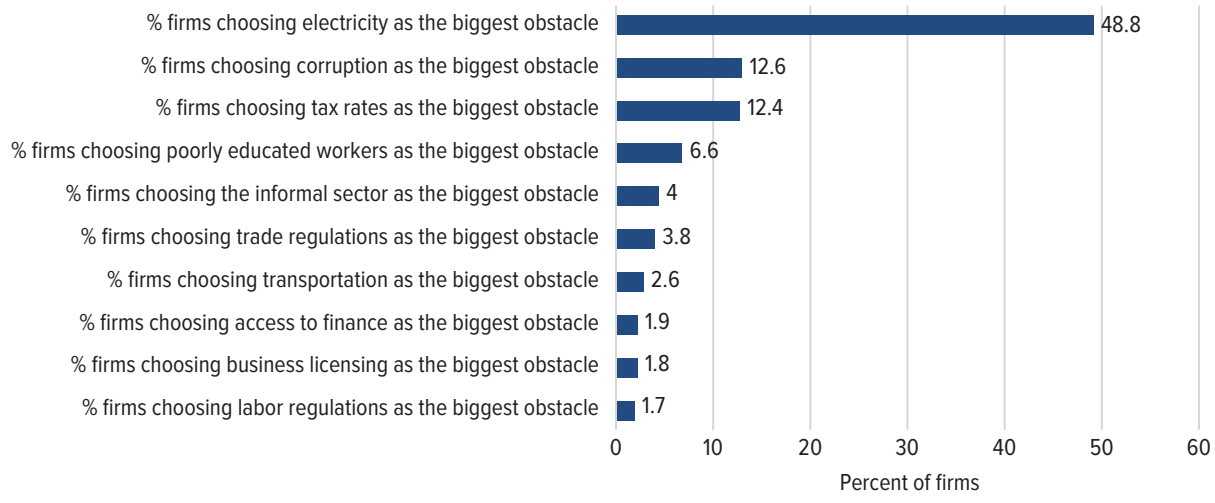
This section examines the supply of labor and in particular whether factors exist in Djibouti that might constrain the quantity of labor, create skills mismatches, or constrain the quality of labor.

A. Skills mismatches

No discussion of the quantity and quality of skills available is complete without a mention of the prospect of skills mismatches. Perhaps one of the most overused terms in explaining poor labor market outcomes has been the proclamation of skills mismatches.

The main mismatch that seems to exist in the Djiboutian market is that the system produces individuals who are overqualified for the jobs that are available in the country. This is not unique to Djibouti and perhaps largely pervasive around the world, but it must be viewed with caution. The common refrain is that young graduates and others are not adequately prepared for the needs of the labor market and lack the necessary skills and that this accounts for the high unemployment rate, but there is growing evidence that the reasons for high unemployment coexisting with large numbers of job vacancies are based on factors other than skills mismatches (Figure 33).

FIGURE 33. Obstacles to Success Identified by Firms



Source: Angel-Urdinola and Kuddo 2010

Firms in Djibouti do not list inadequate skills of workers in the top three identified obstacles to firm success, and when it does feature in the fourth spot, it does so as a distant fourth in terms of percentage of firms who see it as an obstacle.

It may not be entirely appropriate to borrow the language of skills mismatches from the context of more-advanced economies for use in the context of Djibouti. Skills deficits are pervasive in the Djiboutian economy, and the country could benefit from development of a wide range of skills in all sectors. This is discussed in the next section. At the same time, demand for such a wide array of skills is constrained, and even if these skills were produced in the country, there is little chance they would be absorbed.

B. Constraints on the quality of education and skills

Until 2019, a clear vision and precise definition of the technical education and vocational training system's role, objectives, and functioning was lacking. In 2019, the Djiboutian government developed the Politique Nationale de Formation Professionelle (National Vocational Training Policy), which provides a comprehensive assessment of the technical and vocational education and training (TVET) sector and the reforms needed to improve its functioning, but the training policy falls short of distinguishing interventions and targeted activities for different social groups, including youth, women, refugees, and other vulnerable groups.

The TVET and skills development system in Djibouti is inflexible, with medium- to long-term programs. Most TVET programs run a minimum of 1 year and for as long as 3 years. These programs must be reformed to make the overall skills development system more flexible by converting them into modularized, stackable, short- and micro- programs, which would support flexibility in terms of entry into and exit from programs, increase access to groups who are unable to join skills development programs because of their length, establish a skills ladder, make skills development an option for those who are already in the workforce, and allow for better targeting of resources.

Access to post-basic training is severely limited. Despite the number of institutions, there are few training opportunities in Djibouti and most training programs are set up for those who have completed at least compulsory schooling before entering the formal system for further training and seem to be geared to the few employment opportunities available in the formal sector, even while recognizing that most jobs are in the informal sector. There are limited opportunities for those who drop out of school early or never went to school and have entered the workforce directly and function in the informal sector, and even with this high barrier to entry, vocational programs are considered inferior, have a stigma associated with them, and tend to be viewed as an option only for the underprivileged. Thus, although a sizeable share of the population does not have the opportunity to acquire more training even if they wish to do so, there is another group who chooses not to do so even when they are able to access these programs.

The ability of the General Directorate of Technical Education and Professional Training (Direction Générale de l'Enseignement Technique et de la Formation Professionnelle; DGETFP) to fulfill its objective of supporting skills development and employability of Djibouti's youth is constrained. The DGETFP was restructured in 2018 and expected to help with planning, budgeting, and

implementing TVET programs; conduct all monitoring and evaluation functions; function as an inspectorate; and most importantly, support and ensure coordination of the range of entities involved in delivery of technical education and vocational skills, but despite being the key arm of the government in TVET, the DGETFP lacks the autonomy, staff, financing, and other resources needed to support such a broad set of functions, which constrains its ability to fulfill its objectives.

Quality assurance mechanisms are not fully in place, and the elements that are in place do not function well. The TVET system in Djibouti would benefit from development of quality assurance procedures and mechanisms, which would involve a range of activities including development and establishment of a national vocational qualification framework. Efforts must also be made to ensure that program curricula, student assessment mechanisms, practical work, and portfolio development are all strengthened through the training programs. Furthermore, since available local certificates are not competence-based, it is difficult for employers to select the workers they need without competence-based approaches to training

Partnerships should be developed and strengthened to ensure that the supply of training meets employers' needs. Close working partnerships must be built between the training system and institutions and representatives of the private sector, employers, chambers of commerce, and other relevant stakeholders, including youth organizations, nongovernmental organizations working with vulnerable populations, and organizations supporting refugee education and training such as UNHCR and UNICEF.

The TVET system is poorly financed and resourced. Although allocations to TVET have increased in recent years through establishment of a special fund for development of the sector, routine budgetary allocations to the department for the functioning of institutions, and external sources through development partner cooperation, the new strategy identifies funding as a key constraint that will continue to thwart the development and quality of the training sector unless it is addressed. Although TVET may be underfunded, steps must be taken to increase the efficiency of use of available resources.

The professional development system for trainers in Djibouti is weak and consists only of initial training. The most important element in any training system is the trainers who will train the next generation of workers. The current stock of trainers in the Djiboutian system have not been adequately trained in recent years at the pre-service stage or through in-service training. Few programs are available for continuing training for trainers, and given the length of time some of them have been trainers, they have little understanding of current skills needs in the productive sectors. Strengthening partnerships between industry and training providers would support development of market-relevant training programs.

In summary, wages in Djibouti are high, and the primary employer for people with more than a secondary school education is the public sector, which pays a sizeable premium for this level of education. Employment in the private sector is mostly in the informal sector. Given the small size of the economy and the expected undiversified nature of the small economy, job generation in product markets is not keeping up with the number of youth seeking employment. Rigidities in the labor market such as regulations that make it difficult to hire workers could be limiting employment.

On the supply side, improvements in the TVET system could help prepare workers for jobs in emerging sectors in Djibouti or the region.

VI. THE WAY FORWARD

The conflict in Ethiopia has weighed heavily on Djibouti's economy. In addition, higher commodity prices and regional drought have eroded households' purchasing power and reduced government revenue. The recent truce in Ethiopia could allow for recovery in trade, reversing recent declines in port activity, and help attract new foreign investment. The International Monetary Fund projects that economic growth in Djibouti will recover in 2023 with a rebound in Ethiopia and that inflation will fall in line with international trends.

This presents an opportunity to revisit the growth model and opt for a less-capital-intensive, rentier-based, debt-financed model that can deliver inclusive growth through productivity growth. To do so, Djibouti must demonstrate that human capital use is improving, which will require paying attention to the signals that markets send to individuals and households who make human capital investment decisions—whether they are signals from the labor market on segmentation by private and public employers, from product markets on demand for skills, or from trade and investment decisions.

Some recommendations are to consider actions that result in:

- **Improvements in the business environment and decreases in labor market rigidities to facilitate new business formation and hiring.** Djibouti must increase the flexibility of its labor laws to ensure that more Djiboutians can be hired while ensuring that workers are protected from exploitation and unfair practices. Even though Djibouti has made some progress in recent years, it continues to rank higher on difficulty of hiring workers than other countries in the Middle East and North Africa.
- **Reductions in the segmentation of the market between the private and public sectors.** This would require reducing the wage premium from its present 20 percent or more, which would reduce the distortionary impact of public sector hiring on the labor market, reduce the public wage bill, and free up fiscal space for productive investments.
- **Increases in the supply and quality of vocational training for youth.** A suite of reforms was discussed above regarding making TVET programs more modular, flexible, and accessible to marginalized groups and increasing access to post-basic training, along with a national qualifications framework accompanied by better student assessment mechanisms. Increasing autonomy and financing for the key arm of the government in technical and vocational training (DGETFP) would have a substantial positive effect on improving the governance of skills provision.
- **Involvement of the private sector in training**. Greater involvement of the small private sector in the design of training, incorporating information and communications technology into training for rural youth, women, and those who dropped out of formal schooling, would help create the foundation for inclusive growth and improve human capital use in Djibouti.

- **Connecting Djiboutian workers to nearby labor markets.** It is difficult for small states to diversify their sources of growth and employment, so a one-sector economy emerges that is usually resource or capital intensive. In these situations, connecting workers to jobs elsewhere in the region can help prevent human capital from eroding and even increase incentives for greater human capital investments by raising the rate of return through mobility, which offers better human capital use. Such mobility for Djiboutians within the framework of Intergovernmental Authority on Development (IGAD) cooperation or beyond into the Gulf Cooperation Council or Europe could be explored in the same way that other countries in Africa are also actively pursuing through their efforts on intermediation between workers and international labor markets.

CHAPTER 6: CONCLUSIONS

Based on an HCI simulation, an average Djiboutian born in 2022 could be expected to achieve only 41 percent of their full potential human capital by the age of 18. This means that 59 percent of all talent in Djibouti is unharnessed, placing it close to LICs and IGAD averages and lower than income peers. Harnessing this talent would enable Djibouti to increase its productive capacity and exploit a healthy, skilled, resilient population as a driver of sustainable, inclusive economic growth and development. Projections that Djibouti is expected to reach its lowest age-dependency ratio in 2039, with about 55 percent of Djiboutians at working age, underscore the urgency of focusing on human capital accumulation (Our World in Data 2022).

This HCR provides an overview of Djibouti's human development outcomes throughout the lifecycle, with a focus on three periods: early childhood, adolescence and youth, and the working years. These are important transition periods in the lifecycle and in the human capital accumulation trajectory, allowing for the design of effective cross-sectoral interventions and policy actions. Focus on these periods is also a priority for the government. In a small state with limited capacity such as Djibouti, political buy-in is a critical precursor to action.

Recent improvements in human development outcomes are evident, including commendable efforts to support the influx of refugees. Yet more must be done. Enrollment in ECD programs, for example, doubled between 2015 and 2021 to 13.2 percent, but remains low and unevenly distributed, with opportunities to increase access, coverage, and quality of delivery of essential services for families with young children. Likewise, notwithstanding increases in school enrollment rates at all levels over the last two decades, particularly at the primary and lower-secondary levels, expected years of schooling remains low (9.2 years), with high but falling rates of repetition and dropout, especially among girls.

Learning outcomes in numeracy and literacy are lower than in income peers and Middle Eastern and North African (excluding high-income) countries and exacerbated by a lack of learning data. That said, reform efforts by MENFOP to improve quality, increase foundational learning, and bridge gaps in learning data are showing promising results, as the recent Early Grade Reading Assessment results indicate. Incremental expansion of preschool education and government commitment to provide preschool education for all by 2030 reflect this positive reform trend. The momentum for reform must be maintained and, where possible, accelerated. Missed opportunities to acquire basic

knowledge in the early years limits accumulation of human capital throughout the lifecycle. Djibouti's low adult literacy rate (60.1 percent for men, 39.5 percent for women) is a significant obstacle to acquisition of skills needed to enter the labor market.

Djibouti's health outcomes have improved over the last two decades, but improvements lag those of other (non-high income) countries in the Middle East and North Africa. For instance, although delivery of RMNCAH-N services has increased substantially in certain regions, access to maternal and neonatal health care remains limited. Coupled with food insecurity, this constrains the potential for infants and young children to achieve optimal development, school readiness, and longer-term cognitive outcomes and human capital development.

Djibouti's social protection system has evolved over the last 10 years, but social protection programs remain inadequate, fragmented, and unsustainable. Current World Bank-supported transfer programs cover approximately 22,500 households for the project implementation period (see box 2), and Bank support has enabled coverage of the social registry to be expanded to approximately half of the population. Effective targeting of poor and vulnerable people, however requires more improvements and measurement of related performance. MASS has initiated a delivery mechanism at the local level that is expected to improve the delivery of social protection programs, but its coverage is also low. Despite a significant increase in coverage of social safety nets, therefore, support for vulnerable populations remains limited, dependent on donor funding, and hence unsustainable and inadequate in providing a minimum package of services that can smooth consumption and protect human development gains. The social protection system is inadequate to shield poor and vulnerable populations from adverse impacts across the lifecycle. or encourage investment in human capital. The new social protection strategy under development is expected to complement current Bank-supported operations by helping the government expand coverage and increase the efficiency and effectiveness of safety net programs and links with other social service delivery for results.

The adolescent years offer an opportunity to increase accumulation and use of human capital. Girls, in particular have untapped productive potential. Girls' participation rates are lower than boys', even though girls do better in school (have lower repetition rates in primary school and higher scores on the national primary school examination). Girls have a higher dropout rate in the fifth grade, and it is estimated that nearly 46 percent of girls are out of school, compared with approximately 39 percent of boys. In 2017, FLFP was 32 percent, compared with 59 percent for men, and less than 33 percent for young women aged 15 to 24. Although school completion and repetition rates must be improved for boys and girls, girls in particular must be supported with critical life-skills and reproductive health training to delay marriage and childbirth and facilitate their entry into the labor market. **Investing in health education for adolescents could have positive multiplier effects by reducing maternal and infant mortality.**

Djibouti's working-age population faces a triple conundrum: high wages, higher unemployment among more educated workers, and low employment outcomes overall. As such, Djibouti must shift toward a more-competitive, productivity-fueled economy, notwithstanding the constraints that small size naturally imposes on diversification, as well as the country's vulnerability to external shocks. Realizing this opportunity will require reducing segmentation between the public and private sectors by slowly reducing the wage premium, and reducing the fiscal burden of the large wage bill so that productive investments that can spur investment in human capital can be made. In addition spillovers from the transport and logistics sector must be enhanced and leveraged to create linkages to other employment-generating activities. This will require reducing rigidities in the business environment and labor markets, orienting the training infrastructure to meet the requirements of ancillary jobs that youth could be trained for, and involving employers in training design to ensure alignment with the needs to the small private sector. Greater integration of the TVET system with the private sector will be critical to increase opportunities for direct training for those who drop out of school early or never went to school and enter the informal workforce directly.

The government has made a strong commitment to human capital accumulation and the human capital agenda that has been translated into the Vision 2035 national development strategy and efforts to introduce sectoral strategies that address human capital challenges. Vision 2035, for instance, acknowledges that a productive workforce with a range of skills is critical to the creation of a diversified economy. Widening the economic base so that it relies more on human capital would allow for new, more-equitable growth trajectories that bring wider segments of Djiboutians under a productive umbrella. The government has hosted two human capital forums with a series of supporting technical workshops (with World Bank support) and is developing a human capital action plan, which should include prioritized, targeted investments.

Operationalizing the human capital action plan will require increasing the allocation and efficiency of social spending; developing a functional institutional framework rooted in cross-sectoral interventions and cross-sectoral collaboration; and prioritizing stronger data collection systems and greater capacity for data measurement and use. Figure 34 outlines key priority actions and interventions by lifecycle stage, that have been the focus of this HCR, as well as across the lifecycle. These have an overarching objective of ensuring that more people have opportunities to be healthier, more educated, more skilled, and more productive and participate in the country's growing economy, which generates more and better jobs.

FIGURE 34. Priority Actions and Interventions for Improving Human Capital in Djibouti

Early Childhood

- Improve quality, coverage, and equity of ECD services through coordinated targeting of disadvantaged children and leveraging the role of communities and partnerships.
- Increase preschool provision, complemented by nutrition, psychosocial stimulation, child and maternal health, and social protection programs.

Adolescence and Youth

- Generate demand for RMNCAH-N and education services by promoting social and behavioral change and empowerment of women and adolescent girls.
- The MOH and partners should support rural midwife training programs and expansion of the community health workforce to improve the availability and quality of RMNCAH-N services.

The Working Years

- Improve the business environment and decrease labor market rigidities to facilitate new business formation and hiring.
- Reduce the segmentation of the market between the private and public sectors.
- Improve training and job quality by involving the private sector, domestic and overseas.

- **Strengthening data and monitoring systems** by prioritizing an increase in the frequency of surveys, improving the quality and coordination of routine data collection, focusing on capacity building in the areas of measurement and evaluation capacities at the national and subnational levels, and improving use of data for decision making. Continuous assessment of the human capital landscape and effectiveness of ongoing interventions will require greater access to routine administrative and survey data and better monitoring and evaluation at the national and subnational levels. With new impetus behind Djibouti's statistical agency, there is an opportunity to embed monitoring and evaluation of human capital interventions into Djibouti's data architecture. Data needed to update the next HCI are outlined in Table B.1.
- **Strengthening the human capital institutional framework** by: (i) including a broad range of stakeholders at the central and local levels, including nongovernmental organizations, development partners, civil society, and professional associations, and (ii) ensuring that a HCAP is in place to guide the human capital agenda. Prioritizing the human capital agenda and HCAP will require new ways of working that transcend intraministerial hierarchies and institutional rigidities in favor of a broader whole-of-society approach. In addition, commitments to keep the human capital agenda, HCAP, and implementing committees independent of line ministry structures may help with developing a cross-sectoral approach.
- **Increase the allocation, and efficiency of social spending in line with prioritized and targeted human capital investments.** A public financial review for Djibouti could provide important information on opportunities for increasing the effectiveness and efficiency of results-oriented social spending.

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Appendix A| Calculating the Human Capital Index

I. GOALS AND RATIONALE OF THE HUMAN CAPITAL INDEX (HCI)

The HCI is designed to highlight how improvements in health and education outcomes can shape the productivity of the next generation of workers, assuming that, over the next 18 years, children born today face the same educational opportunities and health risks as children now do. The HCI captures key stages of a child's trajectory from birth to adulthood. In the poorest countries in the world, there is a significant risk that a child will not survive to their fifth birthday, and even if they do, there is a risk that they will not start school, let alone complete the full cycle of 14 years of schooling, from preschool to grade 12, that is the norm in high-income countries. The time they spend in school may translate unevenly into learning, depending on a variety of factors including the quality of teachers and schools that they experience. When they turn 18, they carry with them the lasting effects of poor health and nutrition during childhood, which limits their physical and cognitive abilities as they move into adulthood.

Human capital can be connected to future productivity, the aggregate income level, and growth by following the logic of development accounting literature. This can be seen in Equation 1, by arranging the Cobb-Douglas production function to show that output per worker increases equiproportionately to human capital per worker; y is gross domestic product (GDP) per worker, k_p and k_h are the stocks of physical and human capital per worker, A is total factor productivity, and α is the output elasticity of physical capital. **This means that a doubling of human capital per worker will lead to a doubling of output per worker in the long run.** The methodology and evidence for the link between the HCI and its components and productivity and growth is detailed in Kraay (2018).

EQUATION 1. How Changes in Human Capital Can Affect Income in the Long Run

$$y = \left(\frac{k_p}{y}\right)^{\frac{\alpha}{1-\alpha}} A^{\frac{1}{1-\alpha}} k_h$$

Several criteria have guided the design of the HCI. First, the HCI is a prospective, outcome-oriented rather than input-based measure. It focuses on results and the human capital of the next generation rather than the human capital of the current workforce, which largely reflects policy choices made decades ago, when the current workforce was of school age. As such, the HCI quantitatively assesses the key stage in a person's human capital trajectory and its consequences for the productivity of the next generation of workers.

A child born in 2020 was assessed globally as being expected to achieve, on average, only 56 percent of their full productivity as a future worker. This estimate does not account for any impact of the COVID-19 pandemic. Not unexpectedly, there is considerable heterogeneity in HCIs globally. In the poorest economies in the world, a child will be only 30 percent as productive as

they could be with full health and complete education, compared with 80 percent in the richest economies. Despite the high correlation between HCI and GDP per capita, some countries perform significantly better than their income levels might suggest, including Estonia, Kyrgyz Republic, Vietnam, and West Bank and Gaza. Conversely, several countries' HCIs are lower than per capita income would suggest. Among these are a few resource-rich economies where human capital has not matched the potential that one would envisage given levels of economic growth.

Overall, differences in quality and quantity of education account for the largest share of index differences within country income groups, ranging from 65 to 85 percent. Globally, the average HCI is slightly higher for girls (0.59) than boys (0.56), as can also be observed for all HCI components (World Bank 2020a).

II. COMPONENTS

A. Component 1—Childhood Survival:

i) Data Description and Methodology:

- Survival to age 5 is the complement of the under-5 mortality rate.
- The under-5 mortality rate is the probability that a child born in a specified year will die before reaching the age of 5, if subject to current age-specific mortality rates.
- Under-5 mortality rates are calculated by the IGME using mortality as recorded in household surveys and vital registries.
- The IGME assesses data quality, recalculates data inputs, and adjusts if needed by applying standard methods. It then fits a statistical model to these data to generate a smooth trend curve that averages over possibly disparate estimates from the different data sources for an economy. Finally, it extrapolates the model to a target year.

ii) Formula *used to calculate the score* is:

EQUATION 2. Childhood Survival Formula

$$\textit{Probability of dying before age } 5 = \frac{\textit{Under } 5 \textit{ Moratality Rate per } 1000 \textit{ live births}}{1000}$$

$$\textit{Survival} = \frac{1 - \textit{probability of dying before age } 5}{1}$$

Using this formula, and based on the UNIGME data (2021), we have the following score:

EQUATION 3. Calculating Childhood Survival

$$\textit{Probability of dying before age } 5 = \frac{54}{1000}$$

$$0.946 = \frac{1 - 0.054}{1}$$

B. Component 2—Education:

Learning Adjusted Expected Years of Schooling combines information on quantity and quality of education (expected years of schooling and learning outcomes). It is comprised of two indicators: expected years of schooling (EYS), and harmonized test scores.

Indicator #2: Expected Years of School (EYS)

Expected years of schooling captures the number of years of school that a child born today can expect to complete by age 18 given the prevailing pattern of enrollment in the country. Conceptually, expected years of schooling is the sum of enrollment rates according to age from age 4 to 17. Because age-specific enrollment rates are neither broadly nor systematically available, data on enrollment rates according to level of school are used to approximate enrollment rates in different age brackets. Given that the objective is to obtain a close proxy for age-specific enrollment rates, the preferred measure is total net enrollment rate, although other rates, including gross, are also used. Total net enrollment rate measures the fraction of children in the theoretical age range for a given level of school who are in school at any level.

i) Data Description and Methodology:

- *The 2020 release of the global HCI weighs the years of schooling by level of education*: 2 for preprimary, 6 for primary, 3 for lower secondary, and 3 for upper secondary adding up to 14 years of education. For better comparability, the 2022 Djibouti HCI simulation keeps this weighting.
- *The Gross Enrollment Rates for 2021 were taken from the MENFOP website's Annexe Annuaire 2021-2022*. While the HCI generally prefers to use UNESCO Institute for Statistics Total Net Enrollment rates, the World Bank Djibouti education team considered gross administrative data to be a better reflection of enrollment rates for three key reasons. Firstly, the UIS data uses demographic projections from the 2009 census, whereas demographic projections in the administrative data are based on EDAM 2017. Secondly, attendance rates from the 2017 household survey were more closely aligned with administrative data (compared with UIS enrollment rates). Alignment was particularly evident with regards to gender disparities. Thirdly, GER is a recognized and accepted source of data for calculating EYS. In the 2020 global report of the HCI, 50 countries used sources other than the UIS to calculate their EYS scores.
- *The HCI methodology adjusts enrollment for repetition. For Djibouti, repetition adjustments were based on use administrative data*. Preprimary enrollment rates are not adjusted for repetition in the HCI methodology nor in the 2022 Djibouti simulation.

TABLE A.1. Gross Enrollment Rates in Djibouti for 2021

	GER total	GER Female	GER Male
Preprimary (4–5 years)	13.2%	12.2%	14.1%
Primary (6–10 years)	95.9%	90.2%	101.6%
Lower Secondary (11–14 years)	76.4%	69.2%	83.4%
Upper Secondary (15–17 years)	46.0%	42.4%	49.6%

ii) Formula used to calculate EYS is:

EQUATION 4. EYS formula

$$\begin{aligned} \textit{repetition adjusted enrollment} &= (1 - \textit{repetition rate}) \times \textit{enrollment rate} \\ \textit{EYS} &= (2 \times \textit{pre} - \textit{primary enrollment rate}) + (6 \times \text{Pr}\textit{imary enrollment rate}) \\ &\quad + (3 \times \textit{Lower sec ondary enrollment rate}) \\ &\quad + (3 \times \textit{Upper sec ondary enrollment rate}) \end{aligned}$$

iii) Using this formula, and based on the 2021 administrative data, adjusted for repetition, using international standard for school level duration (adding up to 14) we have the following:

EQUATION 5. Calculating EYS

$$9.2 = (2 \times 0.13) + (6 \times 0.92) + (3 \times 0.69) + (3 \times 0.42)$$

Indicator #3: Harmonized Test Scores

i) Data Description and Methodology:

- *The Harmonized Test Scores (HTS) are used to assess learning quality*. HTS are calculated using results from international and regional testing programs including Trends in International Mathematics and Science Study (TIMSS) program, the Progress in International Reading Literacy Study (PIRLS), and the Programme for International, Student Assessment (PISA), and Early Grade Reading Assessments (EGRA).
- *The harmonization of student achievement tests is made using the Global Dataset on Education Quality*. The dataset includes 163 countries and regions over 1965-2015. The globally comparable achievement outcomes were constructed by linking standardized, psychometrically robust international and regional achievement tests.
- *With EGRA the results are converted using the methodology set out in Patrinos and Angrist (2018)*. The harmonization methodology relies on the production of an "exchange rate" between international student achievement tests and their regional counterparts, which can then be used to place tests on a common scale. Test scores are converted into TIMSS units as the numeraire, corresponding roughly to a mean of 500 and a standard deviation across students of 100 points.
- *The exchange rate is based on the ratio of average economy scores in each program to the corresponding economy scores in the numeraire testing program for the set of economies participating in both the numeraire and the other testing program*. The exchange rate is calculated pooling all overlapping observations between 2000 and 2017 and is therefore constant over time. For example, consider the set of countries that participate in both the PISA and the TIMSS assessments. The ratio of average PISA scores to average TIMSS scores for this set of countries provides a conversion factor for PISA into TIMSS scores that can then be used to convert the PISA scores of all countries into TIMSS scores. The exchange rate is calculated pooling all overlapping observations between 2000 and 2017 and is therefore constant over time. This ensures that within-country fluctuations in harmonized test scores over time for a given testing program reflect only changes in the test scores themselves and not changes in the conversion factor between tests.

- *The data from the April 2022 Endline EGRA was provided by FHI (the implementing agency for the DEGRA project)*. The second-grade results were converted into HTS using the standard methodology for the Global Dataset on Education Quality.

ii) Using the above methodology, the Harmonized test score for Djibouti is 340.

Calculation of Score for the Schooling Component

i) Formula used to calculate the component is:

EQUATION 6. Formula for The School Component

$$Learning\ Adjusted\ Year\ of\ School = Expected\ Years\ of\ School \times \frac{Harmonized\ Test\ Score}{625}$$

$$School = e^{\phi\left(Expected\ Years\ of\ School \times \frac{Harmonized\ Test\ Score}{625} - 14\right)}$$

ii) Using this formula, and based on the Administrative (2021) Enrollment data, we have the following:

EQUATION 7. Calculating the School Component

$$5.0 = 9.2 \times \frac{340}{625}$$

$$0.49 = e^{0.08\left(9.2 \times \frac{340}{625} - 14\right)}$$

C. Component 3—Health:

In the absence of a single broadly accepted, directly measured, widely available metric, overall health environment is captured according to two proxies: *adult survival rates*, defined as the fraction of 15-year-olds who survive until age 60, and *rate of stunting for children under age 5*. Adult survival rates can be interpreted as a proxy for the range of fatal and nonfatal health outcomes that a child born today would experience as an adult if current conditions prevailed into the future. Stunting is broadly accepted as a proxy for the prenatal, infant, and early childhood health environments and so summarizes the risks to good health that children born today are likely to experience in their early years—with important consequences for health and well-being in adulthood.

Indicator #4: Survival Rate from Age 15-60

i) Data Description and Methodology:

- *The mortality rate for 15- to 60-year-olds is the probability that a 15-year old in a specified year will die before reaching the age of 60*, if subject to current age-specific mortality rates.
- *It is frequently expressed as a rate per 1,000 alive at 15*, in which case it must be divided by 1,000 to obtain the probability that a 15-year-old will die before age 60.

- *Adult mortality rates are estimated on the basis of prevailing patterns of death rates by age* and are reported by the United Nations Population Division (UNPD) for five-year periods. The five-year data are interpolated to arrive at annual estimates to calculate the HCI.

ii) Formula used to calculate the adult survival rate is:

EQUATION 8. Formula for Adult Survival

$$adult\ \ surivival\ \ rate = 1 - \frac{mortality\ \ rate\ \ age\ 15-60}{1000}$$

iii) Using this formula and based on data from UN population division (2021) we have the following:

EQUATION 9. Calculating Adult Survival

$$0.733 = 1 - \frac{267}{1000}$$

Indicator #5: Fraction of Children Under 5 Not Stunted

i) Data Description and Methodology:

- *The fraction of Children under 5 that are stunted is the share of children under the age of 5 whose height is more than two standard deviations below the reference median* for their ages. The reference median and standard deviations are set by the World Health Organization for normal healthy child development
- *Child-level stunting prevalence is averaged across the relevant 0–5 age range* to arrive at an overall under-5 stunting rate.
- *The Stunting rate from the 2019 SMART survey was used* to calculate the after adjustment to the complement of not-stunted as reported in the Joint Malnutrition Estimates (JME) database managed by UNICEF, WHO, and the World Bank.

ii) Formula used to calculate the indicator is:

EQUATION 10. Formula for the Not Stunted Rate

$$Under\ 5\ not\ \ stunted\ \ rate = \ 1\ - under\ 5\ stunting\ \ rate$$

iii) Using this formula, based on the JME data, we have the following:

EQUATION 11. Calculating the Not stunted Rate

$$0.791\ \ =\ \ 1 - 0.209$$

Calculation of Score for the Health Component

i) Formula to calculate the component is:

EQUATION 12. Formula for the Health Component

$$Health = e^{(\gamma ASR \times (Adult\ Survival\ Rate - 1) + \lambda stunting \times (Not\ Stunted\ Rate - 1))/2}$$

ii) Using this formula and the indicators already calculated we have the following:

EQUATION 13. Calculating the Health Component

$$0.88 = e^{(0.65 \times (0.733 - 1) + 0.35 \times (0.791 - 1))/2}$$

D. Djibouti's Simulated Human Capital Index

The components of the HCI are combined into a single index by converting them into contributions to productivity relative to a benchmark of complete education and full health and then multiplying these contributions to productivity together to obtain the overall HCI

EQUATION 14. HCI formula

$$HCI = Survival \times School \times Health$$

Using this formula and the components already calculated we have the following based on 2022 data:

EQUATION 15. Calculating the Simulated HCI

$$0.41 = 0.95 \times 0.88$$

Parameters used in weighting the HCI:

- φ = 0.08 for school
- γ ASR = 0.65 for adult survival
- γ Stunting = 0.35 for stunting

The weights are chosen to be the same across countries, so that cross-country differences in the HCI reflect only cross-country differences in the component variables. This facilitates the interpretation of the index. This is also a pragmatic choice, because estimating country-specific returns to education and health for all countries included in the HCI is not feasible.

III. UNDERSTANDING THE HCI-LINKS TO PRODUCTIVITY

The health and education components of the HCI have intrinsic value but are difficult to quantify, which makes it challenging to combine the components into a single index. Rather than relying on ad hoc aggregation with arbitrary weights, the HCI uses estimated earnings associated with an additional unit of health and education to translate them into contributions to worker productivity relative to a benchmark of complete education and full health The resulting index ranges from 0 to 1. A country in which a child born today can expect to achieve full health (no stunting and 100 percent adult survival) and full education (14 years of high-quality school by age 18) would have a score of 1, so a score of 0.70 indicates that the productivity as a future worker of a child born today is 30 percent below what could have been achieved with complete education and full health. Because the theoretical underpinnings of the HCI are in the development accounting literature, the index is linked to real differences in how much income a country can generate in the long run and measures a crucial component of potential future wealth. In 2014, human capital accounted for an estimated 64 percent of global wealth. It is thus a much larger driver of economic development than traditionally thought and rises above tangible physical assets as the most crucial ingredient for economic success and poverty reduction (Ersado et al. 2022).

If a country has a score of 0.50, GDP per worker would be twice as high if the country reached the benchmark of complete education and full health with an HCI of 1. A country such as Djibouti with an HCI value of approximately 0.41 could have future GDP per worker in this scenario of complete education and full health that is 1/0.41 = 2.4 times as high as GDP per worker under the status quo scenario. How this translates into average annual growth rates depends on how long the long run is. For example, under the assumption that it takes 50 years for these scenarios to materialize, a doubling of future per capita income relative to the status quo corresponds to roughly 1.8 percentage points of additional growth per year (World Bank 2020a).

In the case of survival, the relative productivity interpretation is stark: **children who do not survive childhood never become productive adults. As a result, expected productivity as a future worker of a child born today is reduced by a factor equal to the survival rate relative to the benchmark in which all children survive.**

The benchmark of complete high-quality education corresponds to 14 years of school and a harmonized test score of 625. **The relative productivity interpretation for education is anchored in the large body of empirical literature measuring returns to education at the individual level. A rough consensus from this literature is that an additional year of school raises earnings by about 8 percent.** The parameter $\varphi = 0.08$ measures the returns to an additional year of school and is used to convert differences in learning-adjusted years of school across countries into differences in worker productivity. Compared with a benchmark in which all children obtain a full 14 years of school by age 18, a child who obtains only 10 years of education, for example, can expect to be 32 percent less productive as an adult (a gap of 4 years of education multiplied by 8 percent per year).

In the case of health, the relative productivity interpretation is based on the empirical literature measuring the economic returns to better health at the individual level. The key challenge in this literature is the lack of any unique, directly measured summary indicator of the various aspects of health that matter for productivity. This microeconometric literature often uses proxy indicators

for health, such as adult height, because adult height can be measured directly and reflects accumulation of shocks to health through childhood and adolescence. **A rough consensus drawn from this literature is that improvement in health associated with a 1-centimeter increase in adult height raises productivity by 3.4 percent.** Converting this evidence on returns to one proxy for health (adult height) into the other proxies for health used in the HCI (stunting and adult survival) requires information on the relationships between these proxies:

- **There is a direct relationship between stunting in childhood and future adult height, because growth deficits in childhood persist to a large extent into adulthood, in addition to the associated health and cognitive deficits.** Evidence suggests that a 10–percentage point reduction in stunting rates increases attained adult height by approximately 1 centimeter, which increases productivity by 10.2 (stunting rate) × 0.1 (height)× 3.4 (productivity percent, or 3.5 percent.
- **The empirical evidence suggests that, if overall health improves, adult height and survival rate increase in such a way that adult height rises by 1.9 centimeters for every 10-percentage-point improvement in adult survival.** This implies that improvement in health that leads to a 10–percentage point increases adult survival rates is associated with an improvement in worker productivity of (1.9 × 3.4) percent, or 6.5 percent.

In the HCI, the estimated contributions of health to worker productivity based on these two alternative proxies are averaged together, if both are available, or used individually if only one of the two is available. The contribution of health to productivity is expressed relative to the benchmark of full health, defined as the absence of stunting, and a 100 percent adult survival rate.

For example, compared with a benchmark of no stunting, in a country where the stunting rate is 30 percent, poor health reduces worker productivity by (30 × 0.34) percent, or 10.2 percent. Compared with the benchmark of 100 percent adult survival, poor health reduces worker productivity by (30 × 0.65) percent, or 19.5 percent, in a country where the adult survival rate is 70 percent. The average of the two estimates of the effect of health on productivity is used in the HCI.

TABLE A.2. Djibouti 2022 Simulated Human Capital Index Indicators

Indicator	International Database	Year	Modeled	Most Recent Survey	Year
Probability of survival to age 5	United Nations Interagency Group for Child Mortality Estimates	2021	Yes	Pan Arab Project for Family Health	2012
Expected years of school	World Bank Staff estimates supplementing administrative data	2021	No	Administrative Data	2021
Harmonized test scores	U.S. Agency for International Development Early Grade Reading Assessment with World Bank calculations	2022	No	Djibouti Early Grade Reading Assessment	2022
Survival rate from age 15–60	United Nations Population Division, World Population Prospects	2021	Yes	Multiple Indicator Cluster Surveys	2006
Fraction of children under 5 not stunted	United Nations Children's Fund–World Health Organization–World Bank Joint Malnutrition Estimates	2019	No	Standardized Monitoring Assessment for Relief and Transition Method	2019

Appendix B| Data Mapping

I. ROADMAP FOR REGULAR HUMAN CAPITAL INDEX (HCI) UPDATES

HCI scores rarely change quickly because changes to basic services can take years to show effects, but regularly identifying changes in the components can help identify trends and bottlenecks to the productivity gains that a rising HCI comes with. These components can be derived from a number of surveys and estimates, which allows them to be collected more frequently and across countries. International databases use these surveys to create the estimates that the HCI uses. Table B.1 lists the survey types that can be used to create an HCI and that are expected to be conducted in the near future.

TABLE B.1. Surveys That Could Be Used to Update the Human Capital Index

Indicator	International Database	Next Potential Survey
Probability of survival to age 5	United Nations Interagency Group for Child Mortality Estimates	Djibouti Census Djibouti Household Survey (EDAM)
Expected years of school	World Bank Staff estimates supplementing administrative data	Djibouti Household Survey (EDAM) Administrative (Annuaire Statistique)
Harmonized test scores	U.S. Agency for International Development Early Grade Reading Assessment with World Bank calculations	Djibouti Early Grade Reading Assessment (DEGRA) Analysis Programme of the CONFEMEN Education Systems (PASEC)
Survival rate from age 15 to 60	United Nations Population Division, World Population Prospects	Djibouti Census Djibouti Household Survey (EDAM)
Fraction of children under 5 not stunted	United Nations Children's Fund–World Health Organization–World Bank Joint Malnutrition Estimates	Standardized Monitoring Assessment for Relief and Transitions Method (SMART)

II. HCI COMPLEMENTARY INDICATORS

Human capital, a crucial ingredient for economic growth, is multidimensional and cumulatively built over the lifecycle. Because of the slow-moving nature of the HCI, an additional set of complementary human capital indicators can offer a snapshot of proximate dimensions of human capital in Djibouti that can be monitored to measure progress on intermediate outcomes. In combination with regional

income group averages, they highlight where the need is for investment in people in each stage of life and for data collection and updates for evidence-based policy making. Table B.2 lists a selection of complementary indicators according to lifecycle stage, with those for which data are not available italicized and highlighted in yellow.

TABLE B.2. Potential Human Capital Complementary Indicators

Early Childhood
Neonatal mortality (deaths per 1,000 live births)
Maternal mortality (deaths per 100,000 live births)
Completeness of birth registration (%)
Bacillus Calmette–Guérin (tuberculosis) vaccination (%)
Children receiving minimum meal frequency (%)
Preschool gross enrollment (%).
School Years
Primary school completion (%).
Gross secondary school enrollment (%)
Learning poverty (%)
Youth/Adolescence
Youth unemployment (%)
Youth not employed or in school or training (%)
Adolescent fertility (births per 1,000 women)
Gross tertiary education enrollment (%)
Adulthood
Female labor force participation (%)
Male labor force participation (%)
Life expectancy at birth (years)

III. DATABASES USED IN HUMAN CAPITAL REVIEW

The Human Capital Review draws on range of data sources ranging from official reports, journal articles, to databases. Table B.3 lists the databases used in the HCR. It also includes databases accessed through the data collection phase which are relevant to human capital in Djibouti but are no longer in the report.

TABLE B.3. Databases and Data Sources Used in Human Capital Review

Year	Name and Source	Primary or Secondary
2019	Spatial database of health facilities managed by the public health sector in sub–Saharan Africa - Alegane et al.	Secondary
2017	Countdown to 2030 - UNICEF	Secondary
2020	COVID-19 National Panel Phone Survey - National Institute of Statistics of Djibouti	Primary
2021	Early Grades Reading Assessment - USAID	Primary
2002	Master Sample and Preliminary Poverty Survey - National Institute of Statistics of Djibouti	Primary
2012	Djibouti Household Survey 3 - National Institute of Statistics of Djibouti	Primary
2017	Djibouti Household Survey 4 - National Institute of Statistics of Djibouti	Primary
1990–2019	Global Health Data Exchange - Institute for Health Metrics and Evaluation	Secondary
2017	SDG Labor Market Indicators - International Labor Organization	Secondary
2010–2021	Labor Force Statistics - International Labor Organization	Secondary
2022	Modelled Estimates and Projections Database - International Labor Organization	Secondary
2019	Social Security Inquiry Database - International Labor Organization	Secondary
2022	World Economic Outlook - International Monetary Fund	Secondary
2022	COVID-19 Data Repository - John Hopkins	Secondary
2019	Relative Wealth Index - Meta & HCR team calculations	Secondary
2022–2021	Statistical Yearbook - Ministry of National Education and Vocational Training	Primary
2014	Integrated Food Security Phase Nutrition Survey - Integrated Food Security Phase Nutrition Survey Secretariat	Primary
2012	Pan Arab Project for Family Health - OPEC fund for International Development	Primary
2012, 2019	Standardized Monitoring Assessment for Relief and Transition Method Survey - National Institute of Statistics of Djibouti	Primary
2020	UN Interagency Group for Child Mortality Estimates - United Nations Children's Fund	Secondary
2022	World Population Prospects - United Nations Population Division	Secondary
2018	aidsinfo - Joint United Nations Programme on HIV/AIDS	Secondary
2017–2017	Sustainable Development Goal 4 Indicators - UNESCO Institute for Statistics	Secondary
2016	Vitamin A Coverage - United Nations Children's Fund	Secondary
2006	Multiple Indicator Cluster Survey 3 - United Nations Children's Fund	Primary
2021	National immunization Coverage Estimates - World Health Organization, United Nations Children's Fund	Secondary
2018–2021	Changing Wealth of Nations - World Bank	Secondary
1996–2021	World Governance Indicators - World Bank	Secondary
2017	Worldwide Bureaucracy Indicators - World Bank	Secondary
2010, 2019	Gender Data Portal - World Bank	Secondary

WORLD BANK GROUP

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