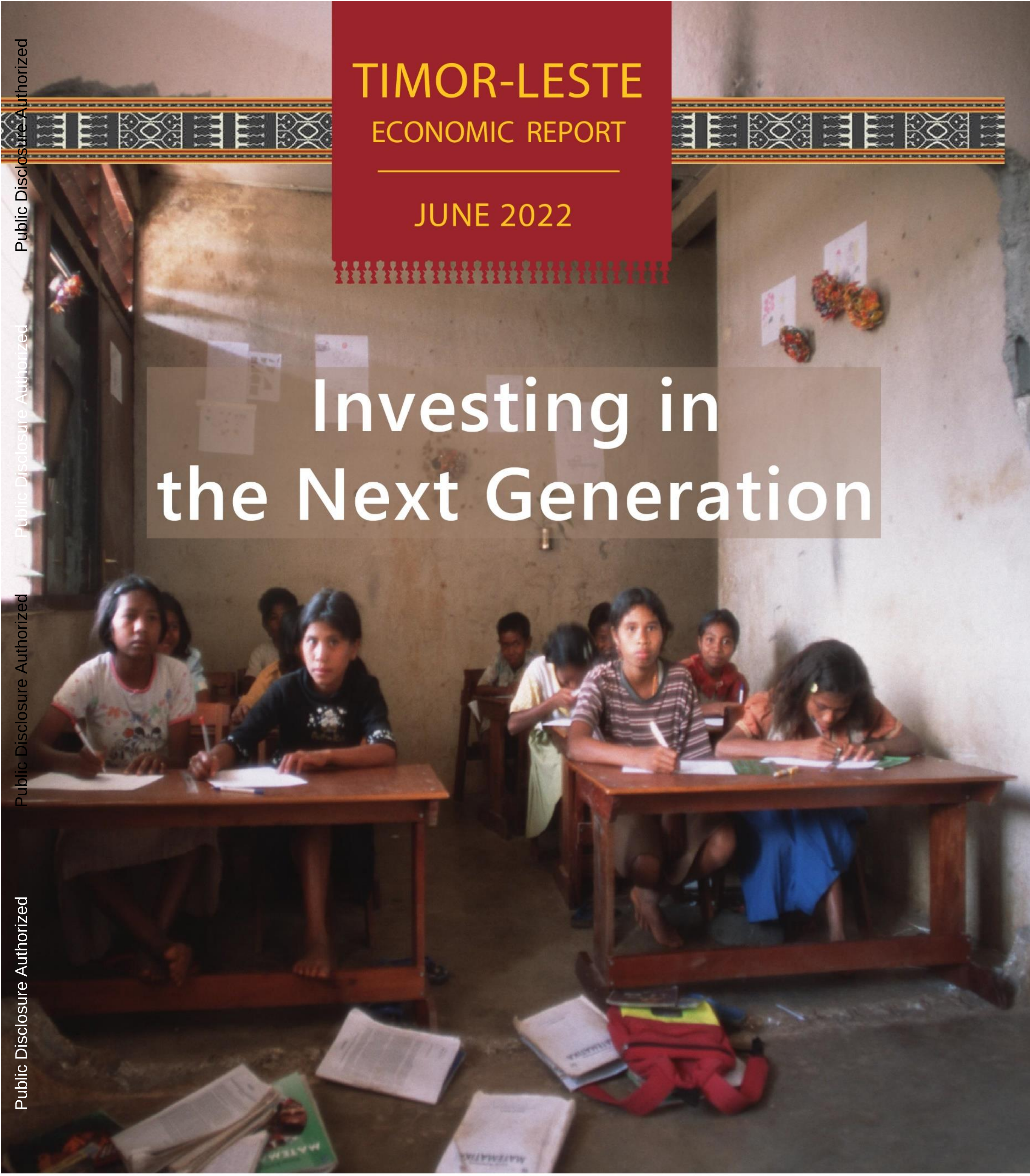
TIMOR-LESTE
ECONOMIC REPORT

JUNE 2022

Investing in the Next Generation



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Timor-Leste Economic Report

Investing in the Next Generation

June 2022

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Acknowledgment

The Timor-Leste Economic Report (TLER) is a bi-annual World Bank report that assesses recent macroeconomic developments, outlook and risks, as well as specific development challenges for the Timorese economy. In doing so, the TLER aims to inform the public policy debate and is geared towards a wide audience, including the general public, the government, the private sector, civil society organizations, and other domestic and international stakeholders.

The TLER is a product of the World Bank Jakarta and Timor-Leste office and receives strategic guidance from an editorial board chaired by Satu Kahkonen, Country Director for Indonesia and Timor-Leste. The report is prepared by the Macroeconomics, Trade, and Investment (MTI) Global Practice team, under the guidance of Lars Christian Moller (Practice Manager), Aparnaa Somanathan (Practice Manager), Toby Linden (Practice Manager), Yasser El-Gammal (Practice Manager), Bernard Harborne (Resident Representative), Achim Daniel Schmillen (Practice Leader) and Habib Rab (Practice Leader and Lead Economist). The report production is led by Alief Aulia Rezza (Chapter 1 and Chapter 2) and Kathryn Gilman Andrews (Chapter 3) and prepared by a team composed of Bayu Agnimaruto, Kevin Simulya Alyono, Csilla Lakatos (Box 1.3), Jose Maria Tavares Mousaco, Somil Nagpal, Yus Medina Pakpahan, Mochamad Pasha (Box 1.3), Bambang Suharnoko Sjahrir (Box 1.1), Janssen Edelweiss Nunes Teixeira and Elisabeth do Rosario Vicente. Rideca Duarte provided administrative support and coordinated the organization of the report launch event. The report was typeset by Arsianti.

The report also benefited comments from David Mark Freedman (IFC), Brett Inder (Monash University), David Stephen Knight (World Bank), and Pablo Lopez-Murphy (International Monetary Fund) as well as Yu Cao, Ergys Islamaj and Duong Le on behalf of the World Bank Chief Economist Office for East Asia and Pacific.

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KEY INDICATORS	
Population (million)	1.3
GDP (USD billion)	1.6
GDP per capita (USD)	1,295
Poverty headcount ratio -national poverty line (% population)	41.8
Poverty headcount ratio-$1.90 a day (2011 PPP, % population)	22.0
Poverty headcount ratio-$3.20 a day (2011 PPP, % population)	65.9
GINI index	28.7

Notes: Population and GDP data are for 2019. Poverty and inequality data are for 2014 (with revised PPPs).

Summary

1. Recent Developments

Buffeted by COVID-19 and Tropical Cyclone Seroja, the non-oil economy grew by 1.5 percent in 2021. A record-high budget with expenditure of nearly 90 percent of GDP bolstered government consumption. A series of fiscal and quasi-fiscal stimulus measures supported employment and incomes, thereby allowing households to maintain their consumption. On the demand side, gross capital formation shrunk while net exports expanded. The oil economy grew by 8.3 percent, bringing the total economic growth to 4.4 percent.[1]

The government lifted the pandemic-related state of emergency at the end of November 2021, but challenges remain. Following a relatively brisk start, the vaccination campaign has moved sluggishly in recent months. Nevertheless, the authorities have initiated vaccination of children and adolescents between 12 and 18 years old, while booster shots have been made available. There has been a concerning surge of Dengue Fever with 5,000 reported cases (and 54 fatalities) to date since January 2022–a more than seven-fold increase from the same period a year ago. All restrictions for inbound international vaccinated travelers to Timor-Leste have been rescinded. By the end of May 2022, the partly vaccinated and fully vaccinated figures in Timor-Leste stood at 85.4 percent and 73.4 percent, respectively.

Rising commodity prices spurred by the Ukraine-Russia war imposes an additional hurdle but Timor-Leste has the policy space to absorb the shocks. Despite the negligible direct impact, the Timor-Leste economy is greatly exposed to the indirect impacts of the war through commodity markets. Headline inflation rose to 6.6 percent year-on-year (YoY) in April 2022, driven by surging global food and energy prices. Timor-Leste has the fiscal space to absorb the impact of the shocks through various social protection schemes allocated in the 2022 budget. These include *Cesta Basica* (the Food Basket program) and *Bolsa de Mae – Jerasaun Foun* (aimed at expectant mothers and children). In addition, the President has recently introduced fuel subsidies for national public transport operators, national maritime and air transport operators and purchasers of fuel intended for agricultural and fishing activities.

The President has recently promulgated a 2022 budget revision of US$1.24 billion (74.8 percent of non-GDP). The revision was made to incorporate complementary measures proposed during the Presidential election campaign. Of the new measures proposed by the government nearly 90 percent will be allocated to the National Liberation Combatants' Fund (NLCF). The revised 2022 State Budget will amount to USD 2.4 billion (nearly double of non-oil GDP), including social security[2]. This is the largest budget in the country's history and will accelerate the depletion of the Petroleum Fund to less than a decade.

The Petroleum Fund balance remained largely unchanged as sizable petroleum revenues and a meagre investment return were offset by substantial withdrawals. The balance of the Fund at the end of Q1 2022 increased by less than 1 percent yoy. Since Q1 2021, higher hydrocarbon prices have driven petroleum revenues and contributed USD 1.2 billion to the Fund but close to USD 1.1 billion was transferred out to the state budget and to remunerate the management of the Fund. It is also worth noting that the Fund recorded more than USD 900 million in losses during Q1 2022 because of weak investment returns.

[1] With the ratification of the Maritime Boundary Treaty in August 2019, oil and gas fields previously shared between Australia and Timor-Leste in the Joint Petroleum Development Area (JPDA) transitioned to Timor-Leste's exclusive jurisdiction. Accordingly, offshore petroleum production is now considered to be part of Timor-Leste's Gross Domestic Product (GDP) and trade statistics. Nevertheless, the full year national account data for Timor-Leste's oil economy is only available for the year 2020. Using nominal values, oil GDP was 16.1 percent of Timor-Leste's economy in 2020.

[2] The creation of the NLCF reduces the balance of the Petroleum Fund and will not be recorded as the budget's cash disbursement.

2. Outlook and Recommendations

The non-oil economy is projected to expand by 3.0 percent in 2022. The projection is underpinned by a significant increase in government consumption and investment as well as rebounding private consumption, supported by the gradual reopening of borders. The fiscal deficit is projected to increase from 45.3 percent of non-oil GDP in 2021 to close to 55 percent in 2022 driven by an increase in transfers and capital spending. Without major revenue reforms, the fiscal deficit is projected to hover around 50 percent of non-oil GDP in the medium term. The Petroleum Fund is expected to fall in value at least until there are inflows from a new hydrocarbon production field or a considerable change in the government's fiscal policy.

Uncertainties surrounding the baseline forecast remain large whilst risks are tilted to the downside. Macroeconomic risks include further increases in global food and energy prices and COVID-19-related mobility restrictions. Timor-Leste's exposure to extreme weather events and natural disasters also makes it vulnerable to upward pressure on food prices –especially if there is another spell of heavy floods. Domestic political uncertainty and policy reform slippages can also lead to protracted macroeconomic imbalances.

Fiscal consolidation, Public Financial Management (PFM) and structural reforms could help lay the foundation for more diversified and resilient growth in the medium term. PFM reforms are a major priority because government expenditure will continue to drive the economy in the medium term. To preserve fiscal and external sustainability, expenditure rationalization and revenue mobilization should accompany PFM reforms. Furthermore, investments in human capital are directly linked to Timor-Leste's future growth, productivity, and competitiveness. The Human Capital Index for Timor-Leste stood at 0.45 in 2020, lower than the East Asia and Pacific's regional average of 0.59. A healthier and more skilled workforce is necessary to better meet future labor demands across the economy.

3. Special Focus: Investing in the Next Generation

Timor-Leste is facing a human capital crisis. Human capital (HC)—the knowledge, skills, and health that people accumulate over their lives, enabling each individual to more fully realize his or her potential—is not only an intrinsic value, but also a central driver of sustainable growth and poverty reduction. Despite some progress over the last decade, measured by the Human Capital Index (HCI), a child born in Timor-Leste today will only be 45 percent as productive as an adult as she could be if she enjoyed complete education and full health. This is lower than the global average (56 percent) the average for the East Asia & Pacific region (59 percent), and the average for its peer income countries in the region (50 percent). Unfortunately, without urgent transformative action, things could get worse. Timor-Leste faces multiple human capital challenges. These include high rates of early life morbidity and mortality as 5 percent of children born will not survive to age 5; poor childhood nutrition; and poor learning outcomes due to low levels of education service delivery and quality. Poor nutrition during childhood results in reduced educational attainment, long-term income loss and increased risk of noncommunicable diseases in adulthood.

Timor-Leste's macro-fiscal situation, demographic profile, and losses caused by Covid-19 call for urgent action to bolster human capital. Its demographic profile offers an opportunity that must be seized now - by building an enabling environment for human capital accumulation and ample labor market opportunities for its current largest cohort of students and children before they reach the labor market by 2040. The need to put the fiscal position on a sustainable footing means that the people of Timor-Leste will now need to be, more than ever, the drivers of the country's income growth. Furthermore, the Covid-19 pandemic has disrupted economic activity and human capital service delivery, which risks adverse long-term impacts on health and learning losses, ringing the alarm that "business as usual" approaches to human capital accumulation and protection will not suffice to make up for lost ground. Without an adequately healthy, educated, and productive population, Timor-Leste's demographic transition may give rise to socially and economically destabilizing conditions.

To take advantage of this crucial opportunity to capitalize on the youth bulge and translate it into a demographic dividend, Timor-Leste will need to improve the efficiency, equity and sustainability of its human capital investments. Key priority areas for human capital development would include, first, investments to reduce malnutrition in young children to improve the health and productivity of Timor-Leste's population in the long term. Second, renewed efforts are needed to address the learning crisis. While availability of educational institutions has increased notably in recent years, poor and disparate learning outcomes and high prevalence of grade repetition will require a focus on the quality of education spending, including with regard to improving teacher capacity. Third, Timor-Leste would benefit from rebalancing the social protection system towards those who need it most. Across all three priority areas, more modern and integrated digital data systems have the potential to improve human capital service delivery; with the introduction of a digital identification system as a true game changer.

A sharper focus on human capital investment is also essential for Timor-Leste's sustained long-term growth. Human capital investments not only contribute to economic growth, but also effectively contributes to poverty reduction goals. Increased human capital investments typically disproportionately accrue to the poor by addressing initial service deficiencies and gaps, reducing inequalities. Investing in human capital also enhances social cohesion and equity, while strengthening people's trust in institutions—an important factor in mitigating fragility as the country contends with the legacies of past conflict.

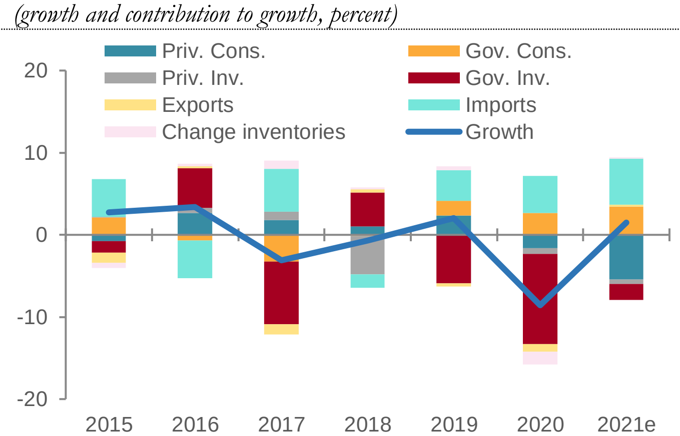
1. Recent Developments

1.1. The economy made a sluggish recovery in 2021.

Buffeted by the COVID-19 pandemic and heavy flooding caused by Tropical Cyclone Seroja, the non-oil economy grew by 1.5 percent in 2021.[3] Following a contraction of 8.6 percent in 2020, non-oil GDP growth in 2021 was supported by government and private consumption. A record-high budget with realized expenditure of nearly 90 percent of GDP in 2021–approved in December 2020 and further supplemented in April 2021–included short-term COVID-19 measures and fiscal responses to address the impact of the floods. In addition, a series of fiscal and quasi-fiscal stimulus measures supported employment and incomes, thereby allowing households to boost their consumption (Figure 1.1).

Figure 1.1: Non-oil Economy Expanded in 2021, driven by Private and Government Consumption

(growth and contribution to growth, percent)



Source: Statistics Timor-Leste

On the demand side, investment shrunk while net exports expanded. Heavy pandemic-related restrictions, new procedures to improve public investment transparency,[4] and the flood response contributed to a slowdown in public investment. In particular, the execution of capital development spending was only 24 percent of the allocated budget in 2021, the lowest during the last five years. Furthermore, despite the

[3] The pandemic-related restrictions were mainly imposed during the second and third quarter of 2021, while the country was hit by devastating natural disasters in April.

[4] Preliminary GDP Statement, https://www.statistics.gov.tl/wp-content/uploads/2022/03/Preliminary-GDP-2021_english-20220405_Publication.pdf.

government support, private investment contracted–continuing the declining trend since 2017. The 2021 Enterprise Surveys reveal that main obstacles for the firms in Timor-Leste include political instability, access to finance and availability of electricity[5]. The government also awarded fewer authorizations and licenses in the construction sector. Exports of goods and services accelerated, driven mainly by greater volumes of coffee exports as stocks accumulated with increased production. In response to the increase in private consumption, the import of consumer goods rebounded slightly, whereas imported services plummeted considerably. As total imports shrank, net exports made a sizable contribution to overall economic growth.

The Oil GDP reported growth of 8.3 percent in the preliminary figures for 2021. The Oil GDP is defined as the production, expenditures, and income related to Bayu-Undan offshore platform and other hydrocarbon exploration activities in the country. Substantial investments were made in the sector during 2021, including infill drilling, essentially decreasing well spacing in a way that increases recoverable reserves, in the Bayu-Undan field[6]. The intervention almost instantly led to an improvement in hydrocarbon output over the reporting period. Indeed, there was slightly more than 30.0 percent yoy increase in oil production during the second quarter of 2021 alone[7].

1.2 Pandemic-related restrictions have largely been lifted, but health challenges remain.

The government lifted the pandemic-related state of emergency at the end of November 2021 and social and economic life has largely returned to normal. With the exception of the presentation of a full vaccination certificate, all restrictions for inbound international travelers to Timor-Leste have been rescinded. At the time of writing, Timor-Leste had a low transmission rate for COVID-19. There are no hospitalized patients and no deaths reported since May 13. This is despite election-related mass gatherings during the first and second round of the presidential election in March and April.

Following a relatively brisk start, the vaccination campaign has slowed down more recently. Timor-Leste administered its first COVID-19 vaccine on April 7, 2021, and by January 1, 2022, 83.4 percent of eligible adults had received their first dose of vaccine, while 68.2 percent have been fully vaccinated. Despite sufficient vaccines for all eligible adults, vaccination rates have stalled. The partly vaccinated and fully vaccinated figures stood at 85.4 percent and 73.4 percent, respectively, by May 31, 2022–close to the early year figures (Figure 1.2). As of late May 2022, Timor-Leste is trailing, but quickly catching up, at the second half of the standings when it comes to vaccination progress (Figure 1.3).[8] Nevertheless, the authorities have initiated the vaccination of children and adolescents between 12 and 18 years old, while booster shots have been made available (Table 1.1).

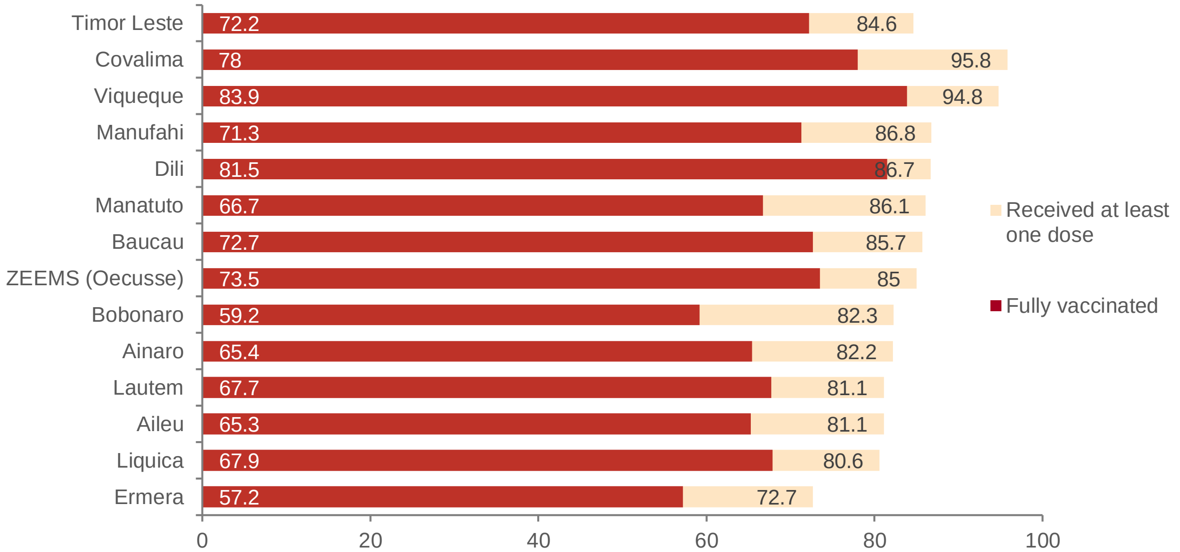
Table 1.1: Vaccination Coverage, by Population Cohort

Age Cohort	First Dose	Second Dose
18 years and above	85.4	73.4
12 to 18 years old	84.4	70.5
Booster (18 years and above)		12.1

Source: Ministry of Health

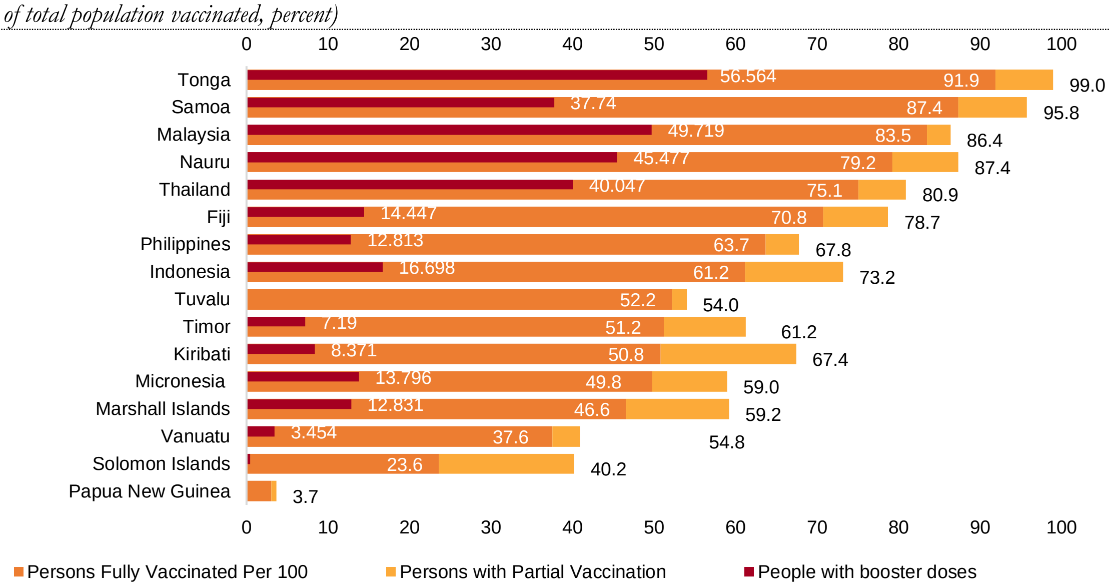
[5] See https://www.enterprisesurveys.org/en/data/exploreeconomies/2021/timor-leste#2
[6] https://www.santos.com/news/santos-commences-bayu-undan-phase-3c-infill-drilling-campaign/
[7] Timor-Leste Country Report, 2nd Quarter 2022, The Economist Intelligence Unit
[8] Figure 1.3 admittedly employs different measurement unit for vaccination coverage than what is used by the Ministry of Health of Timor-Leste in Figure 1.2.

Figure 1.2: Vaccination Coverage, by Districts
(Among 18 y and above population, percent)



Source: Ministry of Health, Timor-Leste
Note: Based on 2022 population estimates.

Figure 1.3: Percent of People Vaccinated in Southeast Asia and Pacific
(Percent of total population vaccinated, percent)



Source: OWID and WHO.
Note: Booster doses are doses administered beyond those prescribed by the original vaccination protocol.

The authorities' focus on accelerating the coverage of COVID-19 vaccination may have considerably disrupted essential health services. The second Socio-Economic Impact Assessment (SEIA 2.0)[9] reveals that the impact of COVID-19 has hit the poorest and vulnerable households the most and exacerbated underlying issues within the country, including limited access to health services. Among other consequences are that a sizable share of children missed scheduled vaccinations, while over one-half of women missed reproductive health services. There has also been a concerning surge in cases of Dengue Fever, with 5,000

[9] Jointly instigated by the Ministry for the Coordination of Economic Affairs, the General Directorate of Statistics, and United Nations.

reported cases (and 54 fatalities) since January 2022–a more than seven-fold increase from the same period a year ago.

Box 1.1: The impact of twin shocks to Poverty

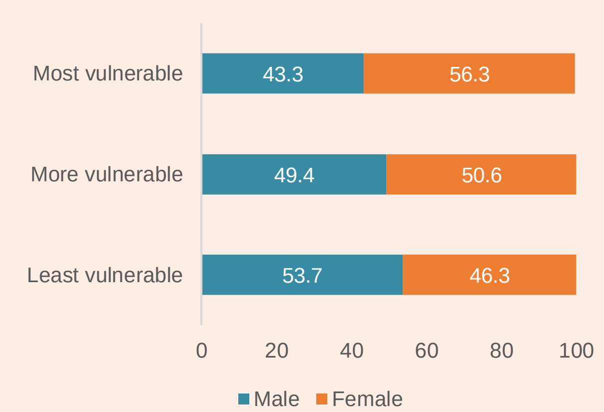
Poverty in Timor-Leste has declined significantly from 2007 to 2014, however, lack of more recent data poses a challenge to fully understand the current condition. The poverty rate at the national poverty line has fallen from 50.4 percent in 2007 to 41.8 percent in 2014. Measured using an internationally comparable poverty line of US$1.90 per person per day (2011 PPP), the poverty rate has declined even more from 37.4 percent in 2007 to 22 percent in 2014. The latest poverty measurement was produced using Timor-Leste Survey of Living Standard (TL-SLS) 2014. The General Directorate of Statistics (GDS) of the Ministry of Finance, plans to conduct the next TL-SLS in 2023. A decade long gap of poverty measurements creates challenges for stakeholders to understand fully the current condition of poverty in Timor-Leste.

Development partners in collaboration with the government try to fill in the data gap while recent surveys may shed some light on current poverty in Timor-Leste. Building upon the nationally representative Socio-Economic Impact Assessment (SEIA) 2.0[10], the GDS, UNDP and the World Bank are conducting a nationally representative high-frequency household phones survey in May-June 2022 which will update the assessment of impacts of the pandemic, while also serving as a pilot of a more frequent poverty monitoring survey to complement the TL-SLS.

The poor are unevenly distributed across the country. The SEIA 2.0 uses a wealth index, following the approach used in Demographic and Health Surveys (DHS)[11] as a proxy of household welfare status. By defining poorer households as those who belong to the lowest two quintiles of the wealth index, the SEIA indicates that the municipality with the highest share of poorer households is Oecusse (69.4 percent) and the municipality with the lowest share is Dili, with only 6.8 percent of its households categorized as poor and vulnerable. This finding is consistent with spatial patterns of poverty suggested by the TL-SLS 2014[12].

Women and the poor are more likely to be socially vulnerable. The SEIA 2.0 constructs a social vulnerability index to indicate whether a household is relatively more vulnerable based on four types of vulnerability: number of older persons in the household, female headship, child dependency ratio and number of persons with disability in the household.[13] The SEIA indicates that almost 60 percent of the most vulnerable household members were women (Figure 1.4) and more than 50 percent of the most vulnerable households belong to the two lowest quintile of the wealth index.[14]

Figure 1.4: Share of men and women who belong to households categorized by vulnerability index
(percent)



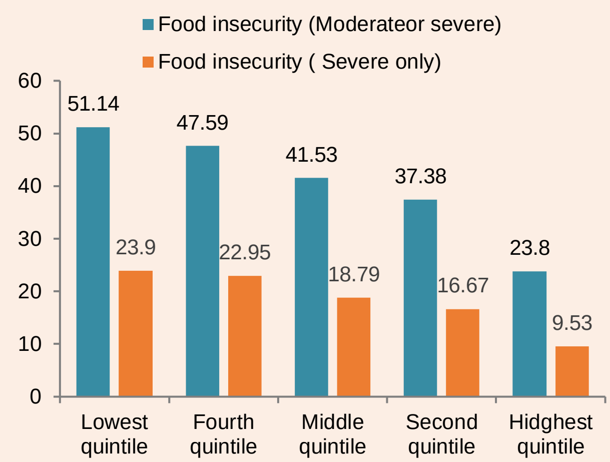
Source: GDS and UNDP (2021)

The prevalence of food insecurity is higher among the poor (Figure 1.5). Using the Food Insecurity Experience Scale (FIES), the SEIA 2.0 shows that 42.4 percent of the population experienced moderate or severe food insecurity as measured in July-September 2021. The prevalence of food insecurity is higher among those in the lowest quintile of the wealth index. About half of the population in the lowest quintile experienced moderate and severe food insecurity. Nonetheless, about 24 percent of households in the highest wealth quintile also experienced moderate and severe food insecurity, indicating the vulnerability that extends beyond the poorest households. SEIA 2.0 report suggests that significant damage and loss on

[10] The GDS and the UNDP conducted the nationally representative Socio-Economic Impact Assessment (SEIA) 2.0 survey in July-August 2021 to identify the impacts of COVID-19 pandemic on individuals, households and MSMEs in Timor-Leste.
[11] The SEIA wealth index is based on select household's assets, utilities, and dwelling characteristics (GDS and UNDP, 2022). Complete methodology is available in GDS and UNDP (2021) and Rutstein (2008).
[12] World Bank (2019). Note that SEIA 2.0 was designed to be representative at the national level therefore may not be representative at a municipality level.
[13] The social vulnerability scores are divided in three categories: (1) less vulnerability for household with zero vulnerability score, (2) more vulnerable for households that scored below the median for all non-zero scores, and (3) most vulnerable for households that scored equal or above the median for all non-zero scores. The complete methodology is available in GDS and UNDP (2021).
[14] GDS and UNDP (2021)

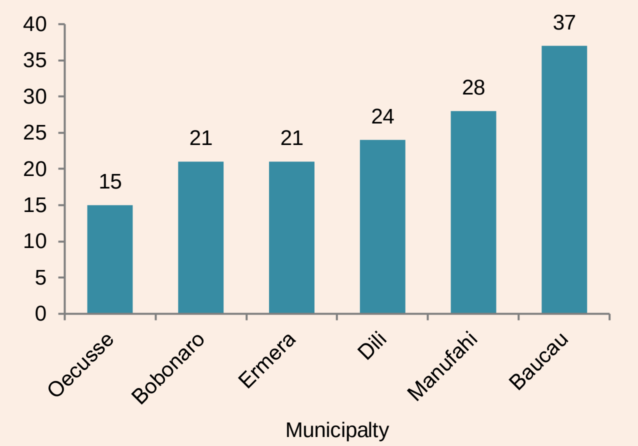
farmlands caused by the easter flood in March 2021 coupled with the mobility restrictions due to COVID-19 which affected the supply chain for food are the reasons behind this prevalence of food insecurity.

Figure 1.5: Prevalence of moderate or severe food insecurity by wealth quintile
(in percentage)



Source: GDS and UNDP (2021)

Figure 1.6: Share of households that would be able to afford nutritious diet
(in percentage)



Source: KONSSANTIL, WFP and FAO (2019)
Note: Estimated by comparing diet cost to adjusted household food expenditure from TL-SLS 2014.

Majority of Timorese households cannot afford nutritious diets (Figure 1.6). A joint report by KONSSANTIL, WFP, and FAO[15] indicate that a nutritious diet would cost more than the estimated food expenditure of majority of households in six municipalities where the study was conducted. By this benchmark, less than 40 percent of households in those municipalities could afford a nutritious diet in 2019[16].

1.3. Commodity prices have soared since the start of the conflict in Ukraine whilst household credit has grown.

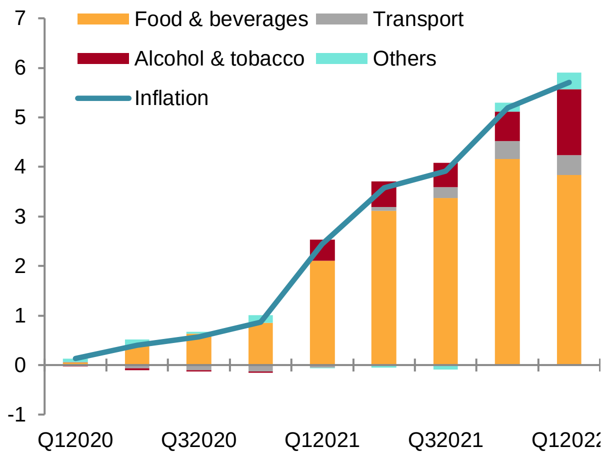
Amid a surge in food and energy prices, consumer price inflation accelerated sharply in the first half of 2022. The war in Ukraine has altered global patterns of trade, production, and consumption in ways that are expected to keep prices at historically high levels through the end of 2024.[17] Commodity prices in the first quarter of 2022 rose dramatically, particularly for commodities that the Russian Federation and Ukraine are large exporters of–such as energy, fertilizers, some grains, and metals. The war has also compounded the impact of the COVID-19 pandemic on commodity prices. The World Bank's nominal food price index increased by 25 percent between December 2021 and April 2022, reaching 69 percent above its January 2020 level. Box 1.2 discusses in more detail the impact of the war in Ukraine on Timor-Leste's economy.

As a result, the consumer price inflation (CPI) in Timor-Leste reached 5.7 percent yoy in Q1 2022. This is higher than the annual rates of 0.5 percent and 3.8 percent in 2020 and 2021, respectively (Figure 1.7). Three categories of goods contributed the most to the increase in prices: (i) food and beverages; (ii) alcohol and tobacco[18]; and (iii) transport. As the majority of goods consumed in Timor-Leste are imported, global prices

[15] The report estimates nutritious diet modelled to meet the energy needs and requirement for protein and 13 micronutrients for a five-person household (KONSSANTIL, WFP and FAO, 2019).
[16] Based on consumption TL-SLS 2014 adjusted at current price (KONSSANTIL, WFP and FAO, 2019).
[17] Commodity Market Outlook (World Bank 2022a).
[18] Partly driven by higher excise taxes for alcohol and tobacco imposed by the government from January 2022.

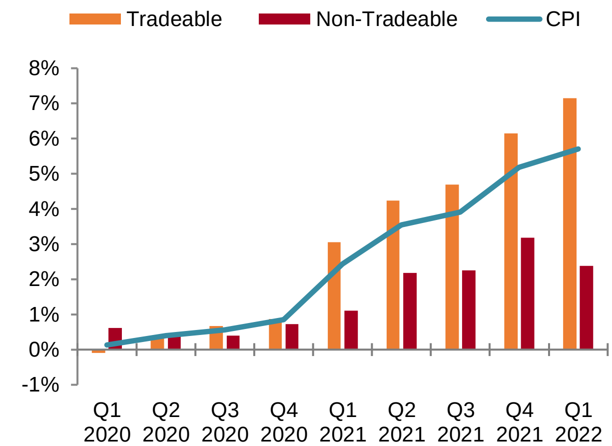
are the main determinant of domestic prices and, hence, inflation[19]. Indeed, the tradable CPI has been consistently greater than the non-tradable CPI since early 2021 (Figure 1.8).[20]

Figure 1.7: Prices of Food and Beverages Drove CPI
(percent)



Source: Statistics Timor-Leste

Figure 1.8: Tradeable CPI Dominates the CPI Mix
(percent)



Source: Statistics Timor-Leste

Box 1.2: The impact of the war in Ukraine on Timor-Leste

The Russian invasion of Ukraine has thrown the world economy into disarray and heightened uncertainty. The war's outbreak in late February 2022 severely disrupted global economic conditions. Shockwaves have been felt, especially in the commodity markets. Energy and food prices have risen considerably, even before the war started, and are projected to remain high throughout 2022. After the recent twin shocks in 2021, the highly uncertain outcome of the invasion is an additional hurdle for the Timor-Leste's economy.

The direct impact of the war in Ukraine on Timor-Leste's economy is limited. More than 98 percent of Timor-Leste's exports are destined for the Republic of Korea and Japan (Table 1.2), while close to 50 percent of imports are from Indonesia, China, and Taiwan, China (Table 1.3). Furthermore, the flow of remittances to the country remains steady as the Timorese diaspora and international workers are mainly located in Indonesia (60.6 percent), Australia (26.7 percent), United Kingdom (7.7 percent), and Portugal (4.5 percent).[21] Despite the gradual reopening of Timor-Leste's border, there have historically been insignificant numbers of tourist arrivals from Russia and Ukraine in Timor-Leste. In addition, there is no reported direct investment from the two countries in Timor-Leste.

Table 1.2: Timor-Leste's Export Destinations

	Percent of total exports
Republic of Korea	63
Japan	35
Germany	1
Indonesia	0.2
Australia	0.2
United States of America	0.1

Table 1.3: Timor-Leste's Import Sources

	Percent of total imports
Indonesia	26
China	14
Taiwan, China	10
Singapore	7
Vietnam	7
India	6

[19] Timor-Leste imposes import duties, except for specifically exempted goods, at 2.5 percent of the "customs value" of the goods. Customs value is the fair market value, including cost, insurance and freight (CIF). Food and beverages as well as alcohol and tobacco, the two main categories that drove inflation, are not the part of the goods exempted from import duties.

[20] Tradable CPI is more influenced by the prices set in the international markets and exchange rate fluctuations. On the other hand, non-tradable CPI considers the prices of a set of products which are only sold domestically.

[21] Diaspora engagement mapping: Timor-Leste (2020). Available online at https://diasporafordevelopment.eu/wp-content/uploads/2021/02/CF_Timor-Leste-v.3.pdf. Accessed on May 15, 2022.

Source: Statistics Timor-Leste. Data during February 2022.

The Timor-Leste economy is, however, greatly exposed to the indirect impacts of the war through commodity markets and trade channels. Timor-Leste remains vulnerable to global inflationary surges as the country is a net food and fuel importer. The impact of rising energy prices could have a negative fiscal impact.[22] Energy prices affect fiscal revenues generated from the sales of hydrocarbon production and public expenditures through government transfers. The government policy to contain consumer prices for electricity will increase government transfers to EDTL, the state-owned enterprise responsible for generating and distributing electricity. Electricity tariffs have been fixed for several years despite the rising international price of primary energy sources such as crude oil, coal, and natural gas.

As fuel prices increased substantially, a noticeable upward trend in food prices was also observed across Timor-Leste since the war in Ukraine started. Fuel prices increased by about 13 percent in average between February and early April 2022.[23] The local price of rice in the month of April 2022 was 0.7 percent higher than in March 2022 and 14 percent more expensive than the same month of 2021 (Figure 1.9). There was also an uptick in the price of imported rice–which is the source of nearly 40 percent of the rice consumed in Timor-Leste–due to extreme heat, bad harvest, high prices of fertilizer, and soaring shipping costs (Figure 1.10). Moreover, since Ukraine and Russia account for about 60 percent of world sunflower oil production (Figure 1.11, the war has significantly impacted the price of cooking oil. The availability of vegetable oil, including cooking oil, on the international market has also been adversely impacted by the decision of Indonesia, the world's biggest producer and exporter of palm oil, to impose a ban on palm oil exports.[24] The price of cooking oil in Timor-Leste rose by 54 percent in April 2022 (Figure 1.12). As cooking oil is used throughout the food industry–from ready meals to long-life cream–cost rises and shortages have further repercussions on the price of other tradable goods in the country.

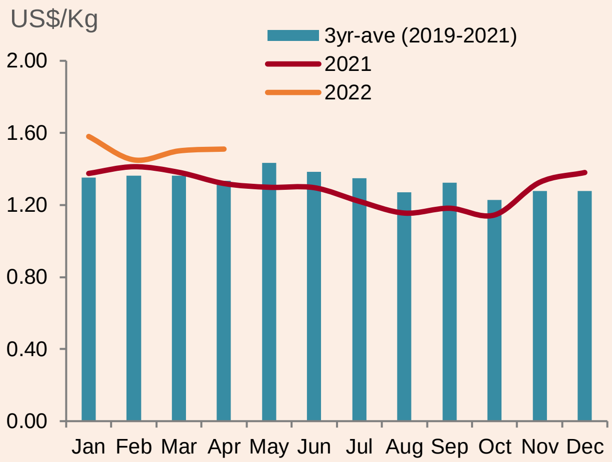
Timor-Leste has the policy space to absorb the limited shocks transmitted through global commodity markets. The government has fiscal space through its large, liquid, and accessible Petroleum Fund. Early this year, the government and parliament agreed to allocate USD 80 million for *Cesta-Basica* (the Food Basket Program) in the 2022 budget. This is an increase of nearly 600 percent from the budget allocated in 2021. Additionally, the president has promulgated the Decree-Law to allocate fuel subsidies for national public, air, and maritime transport operators working in agricultural and fishing activities. The measure is applied temporarily and involves the allocation of fuel vouchers with a 100 percent discount on the difference between the average price of a litre of gasoline or diesel in December 2021 and the current price. The program is set to expire by July 31 but can be extended if required. Additional monthly social protection payments for expectant mothers (USD 15) and children under three years of age (USD 20) through *Bolsa de Mae – Jerasaun Foun* have been made available recently in three districts.

[22] Recent estimate suggests that Timor-Leste produces less than a half million barrels of oil equivalent of hydrocarbons per month. Furthermore, the production is largely condensates and gas which are considerably cheaper than oil. The higher prices of oil accordingly only translate to middling additional revenues that are not enough to cover the various fiscal measures. See; http://www.tatoli.tl/en/2021/07/29/bayu-undan-phase-3c-infill-production-exeeds-expectation/

[23] Survey data from TANE Konsumidor (Timor-Leste's Consumers Protection Association), collected from 19 fuel stations across Dili. Year-on-year (yoy) data is unavailable.

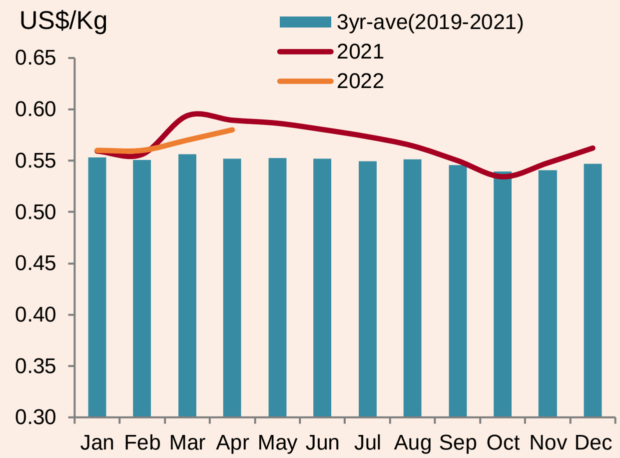
[24] The ban was however short-lived. Banned to export since April 28, 2002, palm oil producers are allowed to resume their export activities from May 23, 2022. See https://asia.nikkei.com/Economy/Indonesia-to-lift-palm-oil-export-ban-on-May-23

Figure 1.9: Price of Local Rice has accelerated…
(USD/kg)



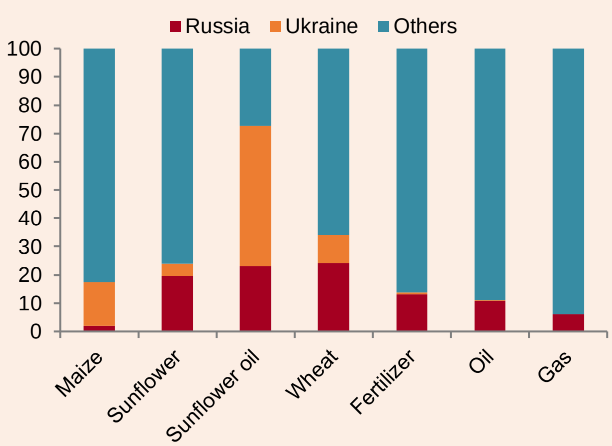
Source: WFP Timor-Leste.

Figure 1.10: … as has the Price of Imported Rice
(USD/kg)



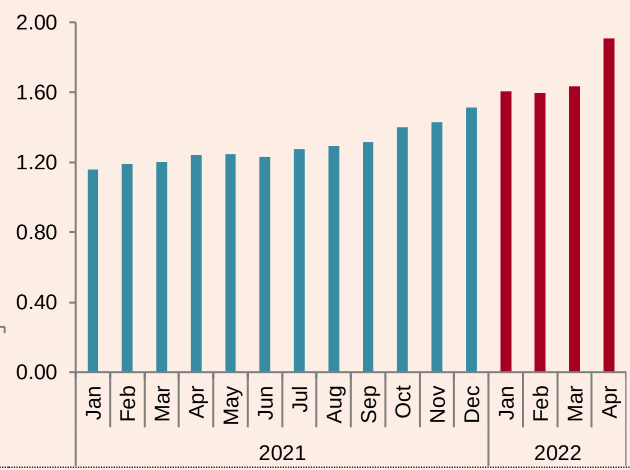
Source: WFP Timor-Leste.

Figure 1.11: Global Market Shares for Key Exports of Ukraine and Russian Federation
(percent)



Source: UN COMTRADE.

Figure 1.12: Price of Vegetable Oil
(USD/litre)



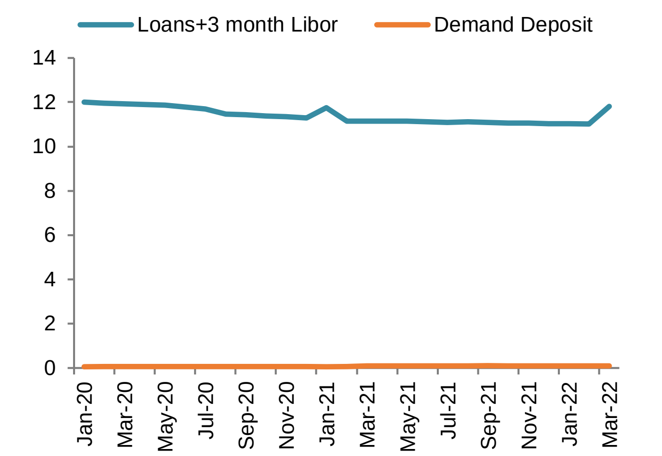
Source: WFP Timor-Leste.

Despite slightly higher interest rates, commercial banks' credit to the private sector continues to grow. The average bank lending rate rose to 11.8 percent in Q1 2022 from 11.2 percent in the same quarter a year before. Conversely, deposit rates rose only 1 basis point during the same period (Figure 1.13). These movements resulted in a higher lending spread for banks. On the other hand, credit to the private sector expanded yoy by 3.9 percent in Q1 2022. The strong growth of lending to the agriculture, water, and forestry sectors (153.5 percent) as well as to industry and the manufacturing sector (119.2 percent) was mainly due to base effects. Despite a continuous increase in the number of inbound passenger arrivals at the Dili International Airport,[25] a considerable yoy decline was observed in loans to the tourism and service sector (-50.2 percent) as well as transportation and communication (-61.3 percent) (Figure 1.14). An accurate and timely picture of the financial system's health is essential to avoid a spike in credit costs and nonperforming loans.

[25] Dili International Airport welcomed 278 percent more flights and 473 percent more visitors during Q1 2022 relative to Q1 2021.

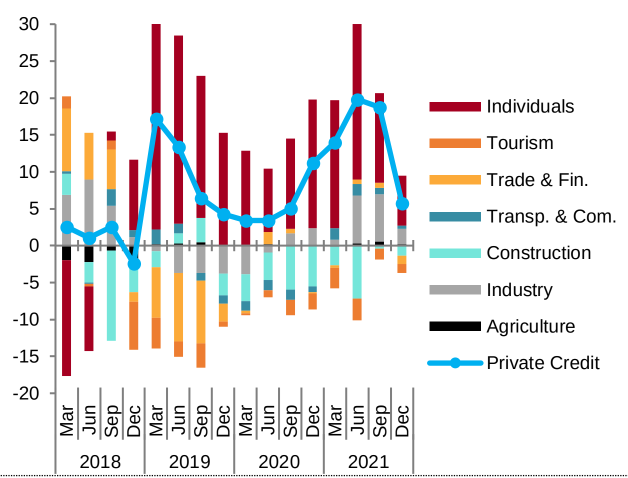
Lending to individuals, mostly in public administration jobs with secure wages, accounted for 67.0 percent of the total commercial bank's lending, rising slightly from 65 percent in Q1 2021. Overall, access to finance remains one of the top two business environment constraints in Timor-Leste.[26] Less than 5 percent of the firms surveyed financed their investment activities from commercial banks, while nearly 90 percent financed their investments from internal sources (Figure 1.15). The main obstacles to stronger financial intermediation include: (i) a weak collateral system; (ii) difficulty in assessing borrowers' credit risk profiles; and (iii) a low level of financial literacy. Overall, the size of the financial sector remains small with the ratio of credit-to-non-oil GDP estimated at 16.8 percent in 2021.

Figure 1.13: Commercial Banks' Interest Rate
(Percent)



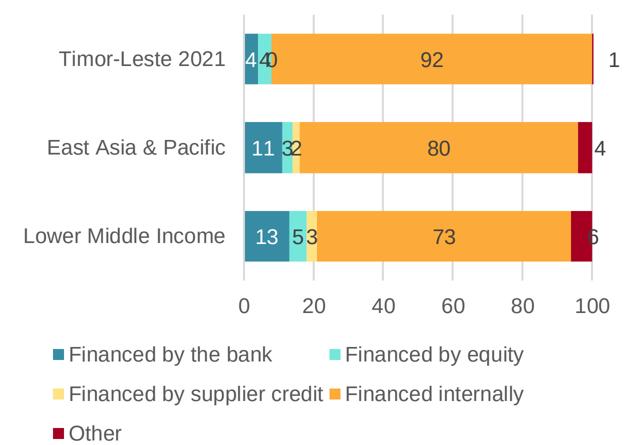
Source: BCTL

Figure 1.14: Commercial Banks' Credit to Private Sector
(Annual % Change and Percentage Point Contributions)



Source: Statistics Timor-Leste

Figure 1.15: Sources of Financing for Purchases of Fixed Assets (Investments)
(percent)



Source: 2021 Timor-Leste Enterprise Surveys

[26] According to 2021 Timor-Leste Enterprise Surveys, available at https://www.enterprisesurveys.org/en/data/exploreeconomies/2021/timor-leste

1.4 Despite the receding impact of the pandemic, the 2022 budget expands considerably.

The effects of the pandemic and floods contributed to a 45.3 percent budget deficit by the end of 2021. This compares to 25.6 percent recorded in 2020 and around an average of 30 percent during the last decade (Table 1.1). Petroleum Fund withdrawals remained the largest source of financing. The creation of two public enterprises for power and water supply lowered the non-oil domestic revenue collection as their incomes were now excluded from non-tax receipts (Figure 1.16). On the other hand, total public spending reached at 89.0 percent of GDP, larger than the 2017-2021 average of 76.6 percent of GDP. Recurrent spending, in particular, reached 80.4 percent of GDP whilst capital spending remained subdued at merely 8.6 percent of GDP, exceptionally lower than the last four-year average of 17.2 percent of GDP (Figure 1.17).[27] Efforts to address the impact of the floods have largely weighed on public investment.

Figure 1.16: Revenue collection fell in 2021, driven by lower non-tax revenues …
(as percent of GDP, percent)

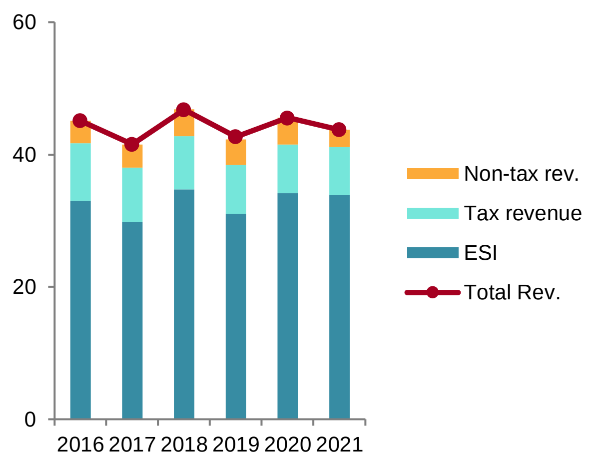
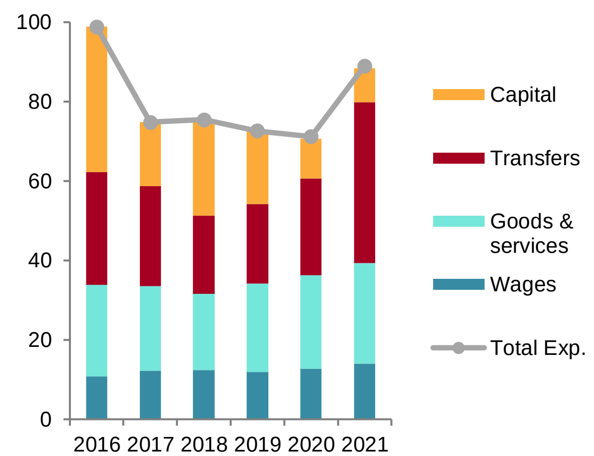


Figure 1.17: … while expenditures accelerated
(as percent of GDP, percent)



Source: Budget Transparency Portal, Ministry of Finance.

Unlike the delay in approving three annual budgets during the last four years, parliament approved the 2022 budget in time in December 2021. Nevertheless, the 2022 General State Budget's spending envelope was nearly 20 percent higher than what was proposed by the government in October 2021. The share of rigid expenditure[28] in total spending has slightly declined, but recurrent spending still dominates, accounting for 77.1 percent of the budget (Table 1.4). Meanwhile, the projected revenue collection is still lower than the actual revenue collected during the pre-pandemic period. The budget processes truly highlight the challenges of introducing more prudent fiscal reforms in the country. Notwithstanding the efforts by the Ministry of Finance to present a realistic budget that more adequately reflects the country's spending capacity and preserves Petroleum Fund, the proposals did not receive sufficient political support.

Despite the slow budget execution, Parliament has approved a budget rectification in May 2022, further increasing the total spending plans. The amendment added USD 1.24 billion (74.8 percent of GDP) of spending to the total budget. The revision was made to incorporate complementary measures proposed during the Presidential election campaign and to deal with higher food and fuel prices. Of the newly proposed

[27] Against the allocated budget, budget executions of recurrent and capital spending were 83.1 percent and 24.1 percent, respectively. The last four-year average of capital spending was 77.9 percent.
[28] Budget items that cannot be reassigned without entailing a high cost are generally said to be 'rigid'. Budget components classified as rigid (or inflexible) are thus not subject to the immediate discretion of the authorities. Civil servant salaries and public benefit transfers (which includes pensions) fall under the high rigidity category, since these cannot be easily reduced.

measures, nearly 89 percent of the proposed budget revision is allocated to the National Liberation Combatants' Fund (FCLN)[29]. Other measures in the rectified budget included USD 70 million to fund a USD 200 million 'Christmas bonus' for all families, and USD 58.7 million to finance electricity provision by EDTL, Timor-Leste's power company. The latter measure brings the total transfer from the budget to EDTL to close to USD 160 million, nearly five percent of the total rectified budget. Furthermore, there are concerns about the transparency of the execution of the budget as most of the additional budget would be allocated under "Public Transfer". Post amendment, the 2022 State Budget now amounts to USD 3.4 billion (186.9 percent of GDP). This is the largest budget in the country's history and will only accelerate the depletion of the Petroleum Fund to less than a decade.

Overall, the country's fiscal policies warrant the need for a reform strategy to ensure long-term fiscal sustainability. As share of GDP, public expenditure levels in Timor-Leste have been among the highest in the world. There has also been an insistent shift in the composition of public spending, with transfers increasing in importance. Capital expenditures have been volatile and may thus adversely impact the future growth. Budget credibility has been undermined by regular mid-year revisions. On the other hand, domestic revenues remain small, while the Estimated Sustainable Income (ESI) is gradually declining.[30] The fact that the ESI, as a fiscal rule, has been consistently breached over the past decade is a matter of concern. The exhaustion of the Petroleum Fund could lead to a sudden fiscal adjustment with significant consequences to service delivery and human development.

Table 1.4: Budget (percent of GDP)

	2013-2016 Average Actual	2017-2020 Average Actual	2021 Rectified	2021 Actual	2022 Initially Approved	2022 Rectified*
Revenue	54.6	44.1	45.4	43.8	42.5	42.5
- Domestic Revenue	11.8	11.7	11.6	9.9	9.1	9.1
Tax	8.4	7.8	7.7	7.3	7.4	7.4
Non-tax	3.4	3.8	3.8	2.6	1.7	1.7
- ESI	42.8	32.4	33.8	33.8	33.4	33.4
Expenditure	88.6	73.5	125.4	89.0	117.5	133.2
- Recurrent	60.9	56.3	96.7	80.4	88.3	103.4
Salary and Wages	10.8	12.3	15.2	14.0	16.2	16.2
Goods and Services	27.3	21.6	37.4	25.4	31.9	31.9
Public transfers	22.9	22.2	43.5	40.5	55.0	115.3
Contingency		0.5	0.7	0.6	0.3	0.3
- Capital Expenditure	27.7	17.2	28.6	8.6	29.2	29.8
Minor Capital	2.4	0.8	4.2	2.7	3.0	3.0
Capital & Development (incl. loans)	25.2	16.4	24.5	5.9	26.8	26.8
Deficit**	-34.0	-29.4	-80.0	-45.3	75.0	-90.7
Spending execution (percent of total budget)	81.0	85		71.0		

Note: * The USD 1 billion allocated for National Liberation Combatant Fund is not included. ** Assuming that the budget is fully executed.

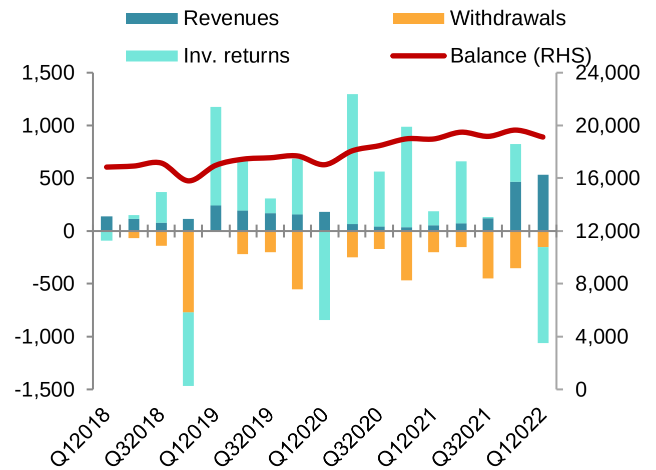
[29] The detail is still being decided but it is likely that the so-called "Veterans Fund" is simply a set-aside and part of the Petroleum Fund. It is also currently unclear if the new Fund will replace other budget allocations to veterans' pensions. The investment return of the Fund will then be exclusively utilized to finance various social benefits for Veterans.

[30] The ESI, a form of fiscal rule, is set at 3 percent of petroleum wealth, which consists of the Petroleum Fund balance and the projected net present value of future petroleum revenues. The ESI is only updated once a year as part of the main budget process. The Government can withdraw an amount from the Petroleum Fund in excess of the ESI if that it is in the long-term interest of Timor-Leste and that it is approved by the national parliament. Parliament has yet to reject a request for excess withdrawals.

The Petroleum Fund balance remained largely unchanged as sizable petroleum revenues and a meagre investment return were offset by substantial withdrawals. The balance of the Fund increased by only USD144 million between Q1 2021 and in Q1 2022 to end the most recent quarter at USD19.1 billion, an increase of less than 1 percent. The balance of the Fund is determined by inflows from petroleum revenues, investment returns, and outflows from Government withdrawals. Since Q1 2021, higher hydrocarbon prices have driven petroleum revenues and contributed USD1.2 billion to the Fund but close to USD1.1 billion was transferred out to the state budget and to remunerate the management of the Fund. Conversely, investment return was a measly USD44 million (Figure 1.18). It is also worth noting that the Fund recorded more than USD900 million in losses during Q1 2022 because of weak investment returns.

Figure 1.18: Substantial withdrawals and rattled financial market hamper the growth of the Petroleum Fund

(USD million)



Source: BCTL

The Petroleum Fund is expected to fall in value at least until there are inflows from a new hydrocarbon production field or a considerable change in the government's fiscal policy. Despite adopting a permanent fund framework,[31] a further depletion of the Fund is seemingly inevitable due to a number of challenges. Firstly, the government is not following its ESI fiscal guideline. Withdrawals from the Fund since 2009 have exceeded the 3 percent limit of total Petroleum Wealth rule.[32] By the end of 2021, the government has withdrawn more than USD 9.0 billion since 2013, with excess withdrawal accounting for about 41.9 percent of the amount. Secondly, the reserves in the Bayu-Undan hydrocarbon field are nearly fully exhausted. There are projected to be only negligible revenue during 2022 unless inflows are received from new fields[33]. Lastly, future investment returns are expected to be lower because of relatively lower interest rates post COVID-19 crisis and the impact of segmenting the Petroleum Fund into a liquidity and growth portfolio.[34] Overall, the expected net cash outflows and lower investment returns mean that the value of the Petroleum Fund is projected to continuously decline. The depletion of the Petroleum Fund leads to a fiscal cliff that may force an abrupt reduction of the fiscal deficit and hence stop the provision of basic public services.

[31] Sustainable withdrawals from the Fund are to be offset by the expected real investment return, thereby preserving the Petroleum Fund's purchasing power.

[32] Petroleum Wealth comprises the balance of the Petroleum Fund and the Net Present Value of expected future petroleum revenue.

[33] Currently there are no approved development plans for the Greater Sunrise fields.

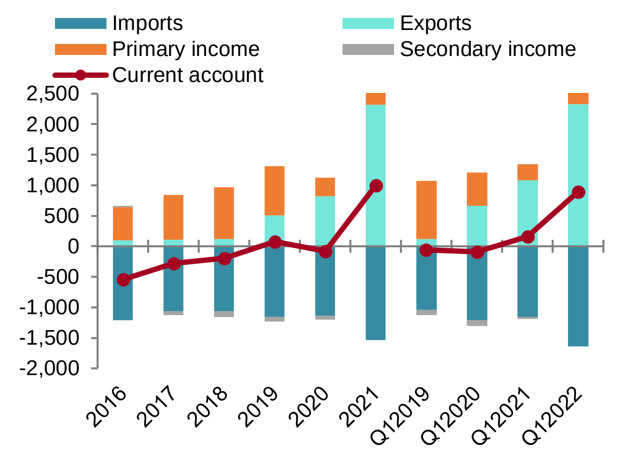
[34] The Minister of Finance, who is responsible for the overall management of the Fund as the government's representative, has since July 2021 segmented the Petroleum Fund into two portfolios. The first is a liquidity portfolio of very low risk investment that will finance the withdrawals expected for the next three years. The second one is a growth portfolio that follows the Petroleum Fund's current allocation of 35 percent equities and 65 percent fixed interest.

1.5 Current account turned positive as oil and gas receipts are taken into account.

Under the new Maritime Boundaries Treaty (MBT), all of the former JPDA is now in Timor-Leste's exclusive jurisdiction and should be considered as resident.[35]. Under the previous treaty known as Timor Sea Treaty (TST), the Banco Central de Timor-Leste (BCTL), the country's Central Bank, considered the entire JPDA as non-resident. As such, it recorded oil revenues (i.e., taxes, royalties and profit which oil and gas companies paid to the Timor-Leste government) under the primary income account. The contra entry in the balance of payments was the Petroleum Fund's investment abroad (i.e., portfolio investment assets). Furthermore, Timor-Leste receives all income under the MBT, with the exception of Greater Sunrise, where Timor-Leste receives the majority share.[36]

Following the adjustment, Timor-Leste's current account balance turned significantly positive in 2021 and in Q1 2022 (Figure 1.19). The BCTL's balance of payments presentation shows a USD 429 million goods trade surplus in Q1 2022, a sum that could climb further as hydrocarbon prices rose in the first half of 2022. The trade balance would however be considerably lower if oil and gas were not available.[37]. The country's services account continues to have a considerable deficit. Construction-related services drove a significant increase in service imports in 2021. As construction initiatives advance, these figures may rise even higher. On the other hand, Timor-Leste's primary income account will continue to be in surplus, since the investment of petroleum wealth generates a significant influx of investment income credits.

Figure 1.19: Current Account turned positive following the inclusion of the receipts from hydrocarbon sales.



Source: BCTL

The real effective exchange rate (REER) of the US dollar, the legal tender of Timor-Leste, has appreciated considerably.[38] Figure 1.20 decomposes the movements in the real exchange rate and differences in the inflation rates between Timor-Leste and its trading partners. Since Q4 2021, real exchange rate appreciation has been driven both by Timor-Leste's inflation and the nominal appreciation of the US dollar,[39] especially against the currencies of Indonesia and Australia, two of Timor-Leste's main trading partners (Figure 1.21). An increase in REER implies that exports become more expensive, and imports become cheaper. An increase therefore indicates a loss in trade competitiveness. Nevertheless, the real appreciation has not had a significant impact on exports of hydrocarbons and coffee as these commodities are generally priced and traded in US dollars. It does, however, add to the challenge of establishing new exports or developing local production.

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[35] The Joint Petroleum Development Area (JPDA) is a geographical location in the Timor Sea that has been identified as having abundant hydrocarbon resources. The JPDA includes the Bayu-Undan and Greater Sunrise production sharing contracts (PSCs). The JPDA is theoretically within the taxation jurisdiction of Timor-Leste and Australia. The JPDA is administered by a 'Joint Authority,' which includes representatives from Australia and Timor-Leste.

[36] The MBT further stipulates that Timor-Leste will receive 70 percent of upstream revenue if the pipeline connects to an LNG processing plant in Timor-Leste or 80 percent if the pipeline is to a plant in Australia. Under the previous treaty, Timor-Leste's share was just 50 percent.

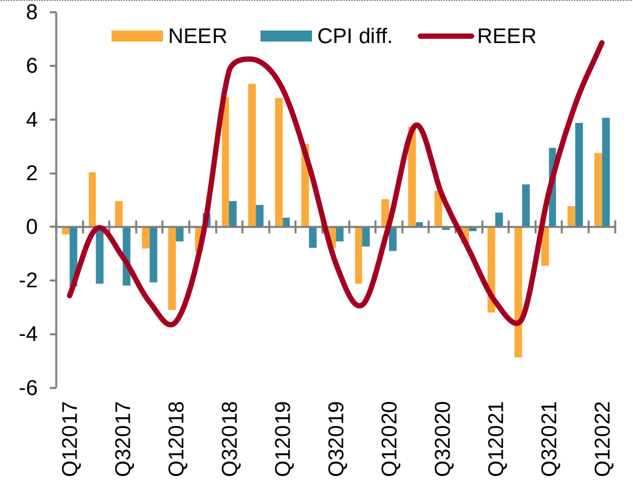
[37] The primary non-hydrocarbon export of the country, at the moment, is coffee

[38] The nominal effective exchange rate is a weighted average of the exchange rate between the US dollar and the currencies used by Timor-Leste's main trading partners. The real effective exchange rate is based on the nominal exchange rate, but accounts for differences in price levels between countries. It therefore provides the truest measure of how the relative prices of goods and services in Timor-Leste and its trading partners are changing over time.

[39] The US dollar has continuously appreciated since the start of the year, largely driven by expectations that the US Federal Reserve will raise interest rates more aggressively than other central banks in the advanced world.

Figure 1.20: Contribution to REER Changes

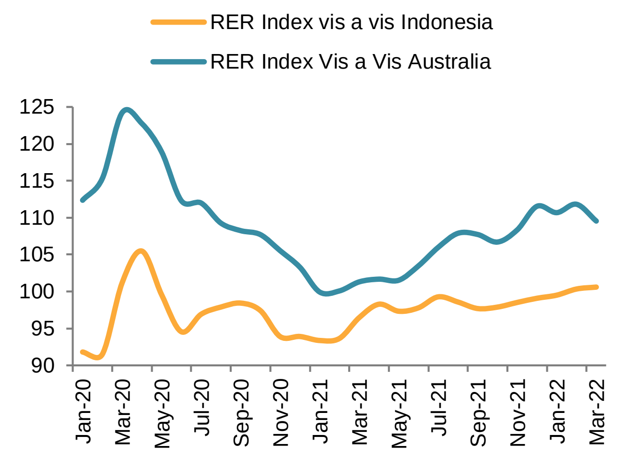
(percent)



Source: BCTL

Figure 1.21: US Dollar RER* Against Indonesia's and Australia's Currency

(index)



Source: BCTL

*RER: real exchange rate

2. Outlook and Risks

Real non-oil GDP is projected to continue its modest recovery at 3.0 percent in 2022 (Table 2.1). The projection is underpinned by an increase in public spending as already sizeable 2022 budget was further expanded in May. Private consumption is expected to rebound, amid steady progress with vaccination rates, and various universal fiscal measures. The lifting of the pandemic-related state of emergency at the end of 2021 will also support domestic economic activity. The non-oil economic growth is then projected to remain stable at 3.0 percent in 2023. On the other hand, despite recent attempts to extend the life of Bayu-Undan field, the oil GDP may decline in 2022 before completely recede in 2023. This is because the operator of the field is preparing to decommission the production facilities and platforms in 2022.[40]

Inflation is forecasted to reach 7.0 percent yoy on average in 2022, driven by imported energy and food prices. Inflation, which was relatively low during the pandemic, has started rising following the spike in food and fuel prices. Food prices had been stable for a few years, but rose 23 percent in 2021, partly due to extreme weather that hurt harvest and the rise in energy prices. The shock from the Russia-Ukraine war dents global food output through its effects on fertilizer production and prices and sent food prices index to an all-time high, at a time when recovery from the pandemic is still incomplete. Government transfer and various other fiscal stimulus will drive up inflation even higher.[41]

Despite lower recurrent spending, the fiscal deficit is projected to increase from 45.3 percent of non-oil GDP in 2021 to 54.5 percent in 2022, mainly driven by increased transfer and capital spending. Revenues will further be boosted by the government's effort to double the taxes on tobacco products since early 2022, but the surge may not be enough to compensate the losses due to the exclusion of electricity and water utilities' revenues from non-tax receipts. Without major revenue reforms, the fiscal deficit is projected to hover at around 50 percent of GDP in the medium term.

[40] https://www.energyvoice.com/oilandgas/410816/bayu-undan-decommissioning-this-year-as-santos-accelerates-giant-ccs-plan-offshore-east-timor/

[41] Future fiscal reforms include i) the new tax law, which will streamline the existing taxes, expand the tax base, implement progressive tax rates and increase the tax rate for high earners; ii) a new tax procedure code that will empower the Tax Administration with the tools and resources to combat tax fraud and evasion, and; iii) the submission to the parliament the Value Added Tax (VAT) in 2023.

The inclusion of oil and gas shipments under goods exports in Timor-Leste's balance of payments in the late 2019 led to the goods trade balance turning positive in 2020. However, post the cessation of Bayu-Undan, the current account balance is expected to shift back to a deficit in the medium term with coffee being the main non-oil export. Higher imports of goods and services generated by higher public investment will remain the chief sources of external pressures. The withdrawal of the Petroleum Fund to finance the budget, recorded under portfolio investment inflows, will boost the financial account.

Table 2.1: Economic Forecast

(Percent)

	2018	2019	2020	2021e	2022f	2023f
Real non-oil GDP growth (yoy change, in percent)	-0.8	2.1	-8.6	1.5	3.0	3.0
Private Consumption	2.6	3.7	-2.5	2.4	3.1	3.7
Government Consumption	-1.0	3.2	4.9	6.2	5.5	1.5
Gross Fixed Capital Investment	-1.8	-17.4	-42.5	-19.5	12.9	13.1
Export, Goods and Services	8.4	-17.2	-51.1	26.0	12.2	13.8
Import, Goods and Services	2.3	-6.5	-8.5	-10.5	10.3	6.4
Inflation (Consumer Price Index)	2.2	0.9	0.5	3.8	7.0	2.5
Fiscal Balance (Percent of GDP)	-27.5	-29.9	-26.1	-43.2	-54.5	-50.0
Current Account Balance (Percent of non-oil GDP)	-12.2	7.8	19.3	2.5	-16.1	-35.3

Source: World Bank Staff Calculations

Uncertainties surrounding the projections remain large and are tilted to the downside. Macroeconomic risks include potential further increases in world food and energy prices and COVID-19-related mobility restrictions were cases to accelerate. Timor-Leste's exposure to extreme weather events and natural disasters also makes it vulnerable to lower growth and higher prices. Domestic political uncertainty and policy reform slippages can also lead to protracted macroeconomic imbalances.

The outlook for the commodities markets, especially food and fuels, remains unstable and is linked to the outcomes of the war in Ukraine. The adverse impact could be longer lasting for several reasons. First, an increase in the price of one commodity is followed by an increase in the demand for substitutes. Since the price increases have been broad-based, however, the price of substitutes will also escalate. Second, the price increases in certain commodities have escalated production costs for other commodities. This is particularly true, for example, in the case of energy prices that have raised fertilizer prices which, in turn, increases agricultural commodity prices. The war is also expected to substantially divert trade, with countries seeking supplies from more remote locations, thereby further increasing costs[42].

A credible and coherent strategy to address short- and medium-term challenges is urgently needed. Fiscal policy should aim to protect the vulnerable from rising food and fuel prices, preferably through targeted assistance. The government can promote policy actions conducive to reducing food prices through increasing agricultural productivity, increasing nutrition through diversifying domestic production, and enhancing sustainability through the "greening of agriculture". On the energy side, the efficiency of electricity generation and provision should be improved as doing so would positively impact the budget and reduce the carbon footprint of the country. Efforts to diversify energy sources, including renewables, should be explored.

Despite the slowing of COVID-19 transmissions across Timor-Leste and in Asia, vaccination efforts should pick up pace to reach the most remote parts of the country. The government may consider incorporating the COVID-19 vaccine regime to standard immunization regime or other health services by using the Integrated Community Health Services (SISCA) and *Saude na Familia* programs. The infrastructure for isolation facilities should be maintained with Personal Protective Equipment (PPE), oxygen tanks, bedding and medical supplies. Authorities should also consider maintaining an inter-ministerial coordination group that has the influence to draw in surge capacity to respond to emergencies.

[42] See for instance World Bank (2022d)

Fiscal consolidation, Public Financial Management (PFM) and structural reforms would help lay the foundation for more diversified and resilient growth in the medium term. PFM reforms are a major policy concern because Government expenditure will continue to drive the economy in the medium term. Higher priority areas under the PFM reforms include budget execution closer to budget plans and improved public investment management. COVID-19 spending during 2021-2022 should also be reported on a full and timely manner. To avoid fiscal cliff and to preserve fiscal and external sustainability, expenditure rationalization and revenue mobilization should accompany the much-needed PFM reforms[43]. On the other hand, diversification of the economy through development of tradeable sectors is essential for sustained growth. Such goals can partly be aided by accessing the membership of the World Trade Organization (WTO). Joining the WTO inherently signifies the country's attempt to better integrate its economy with the global market (Box 2.1) and may simply be attained by committing to reforms and to improve domestic business environments.

Box 2.1: Timor-Leste's Accession to the WTO: One of Potential Pathways for Economic Reforms

Timor-Leste is in the process of acceding to the World Trade Organization (WTO) with the goal of improving its integration with the global economy[44]. Broadly, the WTO accession process is a series of negotiations between an acceding country and incumbent WTO members. The most important steps in the WTO accession process are the creation of the Working Party to review the membership application, drafting of Memorandum on Foreign Trade Regime (MFTR), acceding country's satisfactory response to questions from existing members about its trade regime, conclusion of bilateral negotiations with Working Party members, and the approval of the Protocol of Accession by the Working Party and then by the WTO General Council or Ministerial Conference (MC). Timor-Leste applied for membership in June 2015 with the Working Party established in December 2016. Timor-Leste's MFTR was circulated in June 2017 and the first Working Party Meeting to review it was in October 2020. Timor-Leste recently concluded the third Working Party meeting in April 2022.

Unlike the process to become a member of GATT (General Agreement on Tariffs and Trade)), the predecessor of the WTO, the WTO accession process is more complex and takes longer to complete. WTO accession requires more comprehensive commitments than GATT[45]. Article XII of the Marrakesh Agreement, the legal instrument for WTO accession, simply states that countries may join the WTO on "terms to be agreed". This thin legal guidance leads to a broad spectrum of "prices" for accession negotiations, ranging from expedited and hassle-free to decades long and onerous accession processes. On "prices" of accession, there are two distinct types of commitments acceding countries need to make, (1) commitments directly related to market access (goods and services), and (2) commitments on rules or non-market access (Evenett and Braga, 2005). Commitments on goods market access, expressed in terms of tariff concessions on agriculture and non-agriculture products, have been growing over time (Evenett and Braga, 2005). The scope and coverage of commitments on services for acceding members are subject to negotiation (Smith, 1996), but the number of services sub-sectors committed for inclusion for Least Developed Countries (LDCs) have been increasing over time. LDC WTO founding members on average committed to 20 services sub-sectors (Evenett and Braga, 2005), while the average number services of sub-sector commitments for recently acceded LDCs under Article XII of the Marrakesh Agreement is 87 services sub-sectors (WTO, 2021; WTO, 2022). Non-market access commitments typically cover a wide range of policy measures, the so-called WTO-plus. WTO-plus in the context of accession are commitments made by an acceding country with the contents and level of obligations exceeding those required by WTO agreements[46]. Acceding countries need to implement significant reforms to line up their domestic institutions and policies with WTO disciplines. From this perspective, WTO accession can be an effective tool to promote trade liberalization and substantive regulatory reforms. Acceding countries, especially LDCs, generally

[43] See World Bank (2021)

[44] Complementary to WTO membership, Timor-Leste is in the process to obtain ASEAN membership and join the EU-Pacific Economic Partnership Agreement (EPA).

[45] Developing countries were not required to undertake substantial regulatory reforms to become a GATT member (Tang and Wei, 2009). The Uruguay Round of negotiations led to significant changes in the accession process. The key principles of GATT are incorporated and enhanced under the WTO umbrella. WTO accession process includes the GATT Agreement, 12 agreements related to trade in goods (e.g. agreements on sanitary and phytosanitary, agriculture, textiles and clothing), the General Agreement on Trade in Services (GATS), and Trade-Related Aspects of Intellectual Property Rights (TRIPs) (Smith, 1996). The full list of WTO Agreements is available from https://www.wto.org/english/docs_e/legal_e/final_e.htm

[46] For example, for their accession, China was required to accept special safeguard provisions, while Bulgaria made commitments on domestic price control and privatization of SOEs (Evenett and Braga, 2005).

lack the capacity to effectively engage in these negotiations due to lack of human resources, institutional capacity, and financial means.

Membership in the WTO have the potential to boost Timor-Leste's efforts to promote economic growth and kickstart economic diversification. The common rationale for countries to join the WTO is to better integrate their economy with the global economy, with the expectation that WTO membership improves access to world markets and will lead to higher exports. Another rationale for WTO membership is to attract FDI. WTO accession signals commitment to reforms and a better business environment so countries are more attractive to investors (Catteo and Braga, 2009). In addition, accession also leads to greater access to foreign goods, including capital goods, raw materials and intermediates which are crucial for producers, and more variety on consumption goods. Accession would lead to greater variety of imports at lower prices for consumers and producers. On the other hand, modest post-accession impact could be due to lack of information and costly and inefficient infrastructure. Empirical evidence suggests that WTO accession is associated with a five-year period of growth and investment, leaving the economy permanently larger by 20 percent as a result (Tang and Wei, 2009). WTO accession has been found to increase international trade of member countries by 72 percent relative to their domestic sales (Larch et al., 2019). Countries joining the WTO gained in terms of welfare by 4.37 percent (Felbemayr et al., 2019). Overall, WTO accession opens the path to upgrade important elements of the domestic business environment with considerable payoff for the acceding countries.

Timor-Leste needs to take several steps during and post WTO accession to ensure that the benefits of WTO membership are maximized. The overarching goal of WTO accession is selecting the combination of national and international initiatives which best meet Timor-Leste's development objectives. Identifying economic goals, combined with a comprehensive analysis of options, and formulating negotiating priorities in support of these objectives are essential. For example, Cambodia in its accession process identified textiles and garments, and tourism as sectors which could benefit from reforms and build its negotiating priorities accordingly. Managing expectations is also key to a successful WTO accession process. The accession process could take considerable time[47], while there are risks and benefits to having a rapid WTO accession process. The potential benefit of a longer process is the consolidation and deepening of trade and economic reforms that are already underway. On the other hand, the risk is if an expedited accession is on ambiguous terms or implementation schedule, then there is the risk of backsliding on commitments (Smith, 1996). In terms of bound tariff commitments, the LDC average final bound rate for agriculture is 28.9 percent and 21.4 percent for non-agricultural products (WTO, 2021; WTO, 2022). Currently Timor-Leste applies a uniform tariff rate of 2.5 percent. Acceding countries are expected to sign and implement around 25 commitments on rules, which have implications on sensitive policies such as subsidies and intellectual property rights (Evenett and Braga, 2005). While WTO accession can provide credibility, reduce uncertainty, and promote further domestic reforms, the extent to which these will lead to the expected gains also depends on steps taken by the acceding country's Government and private sector to capitalize on the opportunities that WTO membership provide.

[47] The 2022 General Council Decision set out guidelines for accession negotiation for LCDs with the goal to conclude the process as quicky as possible (WTO, 2022). The average length of WTO accession is ten years and two months and the average for LDC is 12 years and 6 months (WTO, 2021). On the other hand, the Kyrgyz Republic completed its accession process in 2 years and 8 months.

3. Special Focus: Investing in the Next Generation

Timor-Leste is facing a human capital crisis. Human capital (HC)—the knowledge, skills, and health that people accumulate over their lives, enabling each individual to more fully realize his or her potential—is not only an intrinsic value, it is also a central driver of sustainable growth and poverty reduction. Measured by the HCI, a child born in Timor-Leste today will only be 45 percent as productive as an adult as she could be if she enjoyed complete education and full health. This is lower than the global average (56%) the average for the East Asia & Pacific region (59%), and the average for its peer income countries in the region (50%). Unfortunately, without urgent transformative action, things could get worse. The country's macro-fiscal situation, demographic profile, and losses caused by Covid-19 call for urgent action to bolster human capital. Its demographic profile offers an opportunity that must be seized now - by building an enabling environment for human capital accumulation and ample labor market opportunities for its current largest cohort of students and children before they reach the labor market by 2040. The need to put the fiscal position on a sustainable footing means that the people of Timor-Leste will now need to be, more than ever, the drivers of the country's income growth. Furthermore, the Covid-19 pandemic has disrupted economic activity and human capital service delivery, which risks adverse long-term impacts on health and learning losses, ringing the alarm that "business as usual" approaches to human capital accumulation and protection will not suffice to make up for lost ground. Without an adequately healthy, educated, and productive population, Timor-Leste's demographic transition may give rise to socially and economically destabilizing conditions. To take advantage of this crucial opportunity to capitalize on the youth bulge and translate it into a demographic dividend, Timor-Leste will need to improve the efficiency, equity and sustainability of its human capital investments by (i) focusing on key issues in malnutrition and early grade repetition by targeting investments to improve primary health care utilization and teaching competency (ii) addressing inefficiencies of current HC investments by rebalancing the social protection system towards those most in need of support, and (iii) investing in data systems to inform decision making for targeted investments, strategic allocation of skilled service providers, and better alignment of training provisions with industry needs.

3.1. Introduction

Human capital (HC)—the knowledge, skills, and health that people accumulate over their lives, enabling each individual to more fully realize his or her potential—is not only an intrinsic value, it is also a central driver of sustainable growth and poverty reduction, both at the individual and collective levels.[48] This is especially true

[48] Wantchekon et al. (2015), among others, provides evidence of the critical role that human capital plays in preventing the intergenerational transmission of poverty.

in the context of a global economy in which between 10 and 30 percent of per capita gross domestic product (GDP) differences is attributable to cross-country differences in human capital.[49] A key metric for the World Bank Group's (WBG) analysis of human capital formation is the Human Capital Index (HCI)—which measures, across 174 countries, the constraints to productivity of the next generation of workers given the prevailing rates of mortality, schooling, and health (see)

Box 3.1: Human Capital Index Methodology

The Human Capital Index (HCI) is an international metric introduced by the World Bank in 2018 that benchmarks the key components of human capital across economies. The HCI measures the human capital that a child born today can expect to attain by her 18th birthday, given the quality of health and education prevailing in her country. The HCI uses global estimates of the economic returns to education and health to create an integrated index that captures the expected productivity of a child born today as a future worker. The Index incorporates 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 school and international test scores).

The three components of the HCI are combined into a single index by first converting them into contributions to productivity relative to a benchmark of complete education and full health. Multiplying these contributions to productivity together gives the overall HCI (HCI = Survival x School x Health).

Note: The HCI ranges from 0 to 1, so that an HCI value of, for instance, 0.5 implies that a child born today will be only half as productive as a future worker as she would be if she enjoyed complete education and full health.

[1] Patrinos, H. A., and N. Angrist. 2018. "Global Dataset on Education Quality: A Review and Update (2000–2017)." Policy Research Working Paper 8592, World Bank, Washington, DC.

3.1.1. Why is Shifting Focus to Human Capital Important for Timor-Leste?

Timor-Leste is facing a human capital crisis, exacerbated by an inescapable macro-fiscal cliff in the next decade. Despite some notable progress over the last decade, measured by the HCI a child born in Timor-Leste today will only be 45 percent as productive as an adult as she could be if she enjoyed complete education and full health. Unfortunately, absent urgent transformative action, things could get worse. The depletion over the next decade of the country's Petroleum Fund—which has underpinned its oil-driven economy—means that the people of Timor-Leste will now need to be, more than ever, the drivers of the country's economic growth. Hence the importance of designing cost-effective interventions to accumulate and protect human capital.

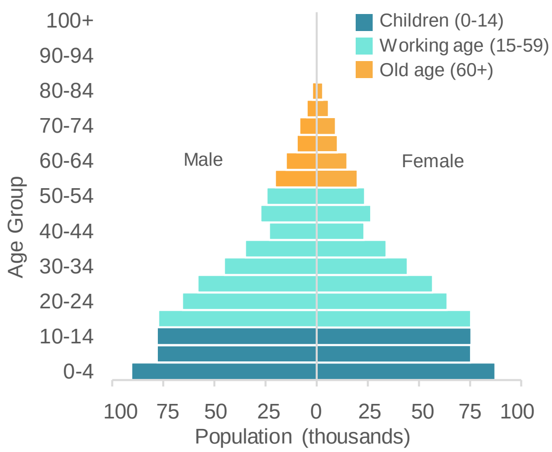
Timor-Leste's demographic profile offers an opportunity that must be seized now - by building an enabling environment for human capital accumulation and ample labor market opportunities for its current largest cohort of students and children before they reach the labor market by 2040. The country's population is primarily young, with a median age of 20.8 with 37 percent of the population under the age of 15[50] (See Figure 3.1). With the continued growth of its young population, the country's demographic profile is projected to give rise to an increasing dependency ratio by 2050, eventually resulting in almost one nonworker for every worker by 2100 (See Figure 3.2). Without an adequately healthy, educated, and productive population, this transition may give rise to socially and economically destabilizing conditions. Taking advantage of this window of opportunity now to ensure high levels of human capital and ample labor market opportunities for the existing cohort of students and young children through education and health is crucial – not only to

[49] See Hsieh and Klenow (2010).

[50] Based on population estimates and projections by the United Nations, Department of Economic and Social Affairs, Population Division in 2019.

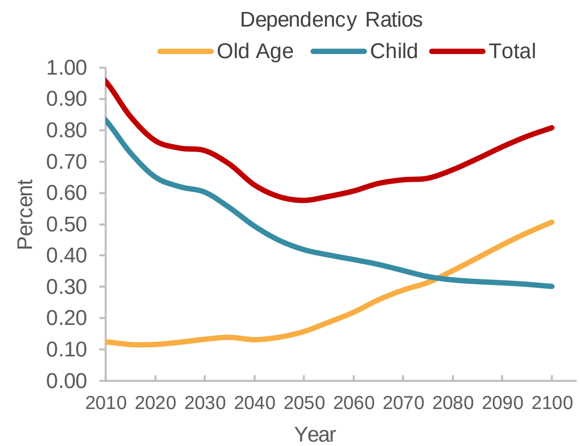
maximize the use of the remaining Petroleum Fund, but also to capitalize on the youth bulge and translate it into a demographic dividend.

Figure 3.1: Population by Age Groups, 2020



Source: United Nations, DESA, Population Division, 2019

Figure 3.2: Population Dependency Ratios



Source: Calculated based on United Nations, DESA, Population Division Database, 2019
Note: Old age and child dependency ratios measure the ratio of old age population (60+) and children (0-14), respectively, to the working age population (15-59). Total dependency ratio is the sum of both.

The country's lagging human capital accumulation is exacerbated by the Covid-19 pandemic. Timor-Leste's HCI in the last decade continually falls behind other countries with similar development levels, rising from 0.41 in 2010 to .45 in 2020, while the average for lower-middle income country (LMIC) was 0.45 to 0.48. The Covid-19 pandemic has resulted in an observed disruption of human capital service delivery, resulting in significant job losses for almost 40% of the working population, missed vaccinations for children, lack of access to reproductive health-care for over 50% of women seeking support, and school closures that lead to learning losses affecting 45% of school children (See Box 3.3). These disturbances risk significant adverse long-term impacts on health, learning, and lifetime income losses, further stagnating the country's efforts in making up for lost ground. This further rings the alarm that "business as usual" approaches to human capital accumulation and protection will not suffice.

Even before the pandemic, however, Timor-Leste's HC initiatives have had persistent challenges. Despite a high overall level of spending on human capital, it has not effectively translated into expected levels of performance in human capital outcomes. This is especially the case when compared to other countries that on average spend a smaller percentage of its GDP and achieve higher HCI levels (See Box 3.4). Persistent challenges include inefficiencies in implementation, lack of program coordination, fluctuating budgeting, and an anomalous targeting of its social protection component of HC investment (rather than a focus on poverty reduction and GDP growth).

A sharper focus on human capital investment is essential for Timor-Leste's sustained long-term growth.[51] Human capital investments not only contribute to economic growth, but also effectively contributes to poverty reduction goals. Increased human capital investments typically disproportionately accrue to the poor by addressing initial service deficiencies and gaps, reducing inequalities. There is also a spillover effect, particularly of education (broadly including expanded information/knowledge), expressed for example in lower fertility rates coupled with lower child mortality rates. Cross-country analysis also suggests that a dollar of public

[51] The World Bank's Long-Term-Growth Model demonstrates that the impact on growth of public capital investments declines over time.

spending on human capital may be more effective than a dollar of public spending on physical capital to achieve a given set of income and poverty goals (see).

Investing in human capital also enhances social cohesion and equity, while strengthening people's trust in institutions—an important factor in mitigating fragility as the country contends with the legacies of past conflict. This is particularly important for Timor-Leste, as the relatively new country initially relied on external organizations to support human development and the provision of social sector services, and where today many stakeholders, policies, and regulatory frameworks that interact in this space are fragmented and uncoordinated.

Box 3.2: A recent study's estimates of the relative costs of human capital vs. physical capital investments for achieving income and poverty goals

Collin & Weill (2020)[1] utilize a quantitative macroeconomic model with realistic demography assumptions to demonstrate that investing in people may be more cost effective than investing in physical capital as a means to achieve income or poverty goals.

Utilizing a comparative impact model of various human capital investment scenarios on income and poverty goals, they compare the magnitude of increases in human capital investment and in physical capital investment that would be required to achieve a specific increase in output (GDP per capita or poverty rate reduction).

In the model, human capital investment is measured by the sum of total health and education expenditures, while physical capital investment is measured by the country's stock of physical capital. Combined with data on the ratio of working age adults to the population as a whole, the model is able to track and compare production per capita relative to human capital vs. physical capital investment under various scenarios.

In their observation, all countries in their dataset demonstrated that the required increase in physical capital investment is larger than the required increase in human capital investment to reach the same specified target. [2]

They also suggest that their model may understate the full effect of an initial policy-driven rise in HC. Extending the model's conclusions to factor in the second-order effects with respect to fertility rates, and its cascading consequences (including through labor market participation, and thus income) reinforces the conclusion of the greater efficacy of human capital investment over physical capital investments, particularly for poverty reduction policy objectives.

Note: the estimated impacts of income increases because the initial increase in human capital investment is likely to be amplified by the actual impacts of parental human capital on fertility and children's human capital investments, and estimated impacts of education on fertility and of fertility on income.

[1] Matthew Collin & David N. Weil, 2020. "The Effect of Increasing Human Capital Investment on Economic Growth and Poverty: A Simulation Exercise," Journal of Human Capital, University of Chicago Press, vol. 14(1), pages 43-83. DOI: 10.1086/708195
[2] The extent of this model's applicability to Timor-Leste may further depend on important context-specific factors that may not have been fully captured.

3.2. Diagnostics: Human Capital Outcomes and Service Delivery

3.2.1. Overview

Timor-Leste has a poorer HCI than the majority of its LMIC in EAP counterparts.[52] The country's HCI equates to a child born today being only 45 percent as productive when she grows up as she could be if she enjoyed complete education and full health (see Table 3.1). Five percent of children do not survive to age 5 (two times the regional average, and also higher than the LMIC in EAP average), 46 percent of children are

[52] It is important to note that 'region' in this document refers not to a geographical entity per se but to the formal World Bank Group institutional aggregation of East Asia and Pacific (EAP) member states.

stunted (one of the highest rates in the world), and learning outcomes measured by learning-adjusted years of school[53] is at 6.3 years, which is lower than the LMIC in EAP average.

Table 3.1: HCI and HCI Component Scores for LMIC countries in the EAP region, ordered by descending HCI

Country Name	HUMAN CAPITAL INDEX 2020	Probability of Survival to Age 5	Fraction of Children Under 5 Not Stunted	Expected Years of School	Learning-Adjusted Years of School	Adult Survival Rate
Vietnam	0.69	0.98	0.76	12.9	10.7	0.87
Mongolia	0.61	0.98	0.91	13.2	9.2	0.80
EAP Average	0.59	0.98	0.76	11.91	8.35	0.86
Global Average	0.56	0.97	0.77	11.31	7.81	0.85
Philippines	0.52	0.97	0.70	12.9	7.5	0.82
Micronesia, Fed. Sts.	0.51	0.97	-	11.8	7.2	0.84
LMIC in EAP Average	0.50	0.97	0.69	10.95	7.03	0.83
Kiribati	0.49	0.95	-	11.2	7.4	0.81
Cambodia	0.49	0.97	0.68	9.5	6.8	0.84
Myanmar	0.48	0.95	0.71	10.0	6.8	0.80
Lao PDR	0.46	0.95	0.67	10.6	6.3	0.82
Vanuatu	0.45	0.97	0.71	10.1	5.6	0.87
Timor-Leste	0.45	0.95	0.54	10.6	6.3	0.86
Papua New Guinea	0.43	0.95	0.51	10.3	6.0	0.78
Solomon Islands	0.42	0.98	0.68	8.3	4.7	0.86
Global LMIC Average	0.42	0.94	0.70	9.24	5.45	0.76

Comprehensive investments in human capital across the health, water and sanitation, education, labor force, and social protection sectors are needed now for Timor-Leste to meet future labor demands and to better serve its citizens. A cross-sectoral and person-centric view of human capital accumulation and its drivers, that is both holistic and gender-sensitive, is needed to identify priorities for strategic investments in service delivery systems and enabling environments for human capital outcomes across the life course.

3.2.2. Early Childhood and Childhood

The first five years of life are most important for human capital accumulation, with impacts that extend throughout life. This makes investments in healthy pregnancy, safe birth, breastfeeding, healthy nutrition and appropriate feeding practices, mental stimulation (including preschool attendance), and immunization coverage especially crucial.[54] Prenatal risk factors contribute to poor nutrition outcomes, which are exacerbated in childhood by suboptimal breastfeeding and diet. There has been variable progress in the coverage of early life essential health services in the country over the past decade, with large improvements in antenatal care coverage, but a decline in vaccination rates associated with persisting geographic and socioeconomic disparities.

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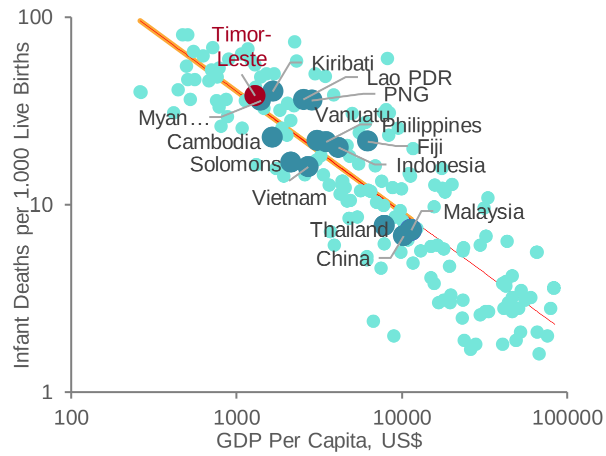
[53] Learning-adjusted years of school combines information on the quantity and quality of education based on prevailing patterns of enrolment rates across grades and harmonized test scores. Please see Patrinos and Angrist (2018) for more details on the methodology.

[54] Cusick Sarah, Georgieff Michael K. *The First 1,000 days of Life: The Brain's Window of Opportunity*. UNICEF-IRC. Accessed December 8, 2020. https://www.unicef-irc.org/article/958-the-first-1000-days-of-life-the-brains-window-of-opportunity.html

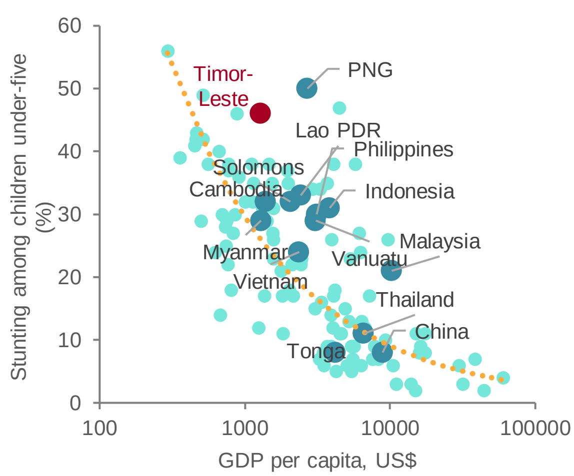
Although infant mortality has halved in Timor-Leste since 2002, neonatal disorders remain the leading cause of morbidity and premature mortality. Specifically, infant mortality declined to 38 per 1,000 live births in 2019, but is still higher than the LMIC in EAP average (and three-times higher than the regional average). Considering the first 28 days of life, the neonatal mortality rate is 19.6 per 1,000 live births; although this a notable advance from 2000 (36.8) it is still almost three times higher than the regional average.[55] While the share of disability-adjusted life years (DALYs) lost attributable to neonatal conditions has declined since 1990, it remains the leading cause of morbidity and premature mortality. Neonatal disorders include preterm birth complications, sepsis, asphyxia, and other trauma.[56] Part of the burden of preterm birth[57] reflects high rates of nutrition deficiencies, including an anemia prevalence of 22.7 percent among women of reproductive age,[58] and high rates of childbirth among girls under age 18.[59]

Figure 3.3: Infant Mortality in Timor-Leste, 2019



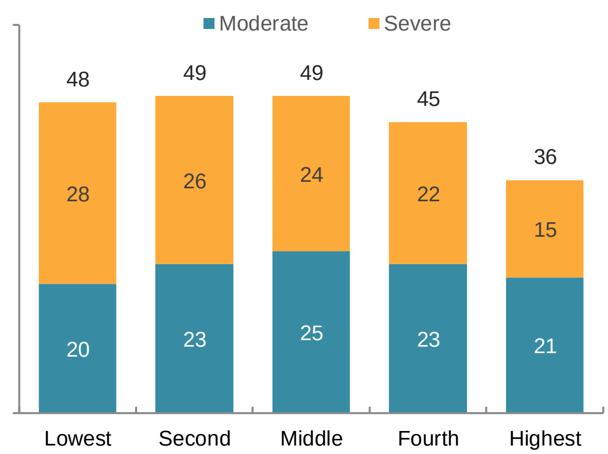
Source: World Development Indicators database
Note: Both y- and x- axes logged

Figure 3.4: Stunting Prevalence in Timor-Leste, 2016



Source: World Development Indicators database
Note: x- axes logged. Stunting figure from the latest data available between 2010-2018

Figure 3.5: Stunting Rate among Children Under 5 by Household Income Level



Source: Timor-Leste Demographic Health Survey, 2016

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[55] World Bank (2020b). Mortality Rate, Neonatal (per 1,000 live births)—*Timor-Leste, East Asia & Pacific Data*. Accessed December 8, 2020. https://data.worldbank.org/indicator/

[56] Institute for Health Metrics and Evaluation. *GBD 2015 Cause List*. http://www.healthdata.org/sites/default/files/files/Projects/GBD/GBDcause_list.pdf

[57] Khashan AS, Baker PN, Kenny LC. Preterm birth and reduced birthweight in first and second teenage pregnancies: a register-based cohort study. *BMC Pregnancy Childbirth*. 2010;10(1):36. doi:10.1186/1471-2393-10-36

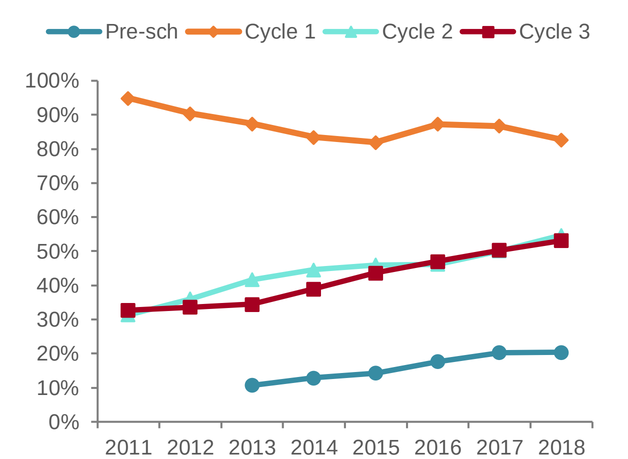
[58] Sunuwar DR, Singh DR, Chaudhary NK, Pradhan PMS, Rai P, Tiwari K. Prevalence and factors associated with anemia among women of reproductive age in seven South and Southeast Asian countries: evidence from nationally representative surveys. *PLOS ONE*. 2020;15(8):e0236449. doi:10.1371/journal.pone.0236449

[59] General Directorate of Statistics, Ministry of Finance/Timor-Leste, ICF. *Timor-Leste Demographic and Health Survey 2016*. Published online April 1, 2018. Accessed December 8, 2020. https://www.dhsprogram.com/publications/publication-fr329-dhs-final-reports.cfm

Inadequate childhood nutrition is a severe problem in Timor-Leste, which has long-term consequences (see Figure 3.3). Almost half (46 percent) of all Timorese children under five are stunted—a startlingly high statistic compared to other countries at similar income level (see Figure 3.4). This rate remains high across all income quintiles, with moderate stunting rates similar across all quintiles and only severe stunting rates being significantly lower for the highest quintile (see Figure 3.5). Stunting affects cognitive and physical development, which in turn adversely impacts educational attainment, future income, and adult health. Widespread stunting among children reflects relatively low access to health (particularly reproductive health) and nutrition-related information and services for women and girls. Recent survey results also indicate that poor nutrition manifests in both long-term nutrition metrics (such as stunting) and in acute ones: 8.6 percent of children under 5 in the country are wasted (more than 2 standard deviations below the global median for weight-for-height), with 1.5 percent suffering from severe wasting (more than 3 standard deviations below the global median). Meanwhile, 32.1 percent of children are underweight (more than two standard deviations below the global median for weight-for-age).[60]

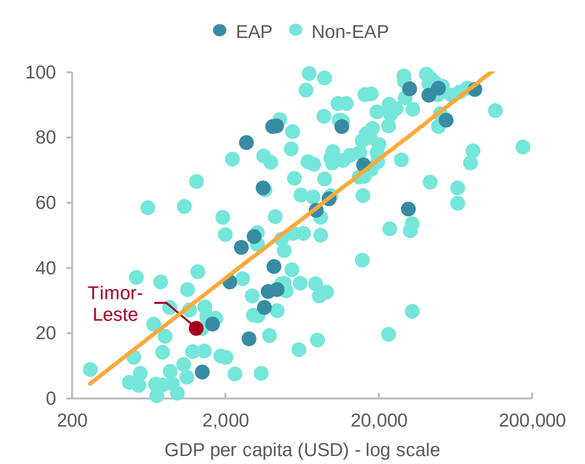
Despite notable advances in preschool coverage over the last decade (from 8 to 25 percent), Timor-Leste is still far from its 2015 target of 50 percent coverage (see Figure 3.6). The expansion in the number of public preschools has been impressive: from 90 preschools in 2010 to 239 in 2018. The 239 public preschools are complemented by 135 private ones, with the majority of the latter clustered in Dili.[61] The failure to achieve the targeted preschool enrollment rate can be partly explained by the uneven distribution of infrastructure and human resources in many municipalities. The "preschool-age population to preschool teacher ratio" and "preschool-age population to preschool ratio" are very high across all municipalities. The consequence is that although enrollment levels meet expectations for its development level, too many children enter basic education without being ready to learn at that curriculum level (see Figure 3.7).

Figure 3.6: Net Enrollment Rates by Education Level



Source: Timor-Leste Education Management Information System (EMIS)
Note: Cycles 1-3 represent basic education, with cycle 1: grades 1-4; cycle 2: grades 5-6; cycle 3: grades 7-9

Figure 3.7: Net Preprimary Enrollment Rates (%) in Timor-Leste versus Other Countries



Source: World Development Indicators database

3.2.3. Youth and Adolescence

Youth and adolescent health, education, and labor market opportunities are imperative for human capital accumulation. Survival rates are high among youths and adolescents (5 to 18 years), which means that the opportunities to increase human capital mainly relate to education and work opportunities. Ensuring high

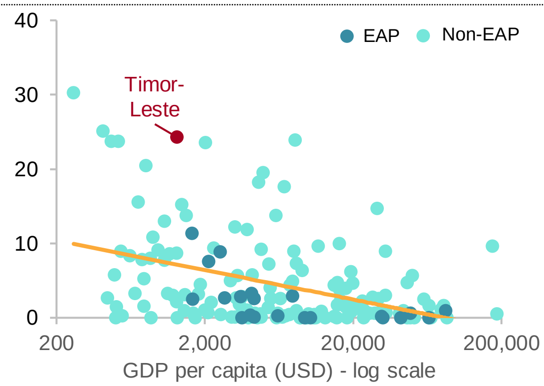
[60] Ministry of Health, Timor-Leste (2020). *Timor-Leste Food and Nutrition Survey 2020.*
[61] Timor-Leste Ministry of Education, World Bank Group. *Education Sector Plan (ESP 2020-2024).* No date available.

levels of human capital and ample labor market opportunities is crucial for creating conditions to capitalize on a future youth bulge and translate it into a demographic dividend.

Poor learning outcomes remain a substantial challenge in early school years – more than 70 percent of grade 1 students scored a *zero* on the Early Grade Reading Assessment (EGRA). Specifically, while the results of the EGRA indicate that substantial improvements were made between 2009 and 2017 in some respects, more than 70 percent of grade 1 students still scored a *zero* on the EGRA tasks of text reading, fluency, and comprehension (see Table 3.2). Poor school infrastructure, teaching quality, and curriculum quality contribute to these low student learning outcomes. In addition, although there are social protection programs to encourage school attendance and provide meals at school, these programs suffer from insufficient funding and poor targeting, exacerbating underlying inequalities.

Early grade repetition is common, raising significant concerns about the quality of education in early grades and the overall efficiency of the education system. The repetition rate in grade 1 dropped from 33 percent in 2010 to 24 percent in 2017. Despite this improvement, repetition rates are exceptionally high given the country's level of development (see Figure 3.8), and not surprisingly track social inequalities. In fact, this is the third highest rate worldwide, from 151 countries with available data. High repetition rates, both a cause and an effect of low-quality education, largely explain the large gap between gross and net enrollment rates. Grade repetition, which results in a wide age range in a given class is a key constraint to education system efficiency and imposes financial costs as well as reduces teaching efficacy and hinders class management.

Figure 3.8: Repetition rate, Grade 1 (%)



Source: World Development Indicators database

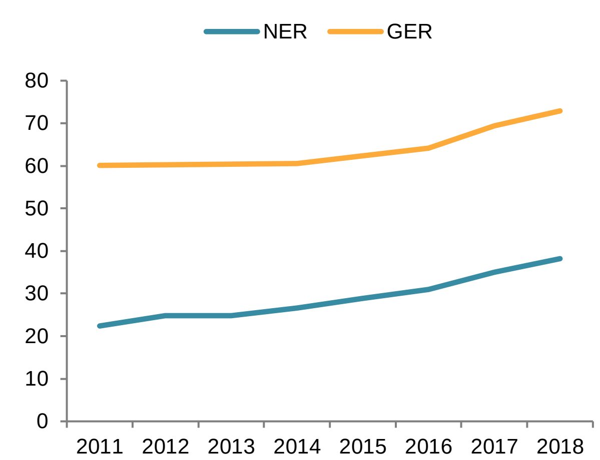
Table 3.2: Percent of Students in Grade 1 who scored Zero on the EGRA Tasks, 2009 and 2017

Skill being assessed	Percentage of zero scores on each task in the EGRA Assessment	
	EGRA 2009	EGRA 2017
Letters	23.23	15.48
Words	67.10	54.70
Non words	70.97	67.90
Text reading	72.26	72.37
Fluency	72.26	71.11
Comprehension	83.87	74.20

Source: Using EGRA for an Early Evaluation of Two Innovations in Basic Education in Timor-Leste, World Bank, MEYS Australian Government

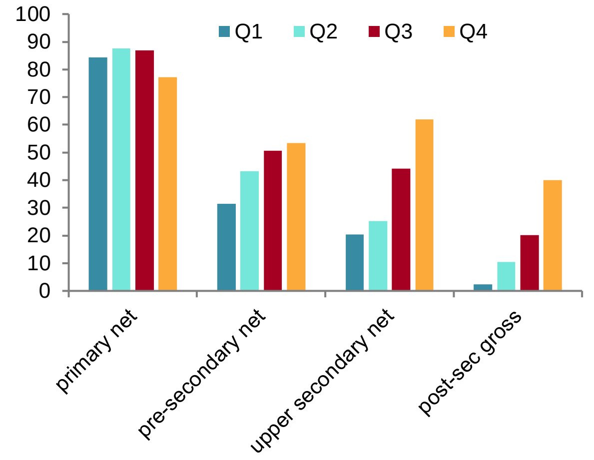
Suboptimal enrollment and poor learning outcomes result in a "quality-adjusted" educational attainment of only 6.3 years of learning, despite an average of 10.6 years of schooling. The net enrollment rate in secondary education (grades 10-12) has been on the rise (see Figure 3.9), and it is rising faster than gross enrollment, which suggests that the proportion of overage students (those above the official secondary school age of 15-17 years) has been falling. Nevertheless, gross enrollment (73 percent) was still substantially higher than net enrollment (38 percent) in 2018. Moreover, aggregated test results in 2018 indicated that less than half of students had learned at least 50 percent of the required material covered in the nine basic education grades. Poor learning outcomes contribute not only to increased school dropout rates, but also to poor acquisition of the required skills to be a productive member of the workforce even for many of those who remain in school. Additionally, although overall enrollment in secondary and tertiary education has risen considerably in recent years, it is uneven across economic groups and localities. Specifically, enrollment rates among lower income quartile households drop significantly as the level of schooling rises (see Figure 3.10).

Figure 3.9: Secondary School Net Enrollment Rate (NER) and Gross Enrollment Rate (GER) in Timor-Leste (%)



Source: Timor-Leste Education Management Information System (EMIS)

Figure 3.10: Enrollment Rates (%) by Level, Stratified by Income



Source: Calculated from Timor-Leste Survey of Living Standards (SLS), 2014
Note: Household expenditure per capita quartiles

Although the national equivalence program has enabled a significant increase in official teacher numbers, it has led to a lower average teaching competency. The national equivalence program, jointly implemented by the National University of Timor-Leste (UNTL) and the National Institute for the Training of Teachers and Education Professionals (INFORDEPE) provides a 'Bacharelato' certification to thousands of teachers who completed three years of relevant study following graduation from senior secondary school. Many of these were volunteer teachers, who had lower levels of education and experience than existing contract teachers. Most teachers entered the profession through the equivalency program, which provides limited pedagogic training, producing less-qualified teachers and lowering the average teaching competency. The one teacher competency assessment that was conducted indicates that nearly 80 percent of teachers are only at an elementary level. A related critical bottleneck is the lack of coordinated teacher training programs, so that teachers are not trained to deliver the same curricula. Additionally, nearly 18 percent of classes in basic education nationwide are overcrowded (defined as more than 40 students). This issue is much more pronounced in poorer municipalities, hindering quality and equitable learning environments.

Social protection services have helped facilitate school attendance and utilization of health services among children, but have not achieved relevant poverty impacts at national level. The Bolsa da Mãe program is a conditional cash transfer (CCT) program that aims to help reduce poverty, promote attendance of nine years of compulsory basic education, and increase use of primary health care services. The program targets poor and vulnerable households with children and the program benefits are conditional on children's school attendance and vaccinations. While the number of beneficiaries of the Bolsa da Mãe program has increased significantly in recent years, there are considerable gaps in coverage and the program coverage rate of the bottom quintile of the population is 19 percent, leaving behind the vast majority of the poorest population.[62] Although it is the only program in the country that targets poor and vulnerable households with children, the amount of benefit relative to the average total household expenditure is too low to affect household welfare status. The size of the program benefit is 10 times less than the veterans benefit level (discussed subsequently). Due to the lack of an effective targeting system, about 47 percent of the beneficiaries were estimated to be nonpoor.[63] As a result, the program has achieved an almost negligible reduction in the

[62] Fernandes R, Pinxten J, Meidina I (2020). *Timor-Leste Social Protection Review*. World Bank Group.
[63] Fink Gunther, Peet Evan, Danaei Goodarz, Andrews Kathryn, McCoy Dana Charles, Sudfeld Christopher R, Smith Fawzi Mary C, Ezzati Majid, Fawzi W. Wafaie. Schooling and wage income losses due to early-childhood growth faltering in developing countries: national, regional, and global estimates. Am J Clin Nutr. 2016;104(1):104-112. doi:10.3945/ajcn.115.123968

national poverty rate. In 2021, the government piloted a "new generation" of the program, *Bolsa da Mãe - Jerasaun Foun*, with the potential to address the adequacy and coverage issue through universal cash transfers.

3.2.4. Working Age

Although working age is when the greatest economic benefits of investment in early childhood, childhood, and youth/adolescence are realized, there is a continuing need for investments along the life course to capitalize on accumulated HC. Partly because investments in the human capital of the next generation will only pay off in the long term while the country seeks to improve its human capital outcomes now, there is a strong need for human capital investments for the working age populace, including relevant health services (such as access to care for non-communicable diseases - NCDs), continuing education, and access to job opportunities (including upskilling). A focus on maternal health, in addition to family-friendly employment options, is particularly relevant for the promotion of human capital across generations.

Adult survival has improved drastically over the past several decades. As previously noted, adult survival is 86 percent, which is roughly comparable to the levels in Vietnam and Thailand, which have more advanced levels of income. In line with global trends, women have a lower mortality rate than men, but the adult mortality rate for both males and females (14.2 percent) is slightly higher than the regional average (13.6 percent).[64]

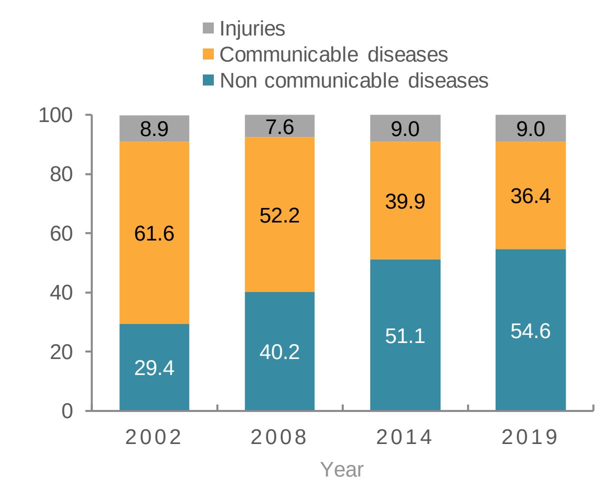
NCDs are on the rise, and the availability of NCD care, particularly in adulthood, is extremely limited. The share of NCDs in the overall burden of disease has increased from 29 percent in 2002 to 55 percent in 2019 (see Figure 3.11). Stroke, heart, and lung diseases, and diabetes are now among the top 10 diseases in the country and have been contributing increasingly to illness, disability, and death. Metabolic risks, including high blood pressure, high blood glucose, high cholesterol, and kidney dysfunction are among the top 10 risks for disability-adjusted life years (DALYs) lost. Tobacco exposure, alcohol use, and poor diet are among the top 10 behavioral risks that contribute to the increasing NCD burden; hence it is likely that there is a significant amount of unmet demand, particularly for prevention and treatment of NCDs. For example, only 2.7 percent of the populace with raised blood pressure is currently on medication to manage it.[65] Among women aged 30-49, only 1.1 percent have ever had a screening test for cervical cancer. Lack of availability/utilization of services explains some of the low out-of-pocket NCD spending despite a weak health-care system. With the growing incidence of untreated NCDs, the cost to the country in terms of related poorer health outcomes—for example, loss of productive years, amenable mortality (i.e., premature deaths that could potentially be avoided, given effective timely care), etc.—will only increase. The financial impact on households will also increase in line with the incidence and severity of NCDs.

The maternal mortality ratio (MMR) declined from 668 per 100,000 live births in 2002 to 195 in 2016, but is still high.[66] Similar to improvements in neonatal mortality, the observed improvements may be driven by improved antenatal care and skilled birth attendance, in addition to the strengthening of health-care workforce. In-facility births have more than doubled, rising from 22 percent in 2009-2010 to 49 percent in 2016. Births attended by a skilled provider (doctor, nurse, midwife, or assistant nurse) have risen from just under 60 percent to 87 percent in urban areas and from 21 percent to 45 percent in rural areas. Slightly more than 61 percent of pregnant females receive antenatal care from a medical professional and 32 percent follow up with postpartum care.[67] However, MMR in Timor-Leste remains high (see Figure 3.12). High MMR is correlated with high infectious disease prevalence, limited access to and/or poor medical care, and high fertility

[64] World Bank (2020b). *Mortality Rate, Adult, Female (per 1,000 female adults)—Timor-Leste, East Asia & Pacific Data.* Accessed December 8, 2020. https://data.worldbank.org/indicator/SP.DYN.AMRT.FE?locations=TL-Z4
[65] World Health Organization Country Office for Timor-Leste, Ministry of Health, Timor-Leste. *Package of Essential Noncommuncable Diseases Interventions in Timor-Leste*; 2017. https://extranet.who.int/ncdccs/Data/TLS_D1_Timor-Leste%20PEN%20%20revised%2021%20April%202017.pdf
[66] Government of Timor-Leste. *Report on the Implementation of the Sustainable Development Goals: From Ashes to Reconciliation, Reconstruction and Sustainable Development*; 2019.
[67] Institute for Health Metrics and Evaluation. *GBD 2015 Cause List.* http://www.healthdata.org/sites/default/files/files/Projects/GBD/GBDcause_list.pdf

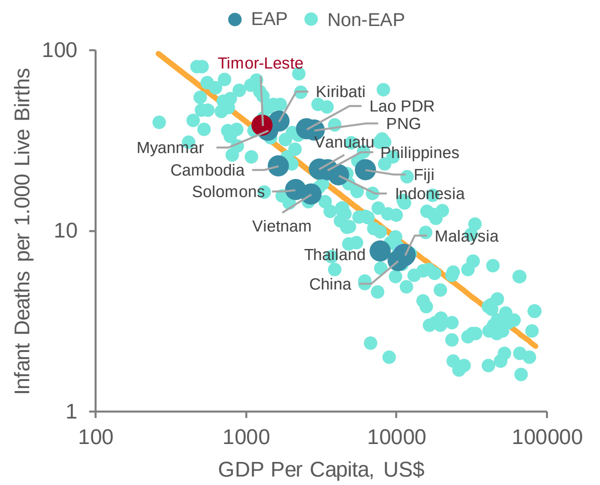
rates, among other factors.[68] In Timor-Leste, fertility rates declined from 7.0 children to 4.5 between 2000 and 2015, but this rate also remains high.

Figure 3.11: Burden of Diseases by Cause in Timor-Leste (%), 2002-2019



Source: Institute Health Metrics and Evaluation (2020)

Figure 3.12: Maternal Mortality in Timor-Leste, 2017



Source: World Development Indicators database and Demographic and Health Surveys (DHS) 2016 data

Note: Both y- and x- axes logged; 2016 is the most recent survey data available for Timor-Leste on this topic

Though adult education and literacy rates have improved, they are still low compared to LMIC countries. The percent of the population over age 25 without any education declined from 49 percent in 2004 to 26 percent in 2015.[69] However, this still means that more than one-quarter of the adult working age populace lacks any formal education. Literacy levels have also improved over the last decade, but only 68 percent of adults are literate compared to countries at a similar development level at 76 percent.[70] At the same time, there has been rapid growth of enrollment in higher education institutions. In fact, the number of students enrolled in higher education has surpassed the number enrolled in secondary education. This increase may be driven in part by poor job opportunities for those with less education.[71]

Although tertiary education enrollment rates are on the rise, the quality of tertiary education service delivery is a concern, especially with respect to private universities/institutions that account for some 80 percent of tertiary students. Enrollment in higher education institutions has increased over the past 10 years (see Figure 3.13), such that in 2019, there were about 68,600 students enrolled in 14 accredited higher education institutions, with about 1,990 teachers. However, over the same span, the student-teacher ratio in tertiary education increased from 14:1 in 2009 to nearly 35:1 in 2019, among the highest global ratios (see Figure 3.14).

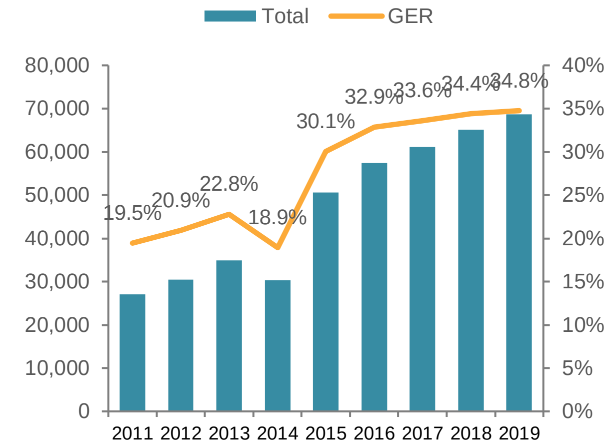
[68] Girum T, Wasie A. Correlates of maternal mortality in developing countries: an ecological study in 82 countries. *Matern Health Neonatol Perinatol.* 2017;3(1):19. doi:10.1186/s40748-017-0059-8
United Nations Development Group: Asia and the Pacific, United Nations Human Rights, UNFPA, UN Women.

[69] United Nations Development Group: Asia and the Pacific, United Nations Human Rights, UNFPA, UN Women. *Leaving No Youth Behind in Timor-Leste: Young People Neither in Education, Employment, nor Training*; 2018. https://timor-leste.unfpa.org/sites/default/files/pub-pdf/03_NEET_ENG_PRINT%20%281%29.pdf

[70] World Bank (2020a). *Literacy Rate, Adult Total (% of people ages 15 and above)—Timor-Leste, East Asia & Pacific Data*. Accessed December 8, 2020. https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=TL-Z4

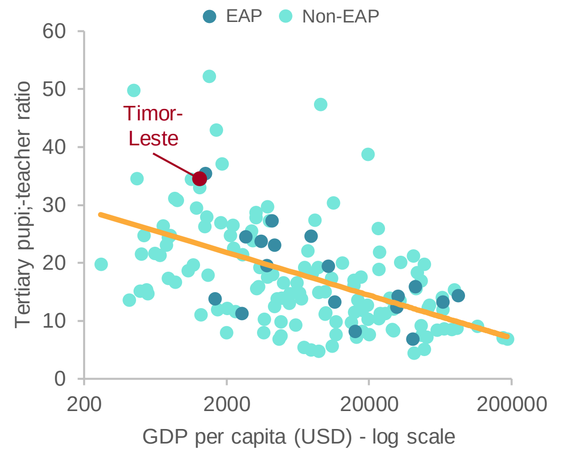
[71] Timor-Leste Ministry of Education, World Bank Group. *Education Sector Plan (ESP 2020-2024)*. No date available.

Figure 3.13: Gross Enrollment Rate in Tertiary Education and Counts of Students Over Time



Source: ESA (2016) and NESP (2020-2024)

Figure 3.14: Pupil-Teacher Ratio, tertiary (%)



Source: UNESCO Institute for Statistics (2020)

Labor force participation has increased but remains low compared to other countries in the region. Labor force participation rose only slightly from 54.7 percent to 56.1 percent between 2010 and 2015, and this masks important regional and educational status variations, with Dili having the lowest percent of working age population employed (40.6 percent) and Oecusse having the highest (66.6 percent), and with unemployment disproportionately affecting the more highly educated members of the populace. Indeed, 48 percent of those who are unemployed have a secondary school degree or higher.[72] Unemployment was 10.4 percent (2016) but the Labor Force Survey 2013 showed that around 72 percent of the employed populace worked in the informal sector (90 percent of whom were aged 15-24).

Individual qualifications are not always aligned with jobs. In particular, 12.2 percent of persons employed in 2016 were in occupations with skill requirements below their educational attainment. This represents an increase of 7.4 percentage points from 2010. The existing skill mismatch of the employed populace will likely adversely affect the return on investment in education and training, and emphasizes the importance of a robust workforce development plan. The World Bank's 2013 Systems Approach for Better Education Results analysis of Timor-Leste noted both the government's significant efforts to coordinate workforce development policies with the country's strategic goals, and the associated implementation challenges.[73] Improved alignment between labor market opportunities and the skills of the population will be imperative in order to capitalize on a youth bulge.

The veteran program provides generous benefits to recognize and compensate the service of combatants during the national liberation struggle. There are three main types of benefits for veterans or surviving family: pensions, a cash lumpsum, and scholarships.[74] These payments are generous; spending averaged nearly $100 million per year in 2015-2019. Although the process for identifying and registering veterans was launched in 2002, the first pension payments were only made in 2008.

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[72] General Directorate of Statistics. *Labor Force: Summary of the Thematic Report*; 2018. https://timor-leste.unfpa.org/sites/default/files/pub-pdf/census_booklet_%20labour%20force.ver3_.0.pdf

[73] World Bank Group. *Timor-Leste: Workforce Development SABER Country Report 2013*; 2013. https://openknowledge.worldbank.org/bitstream/handle/10986/20092/901090WP0Box030rLeste0CR0Final02013.pdf?sequence=1&isAllowed=y

[74] The pension scheme includes a special retirement pension for veterans with at least 15 years of (full-time) service, a special subsistence pension for veterans with at least 8 years of service, and a survival pension for inheritors (e.g. spouse, children, parents, and siblings). The cash lumpsum is a one-off payment for veterans with 4 to 7 years of full service – which started 2012 with the new statute of National Liberation Combatants. Finally, scholarships are provided for the children of veterans covering all levels of education – from primary school to university.

3.2.5. Aging Populace

Only 4.3 percent of the country's population is over the age of 65, which is low compared to regional counterparts (e.g., Thailand/12.4 percent, Vietnam/7.6 percent, Indonesia/6.1 percent).[75] Older members of the populace appear to maintain relatively high rates of labor force participation,[76] although this may reflect financial need in the context of (subsequently discussed) limitations in Timor-Leste's pension system. In 2014, poverty among the elderly (61 and above) was 26.8 percent (males/29.3 percent, females/24.6 percent), accounting for 5.3 percent of total poverty in the country.

The demographic transition underway in Timor-Leste may ultimately give rise to a dependency ratio that will pose social and economic challenges. The country expects a continued growth of its young population, but after 2050 it will rapidly start to age. Specifically, the old age dependency ratio will continue to decline until approximately 2045, and will then increase significantly. Meanwhile, the child ratio will gradually decline until approximately 2030, followed by a rapid fall. The Support Ratio (sum of both ratios) indicates that there may almost be one nonworker for every worker. While enabling people to live longer and live better lives signifies development wins, it also poses many challenges on the economic and social fronts. An adaptive and flexible social protection system is needed in response to these changes as well as reduce income inequalities and limit elderly poverty.

Although coverage of Timor-Leste's (non-contributory) Citizenship Social Security System has continued to rise, it is unsustainable and service delivery for the aging remains limited. Elderly pensions have been implemented by the National Directorate of Non-Contributory Regime of Social Security of the Ministry of Social Solidarity and Inclusion since 2008. Currently, the elderly social pension delivers benefits to 89,804 individuals, which corresponds to 93 percent of the target population (people aged 60 or above).[77] However, key services for aging populations such as for palliative health-care remain limited despite national strategic plans indicating its provision by the national hospital, leaving households to bear the burden of caring for sick and aging family members.

Box 3.3: Impacts of COVID-19 on Human Capital

Service delivery and employment have been drastically affected by Covid-19, the impacts of which may be long term. The various state of emergency-related restrictions (including domestic and international travel restrictions and closure/partial closure of schools, public transport, businesses, and temporary closure of development organizations and government ministries) most severely affected the most vulnerable, who rely on daily subsistence income. A recent study by the Ministry of Finance and the United Nations Development Programme identified that 39.9 percent of those surveyed indicated that they had lost their jobs (42 percent men and 36 percent women), with adults between ages 25 and 39 the most affected (43.3 percent).[1] More than two-thirds (68 percent) of businesses reported strong or moderate adverse impact on their enterprise. Declining incomes and rising food prices have also created near-term pressure on food security. Nationally, 41.1 percent of respondents were affected by moderate or severe food insecurity, which may have lasting impacts on nutrition and human development.

There have been interruptions in delivery of essential health services for COVID-19, with long-term impacts on health and wellbeing. Forty percent of respondents indicated that they could not access health services because Covid-19 restrictions, fear of getting Covid, or travel bans. More specifically, 14.1 percent of households indicated that barriers included the lack of public transport to access health services because of travel restrictions, and 17.2 percent mentioned fear of contracting COVID-19 while receiving health services. Some 37 percent of households with children under the age of 10 years indicated that one or more children missed vaccinations, with children in the lowest income quintile more likely to have been affected than those in the highest. Of women reporting the need for reproductive

[75] World Bank (2020c). *Population Ages 65 and Above (% of Total Population)*—Timor-Leste, Vietnam, Indonesia, Thailand Data. Accessed December 8, 2020.
[76] General Directorate of Statistics. *Labor Force: Summary of the Thematic Report*; 2018. https://timor-leste.unfpa.org/sites/default/files/pub-pdf/census_booklet_%20labour%20force.ver3_.0.pdf
[77] Fernandes R, Pinxten J, Meidina I. *Timor-Leste Social Protection Review*. World Bank; 2020.

health services during the state of emergency, 51.8 percent reported an inability to access them. Child marriages and teenage pregnancies also increased during this time, as did rape and child physical and sexual abuse.

School closures may have translated into significant learning losses. All schools were closed in late March 2020 for several months. Some 45 percent of school children did not continue education (roughly 400,000 children). The loss of learning time is unlikely to be uniformly distributed across socioeconomic groups, particularly when factoring in access/lack thereof to remote learning modalities, exacerbating existing inequalities. The pandemic-related combination of being out of school and the loss of family livelihoods may leave girls, students with disabilities, and other marginalized students especially vulnerable. The pandemic will likely worsen the already weak system of preparing preschool-age children for formal schooling.

Learning losses will translate into income losses. A learning loss simulation of EAP countries estimates a drop in lifetime projected earnings of $28,000 per individual and a total GDP cost of $5.9 trillion.2 It also estimates an increase in learning poverty (ability to read and understand a simple text by age 10) in the region from 35 percent before Covid to 42 percent. Dropout projections also estimate a 9.5 percent increase because of Covid-19, or an additional 2.6 million primary and lower secondary age out-of-school children.

[1] UNDP. *Socio-Economic Impact Assessment of Covid-19 in Timor-Leste, Round 2, 2021* Published 2021. Accessed November 27, 2021. https://www.tl.undp.org/content/timor_leste/en/home/library/poverty/socio-economic-impact--assessment-of-covid-19--in-timor-leste--r.html
[2] Unless otherwise specified, the currency cited throughout this document is the U.S. dollar.

3.3. Underlying Factors Influencing Human Capital Accumulation

3.3.1. Overview

Despite Timor-Leste's HC spending meeting expectations for its level of development, it has not directly translated to poverty reduction or improved human capital outcomes due to inefficient spending and service delivery limitations. Public spending on health (3.3 percent of GDP) and education (4.1 percent of GDP) is roughly as expected given the country's level of development; importantly, however, when social protection spending is factored in, the country's broad HC spending is among the highest in the world (see Box 3.4). This can be partly attributed to the significant allocations made for veterans of Timor-Leste's resistance, which only comprise of 3.7 percent of the poorest 40 percent, but receive two thirds of the social protection budget. Unfortunately, neither these expenditures, nor the broad economic growth underpinning a rise in GDP per capita from $866 in 2001 to $1,237 in 2020,[78] have translated directly into poverty reduction or improved human capital outcomes,[79] largely because of inefficient spending and limitations in service delivery.

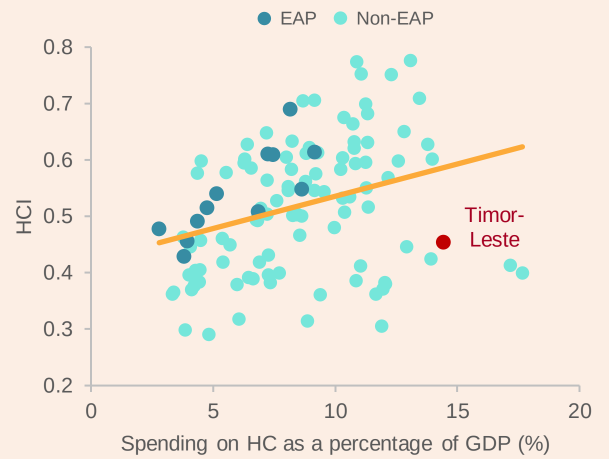
The Covid-19 economic downturn will put additional fiscal pressure on government sectors that support human capital accumulation, at a time when such support is needed most. Public expenditure in Timor-Leste declined by 7 percent during the first half of 2020, with increased resource flows diverted to address the pandemic. Concurrently, exports (particularly of coffee and services) and imports drastically declined. With the declaration of the state of emergency, transport services and informal sector work were substantially disrupted.[80] Despite economic contraction and a resultant reduction in available public funds, greater investment in human capital remains a priority to ensure that Timor-Leste is able to build back better and achieve its development goals.

[78] World Bank (2020d). *Timor-Leste Economic Report, October 2020: Towards a Sustained Recovery.* https://openknowledge.worldbank.org/handle/10986/34748
[79] Government of Timor-Leste. Draft National Social Protection Strategy (NSPS) 2021-2030; 2020.
[80] Iyengar Kavita, *Potdevin Claire.* Managing the COVID-19 outbreak in Timor-Leste. *Development Asia.* Published January 7, 2021. Accessed February 24, 2021. https://development.asia/policy-brief/managing-covid-19-outbreak-timor-leste

Box 3.4: Timor-Leste's Human Capital Spending vs. Outcomes

Government spending on health and education in Timor-Leste is approximately average for its level of development (3.3 percent and 4.1 percent of GDP, respectively), but government spending on social protection relative to GDP is among the highest in the world (at 7.0 percent of GDP). This is driven by the large portion of social protection spending going to veterans. Significantly, summing these values together, government spending on human capital is 14.4 percent of GDP, which is third-highest among 115 countries with available data after Lesotho and Botswana.

Figure 3.15: Relationship between the HC and Government Spending on Human Capital as a Percentage of GDP (%)



Source: World Bank HCI Database (2020)

Unfortunately, however, this high overall level of spending on human capital in the country does not translate into high performance in human capital outcomes as measured by the HCI. As evident in Figure 3.15, governments that spend a far smaller percentage of GDP on HC achieve much higher HCI levels. This highlights the importance of efficient and effective use of resources, including with respect to the intended purpose (e.g., poverty reduction and HC accumulation) of resource allocations.

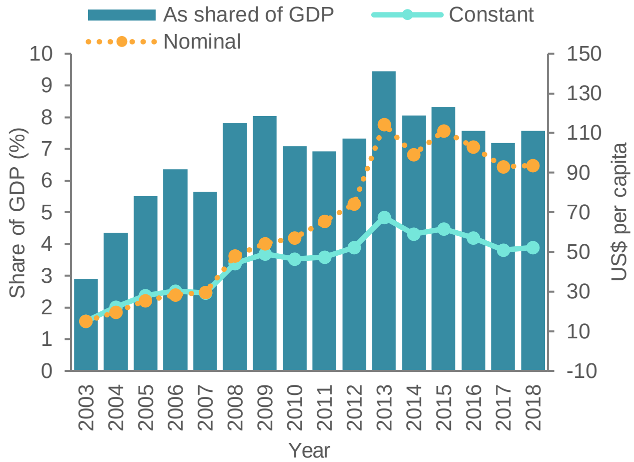
3.3.2. Health

Timor-Leste rivals other LMIC EAP countries in average total health spending. In 2018, total health spending in the country was $94 per capita, equivalent to 7.6 percent of GDP.[81] The level of spending has grown substantially, increasing approximately threefold in real terms over the past decade (see Figure 3.16). This level of health spending is to be expected at Timor-Leste's level of development and is comparable to other countries at a similar level of income (see Figure 3.17).

Although Timor-Leste has available financing for health, improvements in health-care infrastructure and enhanced availability of equipment have not ensured effective coverage of and access to good quality health services. One driver is weak management of key resources such as money, human resources, and supplies. For example, despite increases in health-care infrastructure over the past decade, many health facilities in Timor-Leste still lack basic amenities and are unevenly distributed across the country, yielding a low health service utilization rate. More outpatient facilities—Community Health Centers (CHCs) and Health Posts (HPs)—have been built in recent years, with a significant increase in the number of health posts in 2015, in particular (see Figure 3.18). The number of Referral Hospitals (RH) has remained the same. However, the annual outpatient utilization rate in 2017 was approximately 2.5 visits per person—lower than the National Health Sector Strategic Plan's target of a minimum of three visits per person, and significantly lower than regional counterparts (see Figure 3.19). Although hospital beds are heavily utilized, this seems more a function of low availability, which cannot even cover low utilization defined as two hospital admissions per 100 people, than to highly efficient utilization.[82] Low rates of outpatient visits (and low rates of NCD screening and management) indicate that the population is not accessing preventive primary care, which contributes to inefficient and expensive utilization of hospital care and associated poor health and economic outcomes.

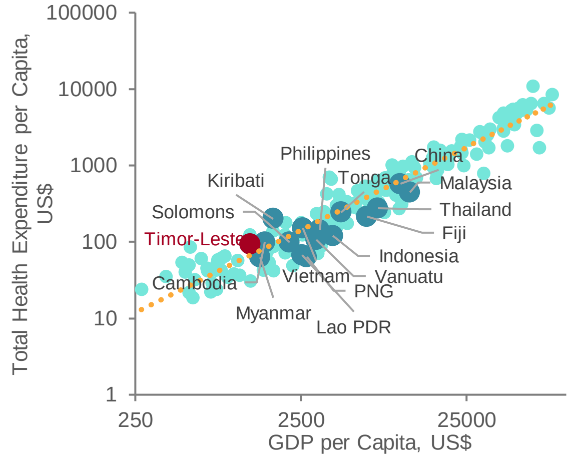
[81] World Bank (2020e). *Timor-Leste Public Expenditure Review*. In Preparation.
[82] ibid

Figure 3.16: Total Health Expenditure Per Capita and as a Share of GDP, 2003-2018



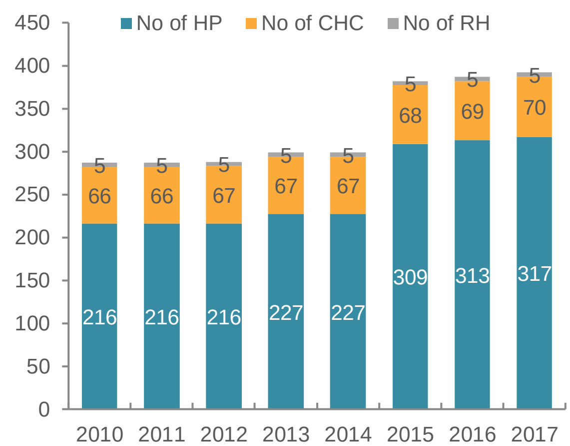
Source: WHO Global Health Expenditure Database
Note: Data are in 2003 constant US$

Figure 3.17: Total Expenditure on Health Per Capita, 2017



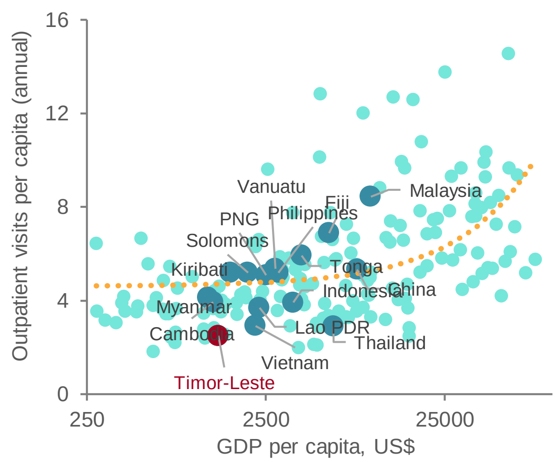
Source: World Development Indicators database
Note: Both y- and x-axes logged
Public expenditure includes both domestic and external funds provided through Government

Figure 3.18: Number of Health Facilities in Timor-Leste, 2010 to 2017



Source: Timor-Leste National Health Sector Strategic Plan (NHSSP) 2011-2030

Figure 3.19: Outpatient Contact Rate, Timor-Leste and Comparator Countries



Source: Institute Health Metric Evaluation Database, 2010 Outpatient figure for Timor-Leste from Annual Joint Report 2018, Ministry of Health
Note: x-axes logged; excluding countries with outpatient visit above 15 per capita

Despite significant increases in recent years, the number of health workers is still relatively low, and they are unevenly distributed. The ratio of nurses and midwives to population has seen the greatest increase, from 9.12 per 10,000 population in 2013 to 17.48 in 2020 (which is low in contrast to neighboring Indonesia with 39.54 per 10,000 in 2020).[83] The number of doctors has increased as well, from 6.17 per 10,000 population in 2013 to 7.56 in 2020. Together, the nurse/midwife doctor ratio of 25.04 per 10,000 population is much lower

[83] "Nursing and Midwifery Personnel (per 10,000 Population)." The Global Health Observatory. World Health Organization. Accessed June 15, 2022. https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-(per-10-000-population).

than the WHO-recommended 44.5 per 10,000 population to achieve universal health coverage.[84] Additionally, a 2015 study found general practitioners' average scores on an assessment of capacity to conduct a physical examination and on health education were poor, with 28 percent and 50 percent accuracy, respectively.[85]

Efficiency gains can be captured by improving the quality and distribution of health workers and increases patient utilization of primary care. Additional efforts are required to strengthen the clinical competencies of health-care providers. Preservice training lacks resources such as adequate library facilities, laboratories, and practice sites. Core competency frameworks and competency-based curricula have not been introduced, which leaves many graduates without suitable skills and competencies when they enter the health workforce, where they will also find suboptimal in-service training.[86] Suboptimal allocation of health care providers in remote or disadvantaged areas undoubtedly contributes to low rates of care utilization among the most in-need. Since most of the health interventions to address maternal and child health and childhood malnutrition (some of the areas where Timor-Leste's performance is worst) are delivered through primary care (ANC, sick- and well-child visits, feeding counseling, nutrition supplementation), increasing equitable outpatient primary care utilization has the potential to drastically improve population health outcomes and also increase the efficiency of health spending.

3.3.3. Education

Government education spending in Timor-Leste is roughly as expected for countries with similar level of development, but the country continues to be challenged by poor student learning outcomes. In 2019, public spending on education represented 4.1 percent of GDP, which is similar to other countries in the region. Public expenditure on education has fluctuated notably, recording a strong increase from US$46 million in 2008 to US$164 million in 2014, but gradually decreased until a partial recovery in 2019. Meanwhile, learning outcomes as measured by the 2018 national exam results for grade 9 indicated that less than half of students had learned at least 50 percent of the required material covered in the nine basic education grades. Weak outcomes may be attributed to weak service delivery. Overcrowded classrooms, high rates of grade repetition, lack of adequate infrastructure, supplies, and competent teachers are some of the most salient issues the country faces.

The composition of spending on education has changed considerably, with a rising wage bill, which could be problematic if not accompanied by improvements in key education outcomes. Specifically, salary and wages account for a large (and growing) proportion of education spending in Timor-Leste, as in many other countries worldwide. Mainly driven by the growing number of teachers, expenditure on salary and wages increased from $20 million in 2008 to $73 million in 2019. In 2019, salary and wages accounted for about two-thirds of total education expense.

Increased spending on wages may be crowding out spending on other key inputs. In fact, spending on goods and services has declined considerably, while spending on other categories such as capital and development, minor capital, and transfers, has been relatively marginal (See Figure 3.20). Investments in infrastructure have also been very limited in the recent past despite an estimated large number (10 percent) of classrooms in poor condition and requiring rehabilitation, to say nothing of rising future demand.[87]

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[84] World Health Organization. Publication. Health Workforce Requirements for Universal Health Coverage and the Sustainable Development Goals 17. Vol. 17. Human Resources for Health Observer Series. Geneva: World Health Organization, 2016. https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-(per-10-000-population).

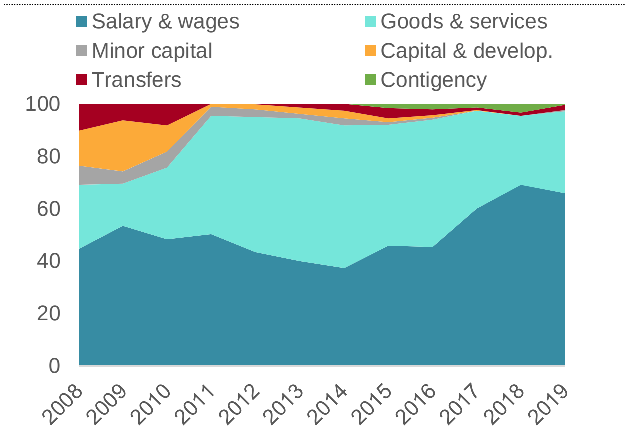
[85] World Bank Group, Oxford Policy Management. *Health Worker Survey in Timor-Leste*. World Bank Group and Oxford Policy Management; 2015. http://documents1.worldbank.org/curated/en/986251468187127947/pdf/103443-WP-P146118-PUBLC-Timor-Leste-Health-Worker-Survey-Final-Report-14June15.pdf

[86] Australian Government, Department of Foreign Affairs and Trade. *Australia Timor-Leste Health Review Report and Management Response*. Accessed December 9, 2020. https://www.dfat.gov.au/about-us/publications/Pages/timor-leste-health-review-report

[87] World Bank (2020e). Timor-Leste Public Expenditure Review. In Preparation.

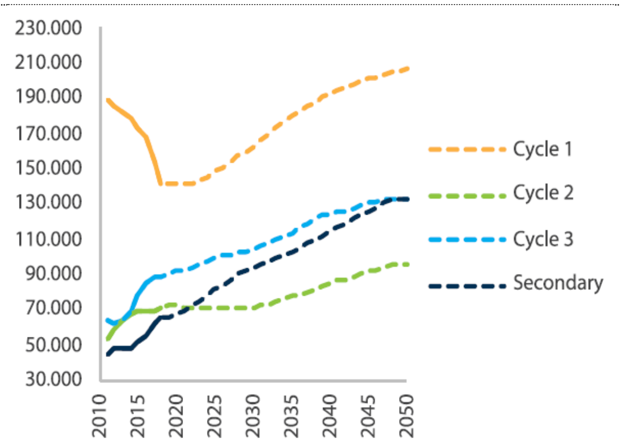
Demographic trends indicate that the education system is expected to face a higher demand for services, with demand for secondary schools outpacing its supply. The student population is projected to increase by 23 percent between 2018 and 2035,[88] meaning the demand for public education services will grow considerably in the near future (see Figure 3.21). The number of 3-5 year-olds is expected to increase by about 17 percent between 2018 and 2030, while there has been limited growth in the number of basic education schools since 2011. Additionally, although the number of secondary schools has increased (with a growth rate of 70 percent) it still does not sufficiently meet the demand of a 47 percent increase in the number of secondary students. Many classrooms are overcrowded, with the biggest increase in class size observed in secondary schools, where the average classroom had 46 students in 2011 and 57 students in 2018, reflecting that the demand is outpacing the supply of secondary schools and adequately-trained teachers.[89]

Figure 3.20: Spending on Education (share) in Timor-Leste



Source: World Bank Development Indicators database

Figure 3.21: Student Number Projections



Source: World Bank using UN 2017 revision
Note: Cycles 1-3 represent basic education, with cycle 1: grades 1-4; cycle 2: grades 5-6; cycle 3: grades 7-9

A 'business as usual' approach—simply relying on further spending without considerations of efficiency, equity, and quality—will be insufficient to generate sustained improvements in learning outcomes. Stronger and better investments in preschool, especially in classroom resources and preschool staff, will be required to help prepare increasing numbers of children for compulsory schooling. Basic education also requires more classrooms and adequately trained teachers to meet a growing demand while ensuring good quality services. These resource increases must be taken gradually since the education system is not able to produce teachers with the required skills and competencies (nor build new facilities) at such a fast pace. There is a need to focus simultaneously on service coverage (for example, enrollment) and quality.

3.3.4. Social Protection

The high rate of social protection spending has not translated into improvement in welfare. Large swaths of spending are allocated for veterans of Timor-Leste's resistance (up to 64 percent of the 2019 social protection budget). This proportion is excessive considering its coverage of a very restricted group of people estimated to compose just 3.7 percent of the poorest 40 percent of the populace in 2019. Social protection programs will continue to have limited impact on welfare as long as resources are distributed in accordance with such criteria.

[88] United Nations Department of Economic and Social Affairs. *World Population Prospects: The 2017 Revision*. Accessed November 28, 2021. https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html
[89] World Bank Group (2020e). *Timor-Leste Public Expenditure Review*. In Preparation.

The government has shown a strong commitment to social protection and human capital accumulation, but is hindered by a lack of coordination and cohesiveness underpinned by piecemeal legislation. A series of programs were put in place in the aftermath of the 2006 crisis to resettle the displaced, reduce tensions, and promote social cohesion. The new social security system has a clear objective, while other existing programs remain fragmented and poorly administered. These programs' objectives may vary from alleviating poverty, reducing vulnerability, mitigating shocks, facilitating access to basic services, and enhancing human development. However, these programs lack coordination and are occasionally inconsistent, principally because they are not embedded in an overall social protection strategy. There are certain programs, benefits, and services without specific regulatory legislation and that operate based on ministerial orders, organic law, and national plans, among other modalities.

Social programs do not share administrative tools; each program uses its own methods for identification of beneficiaries, targeting, and payment delivery. As no strong, objectively developed targeting system exists, there is little convergence of programs. The Ministry of Social Solidarity and Inclusion, for instance, has developed a Management and Information System for core social assistance programs, but it has only been partially implemented. Other cash transfer programs, including the veterans' transfers, also maintain their own Management and Information System. Accordingly, the social protection identification and enrollment system remains disconnected, hindering policy-makers' capacity to discern whether programs converge or overlap, reducing the overall system's efficiency and effectiveness. Lastly, the lack of strong monitoring and evaluation of programs ensures that Timor-Leste continues to miss the opportunity to bolster social assistance initiatives to better promote economic empowerment, skills development, nutrition outcomes, or provide a shock response for the poor.[90]

Box 3.5: Cross-Cutting Sectors

Water and sanitation. The Ministry of Public Works recently embarked on a water sector institutional reform aimed at clearly separating service provision, regulation, and policy-making functions. The impressive water and sanitation development plans aim to achieve 100 percent access to water and hygienic toilets by 2030, which would help limit the cycle of infection and malnutrition.

Gender, disability, and inclusion. Existing regulations provide for men and women's equal participation in economic, social, and cultural life, and prohibit all forms of discrimination. However, weak institutional capacity and existing social norms pose challenges to implementation. The government has ratified most of the international human rights treaties that promote gender equality and prohibit discrimination, but it has not ratified the Convention on the Rights of Persons with Disabilities. The country's national development plan highlights that gender equality is integral to achieving the overall goal and vision of a gender-fair society.

Data systems. The government still lacks a trusted and inclusive identification system, undermining inclusion, digitalization, and service delivery, although it has promulgated a Unique ID System Strategic Plan 2021-2025 to introduce a foundational ID system that could be a universal platform for digital delivery of services. While there are several high-quality Management and Information Systems in the country, these are often isolated, and access is limited and sometimes restricted.

3.4. Priorities for Human Capital Accumulation

3.4.1. Overview

Timor-Leste's macro-fiscal situation, demographic profile, and Covid-related losses underscore the urgent need for transformative action to bolster human capital. The depletion of the country's Petroleum Fund reinforces the view that the next few years are crucial for investment in the workforce of tomorrow,

[90] Fernandes R, Pinxten J, Meidina I (2020). *Timor-Leste Social Protection Review*. World Bank.

which will be the single most influential driver of the country's economic growth. This will require promoting performance-oriented investment in human capital service delivery to ensure quality and equity as well as the productive realization of a demographic dividend. As reliance on revenue-generation from petroleum becomes less viable, competition for the government budget will surely increase in a declining revenue collection window against valid rival claims. This will make securing and sustaining such budget investments even more difficult, and underscores the importance of focusing on efficiency and high-impact interventions. To achieve the productive realization of a demographic dividend, Timor-Leste will need to (i) focus on key issues in malnutrition and early grade repetition by targeting investments to improve primary health care utilization and teaching competency (ii) address inefficiencies of current HC investments by rebalancing the social protection system towards those most in need of support, and (iii) invest in data systems to inform decision making for targeted investments, strategic allocation of skilled service providers, and better alignment of training provisions with industry needs.

3.4.2. Address damaging inefficiencies in financing for HC, and prioritizing actions with high impact

3.4.2.a. Rebalance the social protection system

A gradual rebalancing of the social protection system towards those most in need of support will be required for Timor-Leste to secure long-lasting HC improvements of its youth. While sustained and additional financing in health and education is important, the more attainable "low hanging fruit" for Timor-Leste is around efficiency and appropriate financial allocation that prioritize younger generations. Given constrained resources, large investments in the veterans' program come at the expense of adequate investment in the younger generations that will secure a prosperous and healthy future for Timor-Leste. Human capital accumulation could be bolstered by targeting of social protection programs and budget reallocation programs that yield higher impacts on poverty alleviation and human capital accumulation per dollar spent. For example, social protection programs such as Bolsa da Mãe (which focuses on poor and vulnerable households with children) must be strengthened to provide adequate benefits to support poverty alleviation and human capital accumulation.

3.4.2.b. Increase primary health care utilization

Increasing both the supply of and demand for primary health care will help increase efficiency and improve health outcomes. Inadequate access to primary health-care not only worsens health outcomes but may also spur the use of more expensive secondary and tertiary care. Investment in both supply- and demand-generation for comprehensive primary health-care services (with a special focus on high-impact and integrated maternal and child health and nutrition services to address the health outcomes on which Timor-Leste performs worst) would improve both health outcomes and the efficiency of health financing. At present, outpatient care utilization is very low, and the population under-utilizes preventive primary care services, which are the most cost-effective. Strategic allocation of health care providers and facilities or providing alternative means of access (such as through telehealth services) can help to ensure that primary care services are available even in the remotest areas. Additionally, community-level interventions and behavior change communication will be required to increase population awareness of and linkages to primary care.

3.4.2.c. Reduce malnutrition

Investing in reducing malnutrition in the immediate term can both reduce health care costs throughout the life course and improve productivity in adulthood. In fact, studies suggest that malnutrition in all its forms has an estimated global economic impact of US$3.5 trillion annually, or US$500 per individual.[91] Childhood stunting alone—which affects 46 percent of children in Timor-Leste—results in a global annual economic loss of nearly US$200 billion annually, and returns on investment in stunting could

[91] The Global Panel on Agriculture and Food Systems for Nutrition. The Cost of Malnutrition: Why Policy Action Is Urgent; 2016. https://glopan.org/sites/default/files/pictures/CostOfMalnutrition.pdf

approach 3:1.[92] To address malnutrition (and stunting in particular), the country must invest in co-located, evidence-based cross-sectoral interventions among the most vulnerable. This will require coordinated action to ensure delivery of comprehensive interventions including food and micronutrient supplementation, food fortification, food safety and security, school-based interventions, family planning and ANC services, water and sanitation, and associated behavior change communication efforts. [93]

3.4.2.d. Reduce grade repetition

Special focus on reducing grade repetition will not only improve learning outcomes but also will result in more efficient education spending. Both a cause and effect of low-quality education, grade repetition increases the age range in classes, making teaching methods less effective and class management more difficult, posing a high cost to the education system. Additionally, grade repetition is mostly found among students with disadvantaged backgrounds. A focus on both service coverage (to low resource areas) and teacher competency training (as described further below) would help increase the quality of education students receive, and reduce grade repetition, improving the utilization of limited education resources.

3.4.3. Invest in equitable allocation, improved skills, and performance monitoring/incentives for HC service delivery providers to strengthen human capital service delivery

3.4.3.a. Improve allocation and skills of service providers

Shifting away from investment that focuses only on infrastructure, and toward a greater investment in allocation and skills of service providers will be vital. For example, transitioning the focus to quality and equity may increase the value of investing in more equitable allocation of health-care providers and teachers to hard-to-reach areas. In addition to strengthened pre- and in-service clinical trainings, exploring telemedicine and digital health systems could increase service availability in the remoter parts of the country and also enable primary health-care facility providers to seek specialized advice and widen the scope of their services and competencies. Similarly, limitations in teacher capacity have not been adequately addressed and are reflected in poor and disparate learning outcomes and grade repetition. Strengthened, standardized, and frequent trainings for teachers can improve the quality of education services and will help reduce inequities.

3.4.3.a. Invest in data systems

Investing in modern and integrated digital data systems and analytics can improve HC service delivery quality and equity in addition to informing Timor-Leste's HC policy decisions. Regular and robust data collection systems and analysis by well-trained staff can be utilized to implement performance monitoring systems and performance-based financing modalities. Reliable facility-level data collection systems can facilitate routine performance monitoring in schools and health facilities, and can be used to develop incentive schemes to motivate service providers. Digital identification systems and systematic collection of data in health, education, social protection, and private sector industry can also facilitate evidence-based decision-making in real-time. This is pertinent for improving Timor-Leste's spending efficiency by equipping policymakers with better systems for resource management and allocation. Additionally, a robust data sharing architecture can have a beneficial impact on HC policy decisions and outcomes by improving coordination among government programs as well as helping identify inequities that can subsequently be effectively addressed through better targeting.

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92 Fink Gunther, Peet Evan, Danaei Goodarz, Andrews Kathryn, McCoy Dana Charles, Sudfeld Christopher R, Smith Fawzi Mary C, Ezzati Majid, Fawzi W. Wafaie. Schooling and wage income losses due to early-childhood growth faltering in developing countries: national, regional, and global estimates. Am J Clin Nutr. 2016;104(1):104-112. doi:10.3945/ajcn.115.123968

93 Keats, Emily C, Jai K Das, Rehana A Salam, Zohra S Lassi, Aamer Imdad, Robert E Black, and Zulfiqar A Bhutta. "Effective Interventions to Address Maternal and Child Malnutrition: An Update of the Evidence." *The Lancet Child & Adolescent Health* 5, no. 5 (2021): 367–84. https://doi.org/10.1016/s2352-4642(20)30274-1.

3.4.4. Capitalize on investments in HC through a workforce development/deployment strategy and labor market alignment

3.4.4.a. Develop and implement a workforce development/deployment strategy

Benefiting from investments in human capital requires a robust and effectively implemented workforce development and deployment strategy, and the strategic involvement of the private sector, which will directly benefit from a more highly skilled workforce. Timor-Leste is already facing the challenge of a labor market inundated with graduates struggling to find jobs because of limited vacancies. This is particularly concerning given that the demographic trends suggest that a youth bulge is ineluctably on the horizon, which necessitates a close alignment of skills and workforce opportunities. Given that recent job creation has been primarily a product of public sector expansion, there may be room for economic diversification and private sector expansion to generate jobs in the future. A workforce development and deployment strategy should be developed and operationalized with private sector engagement to benefit from a demographic dividend.

3.4.4.b. Develop a labor monitoring system and updated critical occupation list

Timor-Leste needs to strengthen the connection between education and training provision with industry and HC needs through a labor monitoring system and updated critical occupation list. Although the country has developed several national education/training plans and strategies, there are significant gaps in implementation, coordination, monitoring of outcomes, and budgetary commitment. These gaps compromise the efforts to develop a competent workforce that can help boost economic growth. A robust labor monitoring system and updated critical occupation list could help address both labor surplus and shortages of human resources for HC service delivery (such as health-care providers, nutrition specialists, and teachers). Strategic linkages between training and skills development programs now can simultaneously expand labor market opportunities while helping to unlock the full potential of Timor-Leste's human capital of tomorrow.

3.5. Conclusions

A sharper focus on efficient human capital investment, especially for its young generations, is crucial for Timor-Leste to capitalize on its youth bulge and achieve sustained long-term economic growth. Now more than ever, children born today in Timor-Leste will be the future drivers of the country's economic growth, with new opportunities brought about by technology and globalization. Building an enabling environment for human capital accumulation and ample labor market opportunities for its students and young children now through education, health and nutrition services, and social protection will allow the country to mitigate adverse impacts from the Covid-19 pandemic, enhance trust in its institutions, and allow the nation's children to achieve their full potential and lead Timor-Leste in the 22nd century.

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Annex 1: Key Indicators

Annex Table 1: Economic Indicators

	2016	2017	2018	2019	2020	2021
Real sector	*(annual percentage change, constant)*					
Gross domestic product (non-oil)	3.4	-4.1	-1.1	1.8	-7.3	1.5[e]
Final consumption expenditure	1.7	-1.2	0.8	3.4	-2.8	
Gross fixed capital formation	15.3	-16.7	-1.5	-17.2	-46.5	
Consumer price index, period average	-1.5	0.5	2.3	0.9	0.5	5.3
Fiscal sector	*(percentage of non-oil GDP)*					
Total Revenue	45	42	48	43	46	44
Domestic revenue	12	12	12	11	12	10
Estimated Sustainable Income	33	30	35	32	35	34
Total expenditure	99	76	77	74	72	89
Recurrent expenditure	62	59	52	55	62	80
Capital expenditure	36	16	25	19	10	9
Fiscal balance	-54	-34	-29	-31	-26	-45
Monetary and Financial sector	*(as stated)*					
Credit to the private sector (% growth)	-5.3	24.5	-2.4	4.3	11.2	5.8
Lending interest rate (%)	14.5	12.1	11.9	12.0	11.3	11.0
Nominal effective exchange rate (index)	94.4	94.8	96.3	97.4	98.7	97.9
Real effective exchange rate (index)	110.9	109.0	111.2	112.0	113.2	112.4
External sector	*(percentage of non-oil GDP)*					
Current account	-33	-18	-12	5	-5	62
Goods and services	-68	-60	-60	-38	-20	48
Primary income	33	46	54	47	19	13
Secondary income	2	-4	-6	-4	-4	0
Capital account	3	2	3	2	1	1
Financial account	29	31	16	-7	17	12
Direct investment	0	0	3	-34	5	4
Portfolio investment	42	21	13	29	15	9
Other investment	-12	9	0	-2	-3	-1
Net errors and omissions	-9	1	1	0	-12	-58
Change in reserves	9	-16	-8	1	0	-17
Memorandum items	*(as stated)*					
Oil production (million BOE)	47	42	39	38	36	37
Petroleum Fund, closing balance (USD million)	15,844	16,799	15,804	17,692	18,991	19,651

Source: Ministry of Finance, BCTL