THAILAND
ECONOMIC MONITOR
FISCAL POLICY
FOR A RESILIENT
AND EQUITABLE FUTURE

December 2022

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Preface

The Thailand Economic Monitor (TEM) reports on key developments in Thailand's economy over the past six months, situates these changes in the context of global trends and Thailand's longer-term economic trajectory, and updates Thailand's economic and social welfare outlook. Each edition of the TEM also provides an in-depth examination of selected economic and policy issues and an analysis of Thailand's medium-term development challenges. The TEM is intended for a wide audience, including policymakers, business leaders, financial-market participants, and the community of analysts and professionals engaged in Thailand's evolving economy.

The TEM is produced by the staff of the World Bank's Bangkok office, consisting of Kiatipong Ariyapruchya, Ekaterine Vashakmadze, Nadia Belhaj Hassine Belghith, (Task Team Leaders), Warunthorn Puthong, Thanapat Reungsri, Matthew Wai-Poi, Natalia Millan, Tanida Arayavechkit, Hector Pollitt, Uzma Khalil, and Dilaka Lathapipat. Fabrizio Zarcone, Lars Christian Moller, Rinku Murgai, Souleymane Coulibaly and Ronald Upenyu Mutasa provided overall guidance. The team is grateful to Sailesh Tiwari, Shakira Binti Teh Sharifuddin, and Ergys Islamaj for their constructive peer review comments. Clarissa Crisostomo David, Kanitha Kongrukgreatiyos and Buntarika Sangarun are responsible for external communications related to the TEM, as well as the production and design of this edition.

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Previous editions of the TEM:
- June 2022: Building back greener: the circular economy
- December 2021: Living with COVID in a digital world
- July 2021: The road to recovery
- January 2021: Restoring incomes; recovering jobs
- July 2020: Thailand in the time of COVID-19
- January 2020: Productivity for prosperity
- July 2019: Harnessing fintech for financial inclusion

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Abbreviations

ASEAN	Association of Southeast Asian Nations
BCA	Business Collateral Act
BCG	Bio-Circular-Green
BIM	buildings information modelling
BOI	Board of Investment Thailand
CE	circular economy
CECI	Circular Economy in Construction Industry
CGE	Computable General Equilibrium
CP	Charoen Pokphand
CPSD	Country Private Sector Diagnostic
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CEWT	Circular Economy for Waste-Free Thailand
DEPA	Digital Economy Promotion Agency (Thailand)
DPIM	Department of Primary Industries and Mines
EAP	East Asia and Pacific
EAE	Electrical appliance and electronics
EEC	Eastern Economic Corridor
EEI	Electrical and Electronics Institute
EESD	Environmental Education for Sustainable Development Partnership
EGAT	Electricity Generating Authority of Thailand
EPR	Extended Producer Responsibility
ERIA	The Economic Research Institute for ASEAN and East Asia
EV	electric vehicle
e-waste	Electrical and Electronics waste
GCR	Global Competitiveness Report
GDP	gross domestic product
GHG	greenhouse gas
GPP	green public procurement
G2G	Government to government
IoT	Internet of the Things
KPI	Key performance indicator
L3F	Livelihood Fund for Family Farming
MDES	Ministry of Digital Economy and Society
MHESI	Ministry of Higher Education, Science, Research, and Innovation
MONRE	Ministry of Natural Resources and Environment
MOC	Ministry of Commerce
MOE	Ministry of Education
MOF	Ministry of Finance
MOI	Ministry of Interior
MOL	Ministry of Labor
MOT	Ministry of Transport
MRAs	Mutual Recognition Agreements
MSDHS	Ministry of Social Development and Human Security
MSMEs	Micro-, small- and medium-Size enterprises
NA	National Assembly
NDCs	nationally determined contributions
NESDB	National Economic and Social Development Plan
NGO	non-governmental organization
NSO	National Statistical Office
NXPO	The Office of National Higher Education Science Research and Innovation Policy Council
PCD	Pollution Control Department
PM	Prime ministry

R&D	research and development
SCG	Siam Cement Group
SDG	Sustainable development goals
SEA	Southeast Asia
SRI	Science Research and Innovation
TSRI	Thailand Science Research and Innovation
USD	United States Dollar
VAT	Value added tax
WEEE	Waste Electrical and Electronic Equipment

Table of Contents

TABLES

BOXES

EXECUTIVE SUMMARY

Recent Developments

The economy has shown resilience to recent global shocks thus far, with output surpassing its pre-pandemic level in 2022 Q3, earlier than expected but trailing behind peers. Economic growth accelerated to 4.5 percent in the third quarter fueled by resurgent private consumption and strong tourism inflows.[1] Economic reopening in May and the authorities' measures to mitigate cost-of-living pressures have supported the recovery. Tourism arrivals reached 45 percent of the pre-pandemic level in September, surpassing Indonesia and the Philippines. Because of its heavy reliance on tourism, Thailand's economic recovery, however, lagged that of its ASEAN peers, most of which returned to pre-pandemic levels by late 2021. In addition, exports of goods remained a drag on growth in contrast to many peers who benefitted from stronger good export growth in the first half of this year. Most recently, Thailand experienced a sharp slowdown in goods exports growth, also observed it its ASEAN peers and consistent with the contraction in global manufacturing Purchasing Manager Index (PMI).

Despite higher revenue from tourism, the current account deficit remained wide in 2022 Q3. This was due to a combination of structurally large net oil imports and a cyclical deterioration in the goods trade balance. Merchandise exports continued to slow while the fuel import bill remained high. As a result, the current account deficit reached 5.7 percent of GDP in 2022 Q3. The portfolio account continued to show net inflows in the first half of 2022, driven by inflows to equities, reflecting ongoing economic recovery and improved confidence. This partly offset weakness of the goods trade balance. The real effective exchange rate continued to depreciate. International reserves have notably declined from 13 to 9 months' worth of imports. External buffers against external shocks have therefore declined but remained sizable.

Price pressures have remained elevated and broadened to core inflation. Despite easing slightly due to lower global energy prices, headline inflation remained high at 6.0 percent in October, above the Bank of Thailand's target range of 1-3 percent, and the second highest among major ASEAN economies. Despite price controls applied to energy and public transport, core inflation (excluding raw food and energy) has increased steadily since the beginning of 2022, and reached 3.2 percent in October, its highest rate in 14 years, indicating rising risk of second-round inflation amid recovering domestic demand. While forward-looking measures of inflation expectations remain well-anchored at around 2 percent, continued monitoring will be necessary to determine whether the pick-up in inflation is temporary or more permanent. The central bank has embarked on gradual monetary normalization amid heightened inflation risks as the economic recovery gained traction.

Fiscal measures aimed at mitigating the cost-of-living shock have supported economic activity but contributed to the slowdown in fiscal consolidation. The central government's fiscal deficit narrowed to 5.6 percent of GDP in 2022 Q3 but remained larger than before the pandemic. The government largely maintained proactive fiscal policy to support the recovery and to mitigate the rising cost-of-living pressures. Total public spending declined to 23.4 percent of GDP in FY22 due to lower spending on the Covid-19 related relief measures. However, it remained well-above the pre-pandemic level due to measures to mitigate impact of rising energy subsidies, including cash transfers and subsidies on diesel and cooking gas prices estimated at around 3 percent of GDP. Central government's fiscal revenue remained unchanged at 17.8 percent of GDP Public debt rose to 60.7 percent of GDP at the end of FY22, almost 20 percentage points higher compared to its pre-COVID level. Price controls applied to energy and public transport continued to help contain cost of living pressures, but such controls tend to be an inefficient method of redistributing income, are often regressive in their impact and may delay efficient reallocation of resources and distort the inflation process, thereby complicating monetary policy.

The financial system remains stable overall, although risks associated with increased levels of household and corporate debt have not been resolved. Capital and liquidity buffers at commercial banks

remain well above the regulatory requirements**,** with profitability stabilizing. Indicators of asset quality show some improvement. Nonperforming loans to total gross loans decreased to 2.8 percent in 2022 Q3. Other forward-looking indicators such as special-mention loans have improved. Nevertheless, as a proportion of total loans to SMEs, NPLs remained high at 7.4 percent as of 2022 Q3, well above their pre-COVID levels of 4.5-5 percent. The central bank has extended the SME soft loan facility until end-2022, while several businesses have started their debt restructuring through asset warehousing programs. However, protracted forbearance measures, some only expiring at the end of 2023, may continue to mask vulnerabilities in asset quality. High household debt levels – at above 90 percent of GDP as of 2022 Q1 – and corporate debt – at 87 percent of GDP, both well above major ASEAN economies, may amplify shocks from tightening financial conditions. Small and medium enterprises (SMEs) are particularly exposed.

Outlook and Risks

Severe global headwinds are projected to weigh on the recovery momentum in 2023, testing Thailand's resilience. Output is projected to expand by 3.4 percent in 2022, at a faster rate than 2.9 percent projected in June (*Thailand Economic Monitor* June 2022). Growth in 2023, however, has been revised down to 3.6 percent by 0.7 percentage point, compared to the June forecast, with tourism and investment becoming the major drivers of growth. Investment growth is projected to accelerate helped by robust foreign direct investment inflows and accelerated disbursements of public investment projects. Goods trade and manufacturing investment will slow reflecting the impact of the global economic slowdown. The lingering negative output gap is expected to close by 2024. Long-term potential growth rate is estimated at 3.0 percent, slower than 3.6 percent observed over the past decade. Private consumption growth is also projected to moderate in 2023 to 4 percent as the reopening boost fades. Employment is expected to return to pre-pandemic level and will continue to support consumer spending

The current account balance is expected to reverse from its deep deficit in the past 2 years and return to positive territory in 2023. The improvement will be driven by the tourism rebound alongside declining global shipping costs. However, the goods trade balance is expected to deteriorate as goods export growth is projected to turn negative for the first time in 3 years due to the weakening global demand, while the cost of energy imports is likely to remain higher than prior to the war in Ukraine. The positive outlook on the current account and economic recovery will strengthen investor sentiment and support appreciation of the Thai baht.

Price pressures are expected to remain elevated with headline inflation staying above the Bank of Thailand's target in the first half of 2023 before moderating. Headline inflation is projected at 6.0 percent in 2022—the highest level in 24 years, driven mainly by higher fuel and transportation costs, raw food and prepared food prices. Headline inflation is projected to decelerate to 3.2 percent in 2023 as global crude oil and food prices moderate but will remain above the Bank of Thailand's target range throughout the first half of 2023. Core inflation (excluding raw food and energy) is likely to remain elevated at 2.4 percent in 2023, with ongoing cost pass-through to the prices of some consumer staples and services, coupled with rising demand fueled by a strengthening labor market and higher minimum wage. However, over the medium term, second-round pressures on prices are expected to remain contained, similar to regional peers, due to existing price administration and subsidies as well as a lingering output gap.

Public debt is projected to peak at 60.7 percent of GDP in FY 22. Over the medium term, public debt is projected to remain sustainable as the narrowing fiscal deficit and recovering output would contribute to a gradually declining debt to GDP ratio. Largely denominated in local currency, Thailand's debt is also shielded from the currently depreciating baht.

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[1] Growth terms are in year-on-year terms, unless noted otherwise.

Additional shocks, including a prolonged period of high energy prices, may increase inequality or further erode fiscal space unless more targeted social assistance spending is introduced. The pandemic and energy crisis have highlighted the vulnerability of certain segments of society and the importance of social assistance. At the same time, the recent rise in public debt levels and lagging recovery have made it harder to reconcile the pressures to keep social support and subsidy measures – as the fiscal cost of subsidy continues to rise – with the need for fiscal consolidation. The fiscal cost of energy subsidies could be significantly larger if the global energy supply shock is prolonged. To manage these competing pressures and create additional space to address future shocks, more targeted cost-effective social assistance spending, a rebalancing of expenditure towards public investment, and further effort on revenue mobilization will be necessary.

Labor market conditions have improved, but the phasing out of COVID-19 relief measures and the rising cost of living may slow down poverty reduction. The official unemployment rate declined to 1.2 percent in 2022 Q3 close to its pre-pandemic level of 1.0 percent. Average wages grew by 5.4 percent in 2022 Q2 but lagged the rising cost of living. Most COVID-19 relief measures and stimulus packages, which helped support the income of poor families and drove the official poverty rate down to 6.3 percent in 2021, have been discontinued or soon will. This may lead to the persistence of poverty at 6 percent or above in 2022, particularly if the economy does not grow as predicted and tourists' arrival is less than expected due to global recession.

Fiscal Policy for a More Equitable Future

Prior to the COVID-19 pandemic, Thailand has made remarkable progress in reducing poverty; income inequality has also declined but is still high. Between 1990 and 2019, the national poverty rate fell from 58 to 6.3 percent, and the international poverty rate (measured at $5.5 a day in 2011 PPP) declined from 65 to 6.2 percent. From 2015 onwards, only Malaysia had a lower poverty rate than Thailand in the upper-middle income country (UMIC) group. Thailand has also achieved important reductions in inequality, but it is still high. With an income Gini coefficient of 43.3 percent in 2019, Thailand ranked as the 13th most unequal out of 63 countries for which income Gini coefficients are available, and first in East Asia and the Pacific (EAP). In terms of consumption inequality, Thailand performed better. With a consumption Gini coefficient of 35.0 percent in 2019, it ranked 45th out of 72 countries with available consumption Gini coefficients, but it continues to rank higher than half of countries in EAP. Inequality can undermine progress in human capital accumulation and tends to reduce the pace and sustainability of growth and poverty reduction.

Fiscal policy serves as an important tool to reduce poverty and inequality. This was well illustrated by how Thailand's social assistance response to COVID-19 crisis helped to offset loss of income and poverty increase. Without this assistance, poverty would have reached 8.1 percent in 2021 (27 percent higher than observed levels), while inequality would have been over 4 percent higher than its current level. Fiscal policy can affect short-term poverty and inequality through the immediate effect of taxes, transfers, and subsidies on households' income, and can promote growth and poverty reduction in the long term through spending on health, education and infrastructure.

Pre-pandemic, the impact of Thailand's fiscal system on poverty and inequality reduction was higher than in peer countries. Households pay taxes and benefit from direct cash transfers from social assistance programs. They also receive non-cash benefits from public spending on health and education. In 2019, households in the poorest groups received more benefits than they paid taxes; the poorest 10 percent of people's incomes increased by 10 percent in cash terms through fiscal policy, rising to 70 percent when non-cash health and education are included (the next poorest 10 percent saw a net 2 percent increase in cash incomes and 45 percent when non-cash benefits are included). At the same time, the richest 10 percent paid more taxes than they received in benefits, contributing a net 13 percent of their income. This progressive pattern of Thailand's fiscal system helped to reduce inequality and to a lesser extent poverty. Inequality is most commonly measured with the Gini Index, which ranges from 0 percent (complete equality) to 100

percent (complete inequality). In Thailand the Gini Index falls from 37.5 percent based on market incomes only to 28.6 percent after accounting for taxes, cash transfers and in-kind benefits— indicating that fiscal policy reduced inequality by 8.9 percentage points in 2019. The impact of taxes and cash transfers on inequality reduction is lower than the impact of in-kind spending on health and education, suggesting that in-kind spending is a more important source of redistribution in Thailand. Poverty based on market income (at $5.5 a day in 2011) is estimated at 9 percent, falls to 6.2 percent after accounting for direct taxes and cash transfers but increases to 8.1 percent when adding indirect taxes. In sum, fiscal policy reduced poverty by 0.9 points through cash transfers, with the burden of indirect taxation on the poor partly offsetting the impact of social assistance benefits. In the international context, the impact of fiscal policy on inequality is 22nd - best out of 58 countries with available data, and 13th-best out of 24 UMICs. While the impact of fiscal policy on poverty is relatively low, it is 15th-best out of 56 countries with comparable data and 7th highest among UMICs.

However, Thailand's social spending is low by international standards, as is tax revenue collection. While social spending does help reduce poverty and inequality in Thailand, overall levels are low. At the same time, overall spending is constrained by low total tax revenue collection, particularly low value-added tax (VAT) collection. The fiscal demands of responding to the COVID-19 crisis have increased pressure on fiscal policy. Designing the policy mix that supports an inclusive recovery, accelerates poverty and inequality reduction, and protects households against ongoing and future shocks in a narrowed fiscal space is very challenging. Fiscal policy can focus on increasing the efficiency of social spending by improving targeting of social assistance transfers. Policies can also focus on increasing spending on critical public services for human development and long-term growth and raise revenue for this additional spending in a progressive manner. Reforms to increase tax revenues should minimize negative impacts on vulnerable households and should be accompanied by targeted measures to protect their income.

Thailand's relatively low tax revenue collection contributes to underinvestment in pro-poor spending. Pre-COVID tax revenues were around 16 percent of GDP, below UMIC and non-OCED HIC averages and only half that of the OECD average. Moreover, it relies more on indirect taxes which are less progressive than direct taxes, with PIT accounting for 1.7 percent of GDP, compared to the UMIC average of 2.8 percent. While Thailand's PIT is very progressive with most revenue coming from richer households, it contributes only a quarter as much revenue as VAT and excises. Consequently, Thailand both collects less total revenue than other countries and has a less progressive mix.

Short-term reforms to VAT and social assistance could result in a net increase of tax revenues and significant reductions in poverty and inequality. An increase in the base VAT rate from 7 percent to 10 percent with a removal of preferential rates and exemptions could increase tax revenues by as much as THB 245 billion. These VAT reforms would increase poverty by 1.5 points. However, the negative impact on the poor would need to be offset by social assistance reforms. A tapered increase of the Old Age Allowance (OAA) to between THB 2000 and THB 500 per month for elderly people (60 and above) in the lowest two income quintiles would reduce poverty by 2.1 points and inequality by 1.2 points and would cost THB 71 billion. An increase of Social Welfare Card (SWC) transfers to THB 699 per capita per month with better targeting to the lowest income quintile would reduce poverty by 2.9 points and inequality by 1.2 points and would cost THB 73 billion. The reforms of OAA combined with SWC and VAT reforms would raise tax revenues by THB 100 billion while reducing poverty by 3.6 points and inequality by 2.6 points.

Recent Developments and Near-Term Outlook

Figure ES 1: Thailand's recovery has strengthened as private consumption and services picked up following reopening...

(Percentage-point contribution to real GDP growth, year-on-year)
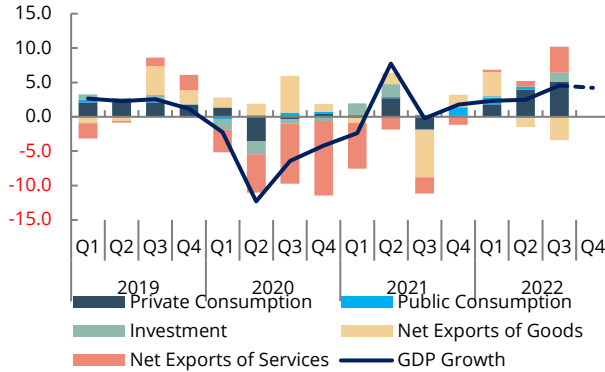
Source: NESDC.
Note: Change in inventories explain the difference between other components and total GDP growth.

Figure ES 2: ...and has shown resilience amid recent global economic uncertainty.

(10-year bond yield, % change y-o-y)
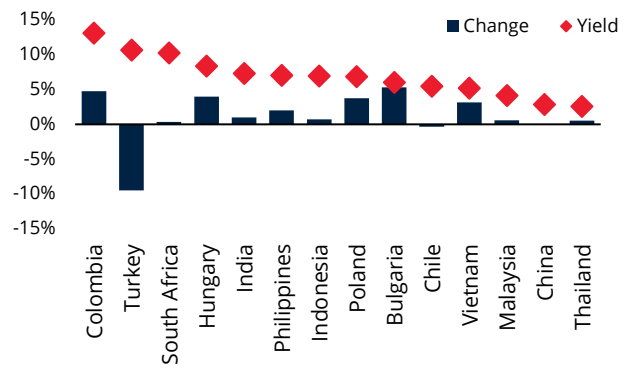
Source: Bloomberg; Haver Analytics.

Figure ES 3: Price pressures remain elevated with rising core inflation and cost of living.

(Contribution to headline inflation, % change y-o-y)
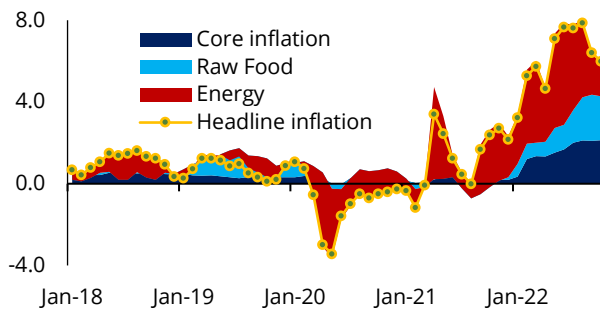
Source: CEIC; World Bank staff calculations.

Figure ES 4: Thai authorities and regional peers have responded with fuel subsidies to mitigate cost-of-living pressures.

(Percent of GDP)
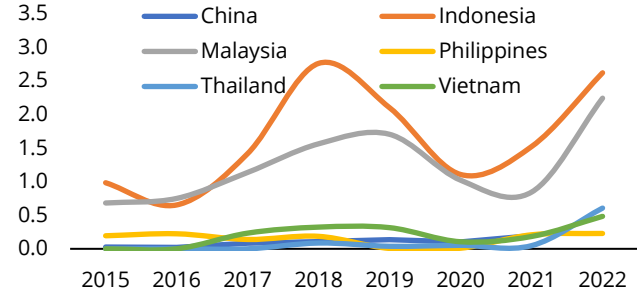
Source: International Monetary Fund 2015–21 and World Bank staff estimates for 2022. **Note:** *estimation* as of July for 2022.

Figure ES 5: A goods exports growth slowdown has already begun to weigh on the outlook...

(Percent year-on-year, 3 months moving average)

Source: Haver Analytics; World Bank staff projections.

Figure ES 6: ...and delay the economy's return to potential output levels to mid-2024.

(Index, 2019 = 100)
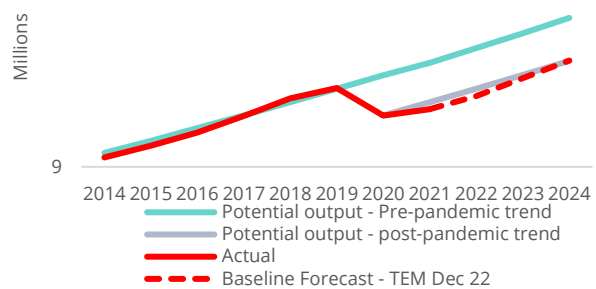
Source: World Bank staff projections.

Table ES 1: Macroeconomic Indicators

	2019	2020	2021	2022f	2023f	2024f
Real GDP Growth Rate						
(at constant market prices)	2.2	-6.2	1.5	3.4	3.6	3.7
Private Consumption	4.0	-1.0	0.3	6.0	4.0	3.3
Government Consumption	1.6	1.4	3.2	-0.9	-1.0	1.4
Gross Fixed Capital Investment	2.0	-4.8	3.4	2.3	4.5	3.7
Exports of Goods and Services	-3.0	-19.7	10.4	10.0	4.6	5.8
Imports of Goods and Services	-5.2	-14.1	17.9	8.6	3.2	4.1
Real GDP Growth Rate						
(at constant factor prices)						
Agriculture	-0.5	-3.2	1.3	2.0	2.2	2.2
Industry	-0.7	-5.3	3.4	1.7	2.7	3.5
Services	4.2	-5.8	0.5	4.6	4.4	3.8
Inflation (Consumer Price Index)	0.7	-0.8	1.2	6.2	3.2	1.2
Current Account Balance (% of GDP)	7.0	4.2	-2.1	-2.6	0.1	2.3
Fiscal Balance (General Government, % of GDP)	0.4	-4.5	-6.9	-5.5	-2.6	-1.5
Debt (% of GDP)	40.9	50.2	57.7	61.0	60.2	59.2

Source: NESDC; World Bank staff calculations.

Part 1. Recent Economic Developments and Outlook: Maintaining Resilience amid Global Turbulence

1. Recent Economic Developments: Resilience Amid Global Turbulence

i. The global economy

Global growth is decelerating rapidly amid heightened geopolitical tensions and persistently high inflation.

Global economy continues to face significant challenges. After strong rebound in 2021, global growth has decelerated rapidly owing to spillovers from the war in Ukraine and significant policy tightening implemented by major economies to arrest rising inflation. Global growth is projected to slow to around 3 percent in 2022, around half of the pace achieved in 2021 and decelerated further to around 2 percent in 2023 well below its pre-pandemic trend (OECD Economic Outlook, Volume 2022).

Global trade growth decelerated.

Global goods trade, which has surpassed pre-pandemic levels last year, is also decelerating. The decline in trade mirrors the slowdown in global industrial production, with decelerating global demand for goods weighing on EMDEs' exports and manufacturing output. Meanwhile, the services trade continues to recover, supported by the gradual shift in demand toward services. Tourism flows have rebounded in many countries following easing of travel restrictions, but they remain highly uneven across regions and still well below pre-pandemic levels (WTO 2022). Although global supply chain pressures are still higher than before the onset of the pandemic, they have eased since mid-2022, as reflected in lower transportation costs and normalization of inventories. These pressures are expected to further abate in 2023, mostly due to weakening goods demand.

Significant tightening of global financing conditions poses serious risks to many EMDEs.

Significant tightening of financing conditions, higher borrowing costs, and asset repricing may pose certain challenges to highly indebted countries and countries with sizable external financing needs (Figures 1 and 2). They could exacerbate external and domestic shocks and trigger significant capital outflows from EMDEs and put adding pressure on the region's currencies. The financial sector in Thailand weathered the pandemic well, but high private leverage remains a source of vulnerability (IMF 2022). During the pandemic, corporate debt in Thailand increased by more than 14 percentage points to about 88.6 percent of GDP in 2022 Q2. The household debt inched down to 88.9 percent of GDP in 2022Q2 after a sharp around 10 percentage point of GDP rise in 2020 (see financial sector section). Despite the economic recovery and increase targeting of the support measures, many firms and households in the sectors hit hard by the pandemic remain vulnerable.

Figure 1: Cambodia, China, Malaysia, and Thailand have high levels of total debt

(Percent of GDP)
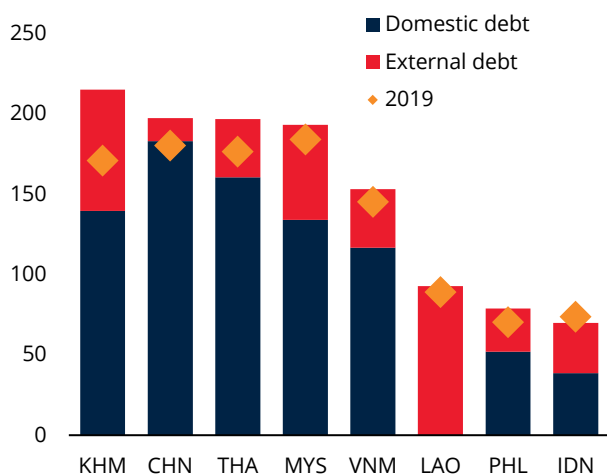
Figure 2: Cambodia, and to a lesser extent Lao PDR, and Thailand have sizable external financing needs in 2023

(Percent of GDP)

Source: Haver Analytics; International Monetary Fund; Institute of International Finance; World Bank.
Note: The International Standards Organization (ISO) 3-digit alphabetic codes are used for the abbreviations of each economy. Chart shows estimated stock of the domestic and external debt of public and private non-financial sectors.

Source: Haver Analytics; International Monetary Fund; Institute of International Finance; World Bank.
Note: Figure shows the current account balance and debt obligations coming due in 2023. Debt obligations coming due are the sum of short-term and long-term debt principal payments and interest payments (the latter being within the

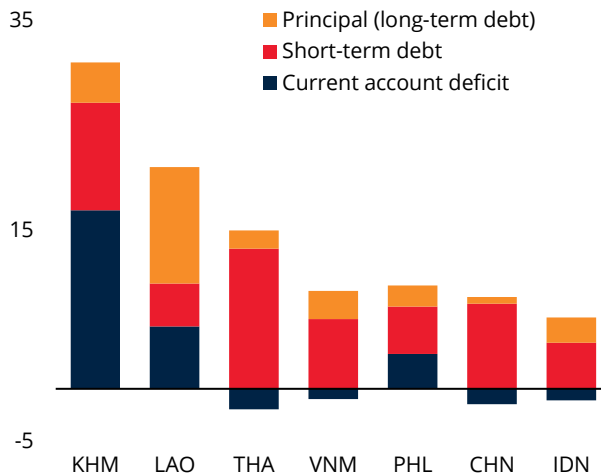Domestic debt stock data are based on World Development Indicators (WDI) data. Last observation is end-2020. External debt stock data for Cambodia, China, Indonesia, Malaysia, the Philippines, and Thailand are calculated based on Quarterly External Debt Statistics (QEDS). Last observation is 2022Q2. External debt stock data for Lao PDR and Vietnam are based on World Development Indicators (WDI) data. Last observation is end-2020. Revised GDP methodology is used for measuring Vietnam's debt-to-GDP ratio.

current account). Short-term external debts in 2022 and 2023 are estimated. GDP and current account balances in 2022 and 2023 are estimates and projections, respectively.

Box 1: Global economic slowdown: implications for Thailand

Thailand will face a difficult global environment in 2023. Global growth is projected to slow to around 2 percent in 2023, well below its pre-pandemic trend weighed down by high inflation, the withdrawal of fiscal policy support, and substantial synchronized monetary policy tightening (Figure B1.1; World Bank January 2023 GEP *upcoming*; OECD Economic Outlook, Volume 2022). This follows a sharp deceleration of global growth in 2022 to around 3 percent—around half of the pace achieved in 2021. Global growth slowdown is expected to be broad-based with growth forecast to slow in majority of advanced economies, including in the United States, the euro area, and Japan.

The EAP region is expected to buck the trend. Growth in the EAP region is projected to strengthen from a subdued 3.5 percent in 2022 and surpass 4 percent in 2023 led by China, where the gradual easing of pandemic-related restrictions allows activity to rebound. Despite the projected rebound, growth in the region will be less-than-projected earlier because of continued Covid-related disruptions in China, rapidly dissipating pent-up demand in the rest of the region, and lower goods exports across the region.

Global inflation has risen to multi-decade highs in many countries reflecting high commodity prices—partly due to Russia's invasion of Ukraine—lingering supply chain disruptions, and demand side pressures. While inflation may be close to peaking in some countries, it remains well above target in many, increasing the risk that inflationary expectations will become de-anchored. In response, monetary policy continues to tighten in both advanced economies and emerging and developing economies (EMDEs). By November, the Federal Reserve had hiked policy interest rates by a total of 375 basis points from the start of the year—the fastest tightening in decades—while other major central banks have also substantially and rapidly hiked interest rates.

Weaker global activity is expected to weigh on global trade including on Thailand's goods exports. The ongoing global demand rotation from goods to services will add to goods trade headwinds, given the less trade intensive nature of services. A growth shock originating in major advanced economies would impact Thai economy through bilateral trade, including trade in intermediate goods through global and regional supply chains. This combined with the negative impact related to global financial tightening should also have impact on financial flows, including on foreign direct investment (FDI). It is estimated that an unexpected, one-off drop in G-7 growth rate of 1 percentage point would lower the aggregate growth rate in Thailand by 0.4 percentage points after one year. In addition to the expected slowdown of external demand, Thailand also faces the headwinds from global financial tightening.

Global financial tightening and shocks to financial markets in the United States, because of policy responses to increasing inflation or market corrections, could spill over to Thailand through interconnected financial markets (World Bank April 2022 EAP Update). A generalized rise in investor risk aversion could lead to capital outflows, currency depreciations, equity market devaluations, and rising risk premia in bond markets. The increasing financial stress could compound post-pandemic fiscal and financial vulnerabilities in Thailand, including large household debt. Finally, as the global growth slowdown intensifies, commodity prices are expected to ease in the next two years, but they will remain considerably above their average over the past five years and will continue to pose challenges to Thailand's growth outlook (Figure B1.2).

Figure B1.1: Global Growth
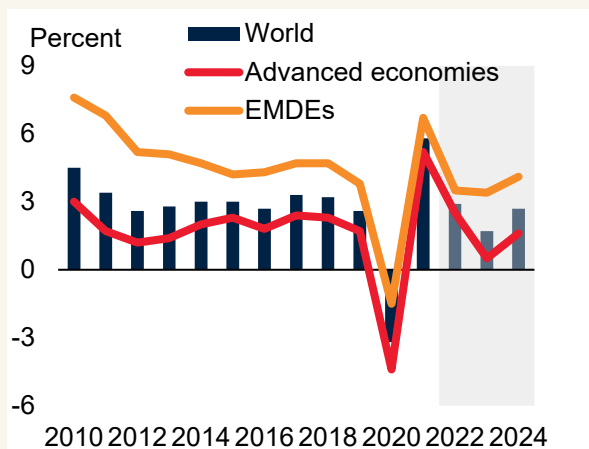
Source: World Bank Global Economic Prospects (upcoming).
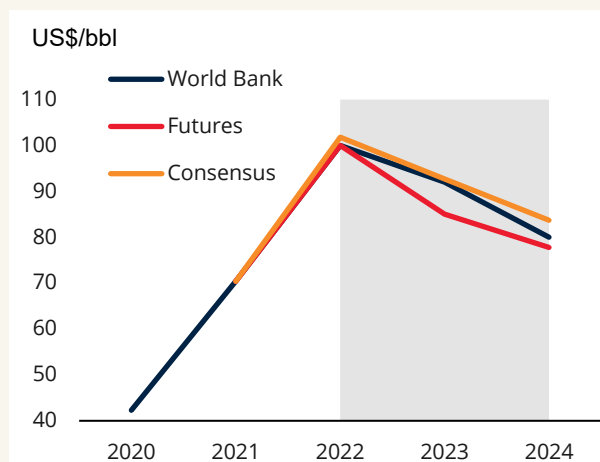*Note:* EMDEs = emerging market and developing economies. Shaded area indicates forecasts. Aggregate growth rates are calculated using real U.S. dollar GDP weights at average 2010-19 prices and market exchange rates.

Figure B1.2: Oil price forecasts

Source: Bloomberg; Consensus Economics; World Bank.
Note: Consensus forecasts taken from the October 2022 survey. Futures prices average of October 3 to October 21, 2022.

ii.   Growth and real sector developments: resilience amid global headwinds

The Thai economy has proven more resilient than expected thus far to the aftermath of the Ukraine war and slowdown of China.

In contrast to the global slowdown, the Thai economy picked up 2022 Q3 by 4.5%, up from 2.5% in the previous quarter, building on the quarterly momentum observed since end of 2021 Q4 (Figure 3). Following full reopening of borders on July 1, stronger private consumption and tourism sector recovery drove the recovery and offset the contraction in goods exports (Figure 4). High frequency indicators show a sustained surge in private consumption and services as of mid-2022 into September 2022. Output surpassed its pre-pandemic level in 2022 Q3, one quarter earlier than previously projected (TEM June 2022).

The Thai economic recovery has lagged peers due to the still-ongoing recovery of tourism.

Major ASEAN economies such as Indonesia, Malaysia and Philippines reached their pre-pandemic levels around late 2021 to early 2022, approximately a year ahead of Thailand. Thailand was highly exposed to the pandemic due to its position as a trade and travel hub. Thailand's tourism sector accounted for a large share of the economy at 13 percent of GDP in 2019. While the global trade in services has recovered, tourism as a whole has not. Despite resurgent tourism inflows of late, Thailand's tourism arrivals still stood at only 45 percent of their pre-pandemic level in September, albeit surpassing Indonesia and the Philippines. Most arrivals came from ASEAN, India, and Europe. Arrivals from China remained subdued and are expected to stay low at least into the next quarter, reflecting China's continued zero-covid policy

The expansion was supported by strong pent-up demand and

Private consumption expanded 4.5% in Q3, up from 2.5% in the previous quarter (Figure 4). High frequency indicators show a sustained surge in private consumption above pre-pandemic levels (Figure 5). Consumer confidence

recovering labor markets which boosted private consumption.

improved for the sixth consecutive month in October, reaching 46.1 pts. The solid consumption recovery was supported by reopening and stronger labor markets. Unemployment declined to 1.2% in Q4, approaching its pre-pandemic level of 1.0% in 2019.

Figure 3: The quarterly growth momentum strengthened in 2022 amid reopening.
(Percentage change)

Source: NESDC

Figure 4: Private consumption and services exports drove the recovery in Q3 2022.
(Percentage-point contribution to real GDP growth, year-on-year)
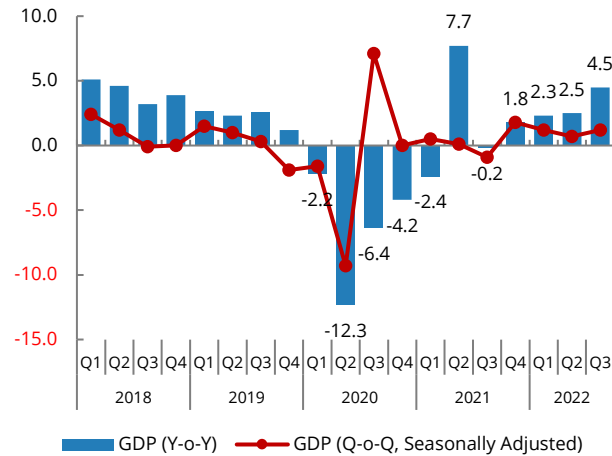
Source: NESDC

Figure 5: High frequency indicators show strengthening private consumption and services but slowing manufacturing activity.
(Index, sa)

Source: CEIC; World Bank staff calculations
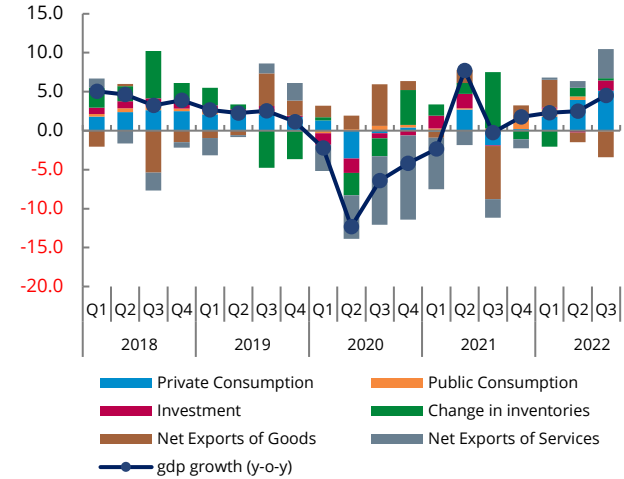
Figure 6: Thailand's recovery to pre-COVID levels in Q3 2022 has lagged behind regional peers.
(Index Q4 2019 = 100, sa)
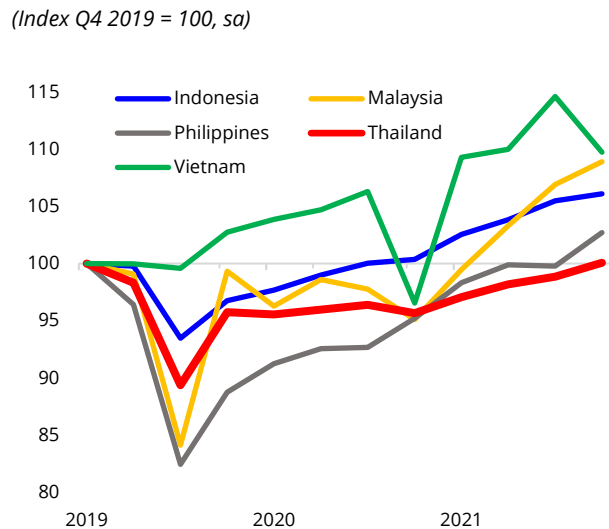
Source: NESDC; CEIC; World Bank staff calculations

On the production side, services and manufacturing contributed to growth.

Services continued to be the key driver of growth amid resurgent foreign and domestic tourism (Figure 7). The average occupancy rate reached 47.80 percent, surging from 5.4 percent in the same period last year. Meanwhile, manufacturing, particularly domestic-oriented manufacturing, returned to expansion, with average capacity utilization rate for this quarter up at 62.55 percent. However, export-oriented manufacturing showed weakness due to slowing external demand, adding to existing weakness from China-related supply chain snarls.[2] The agricultural sector contracted by 2.3 percent due to flooding in many agricultural areas and adverse weather conditions (Figure 8). The contraction pushed already-high agricultural prices even higher, adding to the impact of high global commodity prices following the Ukraine war.

Figure 7: Services drove the recovery amid relaxation of mobility and travel restrictions.
(Percentage-point contribution to real GDP growth, year-on-year)

Source: World Bank staff calculations

Figure 8: Agricultural production contracted, and already-high prices rose further due to flooding.
(Base year 2005 = 100, seasonally adjusted)
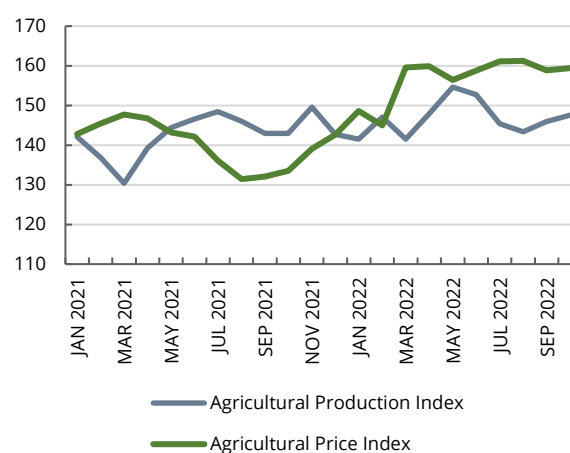
Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

iii. The current-account balance stayed in deficit; the financial account turned surplus, and reserves declined but remain ample.

The current account continued to be in deficit.

The current account deficit remained wide at 5.9 percent of GDP in the third quarter of 2022, as the goods trade balance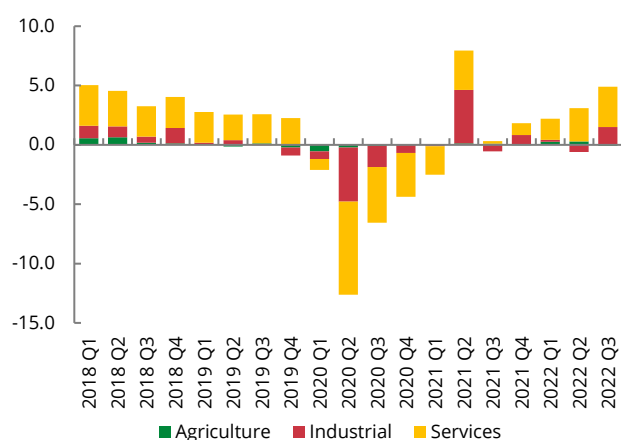 deteriorated due to high energy import costs and weakening goods exports (Figure 9). Meanwhile, the service account deficit narrowed, supported by the tourism recovery following the removal of Covid-19 related restrictions and falling freight costs.

The financial account surplus was supported by strong inward direct

The portfolio account continued to show net inflows in the first half of 2022, driven by inflows to equities, reflecting the ongoing recovery (Figure 10). The net portfolio inflows continued for the third consecutive quarters, despite experiencing greater fluctuations due to the impact of tightening monetary

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[2] The lockdown in China had a sizable impact on Thai goods exports through the strong linkages between the supply of inputs from China and Thai exports. China is the second largest goods export market for Thai exporters after the US, accounting for 14 percent of total exports in 2021. Chinese inputs are significant for the value-added in exports of Thailand, accounting for 6.2 percent of its total exports, the second highest among regional peers after Vietnam. Exports of machinery, computer and electronics, and transport equipment are most vulnerable as they are highly reliant on inputs from China for their value-added in exports.

investment recovery and net portfolio inflows.

policy by the Federal Reserve, which has caused interest rate differential between the US and Thailand to widen. Net foreign direct investment improved further, registering 2.5 percent of GDP in the first 9 months of 2022. Since 2021, net direct investment in Thailand rebounded from the lowest among ASEAN peers prior to the pandemic to surpass Indonesia and Philippines but remained below Malaysia and Vietnam (Figure 11). Inward direct investment increased substantially, reaching 13.2 percent of GDP in the first half of 2022, driven by investment from ASEAN, China, and the US (Figure 12). Applications for investment promotion, especially investments of EV and Smart Electronics in the Eastern Economic Corridor (EEC) area, have continued to rise. EV and parts production from China and Taiwan have benefited from incentives for investment promotion as well as tax and subsidy measures to support EV usage.

Figure 9: The current account remained in deficit due to a narrow trade surplus.
(% of GDP)

Source: Bank of Thailand; World Bank staff calculations.
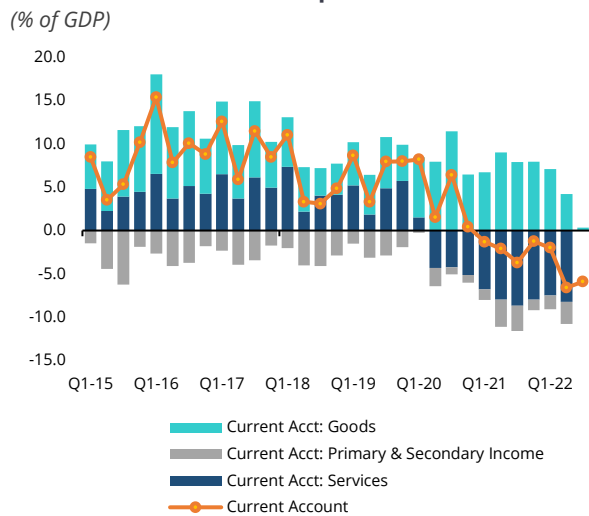
Figure 10: The net financial account surplus was driven by inward FDI and portfolio investment.
(% of GDP)
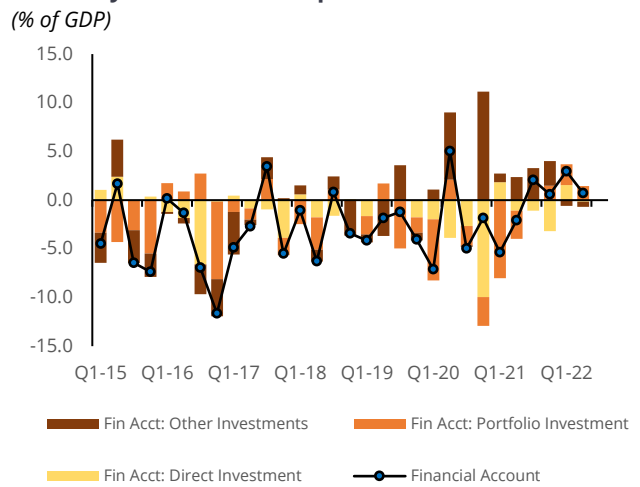
Source: Bank of Thailand; World Bank staff calculations.

Figure 11: Net foreign direct investment has accelerated in Thailand compared to ASEAN peers.
(Percent of GDP)
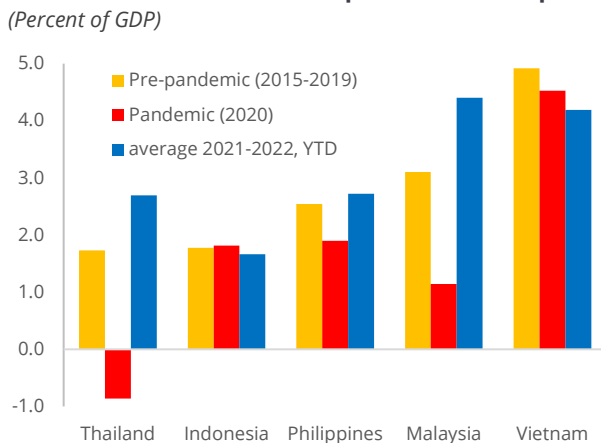
Sources: CEIC, World Bank staff calculations.

Figure 12: Direct investment inflows were driven by higher investment from ASEAN, China, and US.
(Percent of GDP)
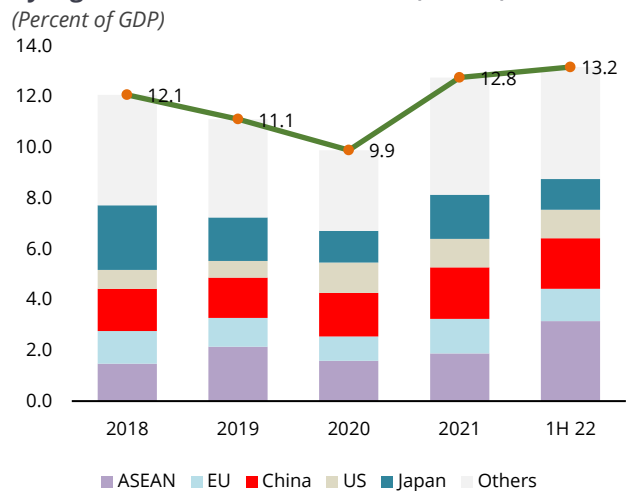
Sources: CEIC, World Bank staff calculations.

The Thai baht stayed weak, reflecting the strong U.S. dollar and large current account deficit.

The Real Effective Exchange Rate (REER) for the Thai baht depreciated by 1.6 percent in the first 9 months of 2022, relative to 2021 average (Figure 13). However, strong external stability continued to mitigate the risk of sudden financial outflows. International reserves remained high at 42 percent to GDP, or 3 times short-term external debt and 9 months of imports in October. However, international reserves saw a notable decline from its usual average of 14 months of imports over the past 3 years, due to valuation change from the U.S. dollar strength as well as foreign exchange intervention to stabilize the baht.

Figure 13: The Thai baht depreciated again in early 2022.
(Base year 2012 = 100)
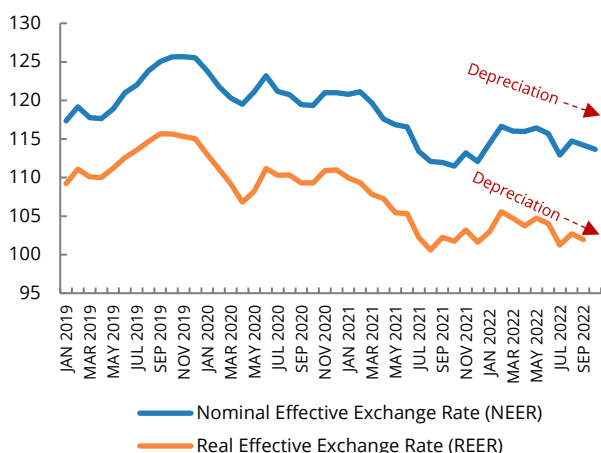
Source: Bank of Thailand; World Bank staff calculations.

Figure 14: In REER terms, the Thai baht, Malaysian ringgit, and Chinese yuan depreciated.
(January 2020 = 100)
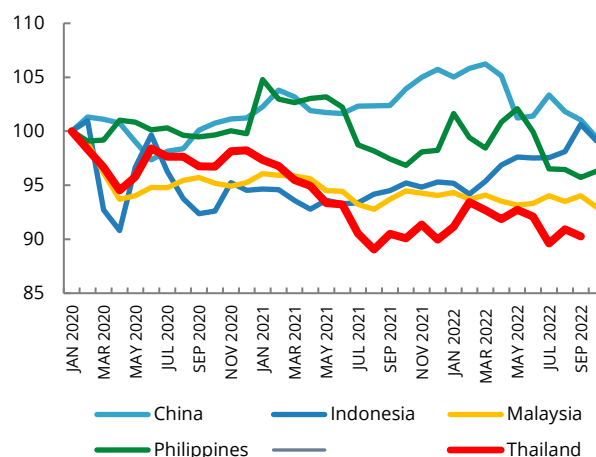
Source: Bank for International Settlements (BIS).

Figure 15: Thailand's international reserves and forward position remain adequate at over thrice the level of external debt.
(LHS: % of GDP, RHS: short-term debt)
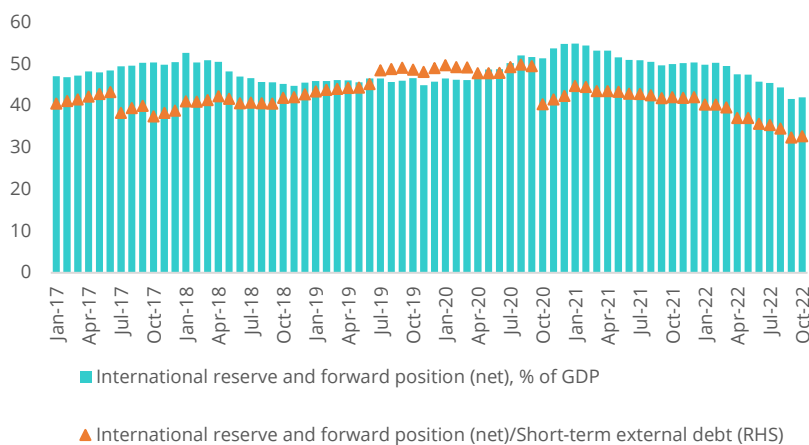
Source: Bank of Thailand; World Bank staff calculations.

iv. Inflation remained above the central bank's target range

Price pressures remained elevated.

In October, headline inflation fell further from 6.4 percent to 6.0 percent but remained the second highest among the major ASEAN countries, just below the Philippines. Energy prices inflation declined as pressure from global energy prices eased amid rising global economic uncertainty, but food-related prices stayed elevated due to flooding which added to the impact of the Ukraine war (Figure 16).

Core inflation has steadily increased.

While headline inflation has eased, core inflation (excluding raw food and energy) has continued to steadily increase since the beginning of 2022, reaching 3.2 percent in October, its highest rate in 14 years, due to both food and non-food items, indicating rising risk of second-round inflation (Figure 17). According to October Consensus expectations, global inflation and global financing conditions over the next 12 months are expected to be tighter than previously expected (World Bank Global Monthly, November 2022 issues). For Thailand, the World Bank also projects headline inflation to remain slightly above the Bank of Thailand's inflation target range of 1-3 percent until at least early 2023.

Price pressure is broadening but long-term inflation expectations remain well contained.

While price increases have been largely concentrated among energy and food-related items in the wake of the Ukraine war, recent price pressures are emerging in items and services not associated with energy and food prices (Figure 18). A minimum wage hike introduced in October 2022 may have small negative effects on SME employment but is not expected to add to cost-push inflation (see Box 2: Thailand's Minimum Wage, Inflation and Employment). Medium-term inflation expectations derived from inflation index linked bonds remain well-contained within the BOT's inflation target, while near-term expectations have increased near the upper end (Figure 19).

The central bank has embarked on gradual normalization and raised the policy rate by 25 bps to 1.25 percent.

The BOT raised the policy rate for the third time this year to manage inflation expectations. However, the pace of normalization has lagged regional peers, in line with the lagging economic recovery. The BOT reaffirmed the gradual pace of normalization as the recovery remains incomplete and demand-side inflationary pressures are limited. Considering the improving macro-economic fundamentals and rising demand driven-inflation pressures, the policy rate is expected to normalize to its estimated neutral rate of 2.5 percent, as the output gap closes in 2024.[3]

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[3] The estimation is based on the standard Taylor rule that relates the central bank policy rate to inflation expectations, deviations from target, and output deviations from potential output. Potential output is derived from a Cobb-Douglas production function, with calibration of the function's parameters.

Figure 16: Energy prices have eased but price pressures remained elevated…

(Contribution to headline inflation, % change y-o-y)
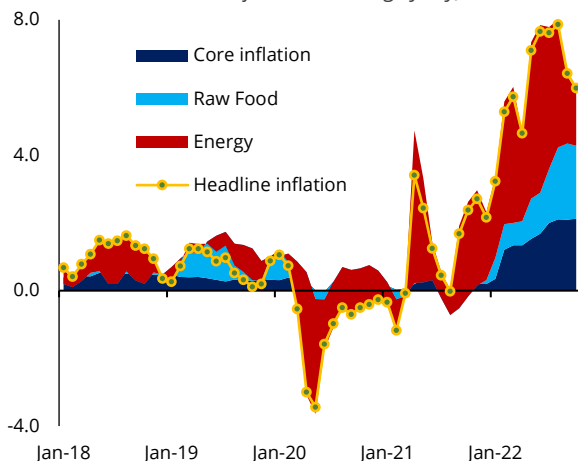
Source: CEIC; World Bank staff calculations.

Figure 17: … while rising prepared food and beverage prices contributed to an uptick in core inflation.

(Contribution to core inflation, % change y-o-y)
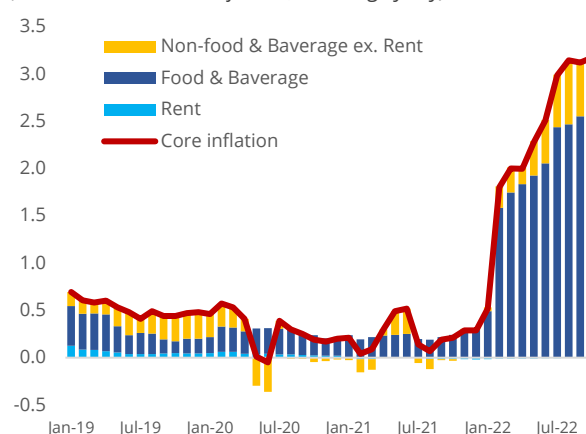
Source: Haver Analytics; World Bank staff calculations.

Figure 18: Price pressures in non-energy and non-food items have also emerged.

(Percent year-on-year)
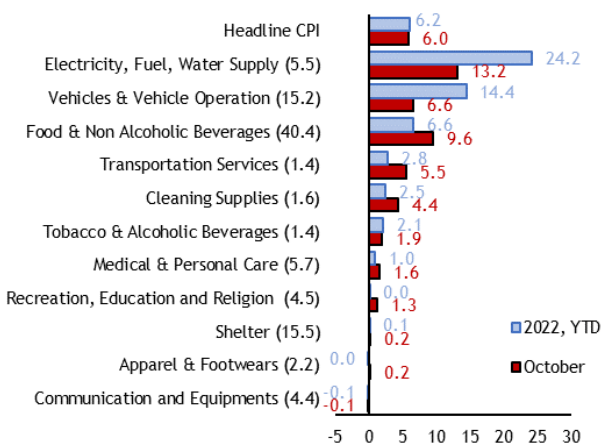
Source: MOC; CEIC; World Bank staff calculations.

Figure 19: Long-term inflation expectations remain within the inflation target range

(Expectations inflation index-linked bonds, percent year-on-year)
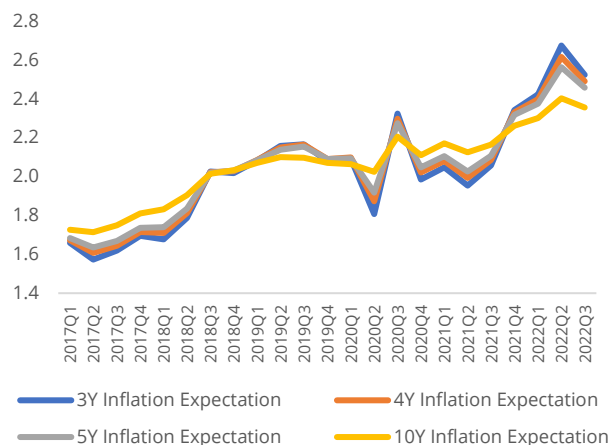
Source: Puey Ungphakorn Institute for Economic Research, Bank of Thailand.

Box 2: Thailand's Minimum Wage, Employment, and Inflation.

In October 2022, Thailand has implemented an increase in the daily minimum wage rate across all provinces by an average of five percent. This measure was intended to help the low-income population cope with rising costs amid high inflation. After this increase, the new daily minimum wage will range from THB 328 (USD8.6) to THB 354 (USD 9.3). This constitutes the highest minimum wage increase since 2011-2013, when the minimum wage rose by an unprecedented 40 percent in certain provinces. With the latest increase, Thailand's monthly minimum wage stands at THB 9,840 to THB 10,620 (USD 273 to USD 295), the highest among its South-East Asian peers. By contrast, the earlier minimum wage hikes in Thailand lagged its major ASEAN peers, averaging at around 2.0 percent per year in 2017-22, broadly in line with the average private sector wage growth rate (2.4 percent) and consistent with subdued inflation (1.4 percent over the same period).

While the increase in minimum wage would raise earnings and incomes of most low-wage formal workers, it may negatively affect jobs, especially in small firms. Using a dynamic panel data model, we find a small 0.17 percentage point decline in the overall employment-to-population ratio six quarters after the recent increase in the minimum wage (Figure B2.2). Among various employment sub-groups, the low-skilled youth group is expected to be most adversely affected. The minimum wage hike is expected to cause a 0.85 percentage point contraction of employment share in this employment sub-group compared to the baseline. A contraction in micro and small and medium sized private enterprises will likely be the key driver behind this decline (see Annex 1: Minimum Wage Effects on Employment in Thailand).

The minimum wage hike may also contribute to higher core inflation if wage increases exceed labor productivity growth. If wage growth exceeds productivity growth and firms increase prices to preserve profit margins, inflation may accelerate in a so-called wage-price spiral. The risks of a wage-price spiral are currently limited as real wage growth has generally been in line with labor productivity growth (Figure B2.1). Significant average real wage increases, i.e., above 7 percent, last took place during the large minimum wage increases of 2012-2013 which also coincided with a period of high labor productivity growth. The latest minimum wage hike has occurred in a context of stagnant real wages (see poverty section above). This may help offset some of the cost-push shocks that would have otherwise fueled inflation and caused a wage-price spiral. However, further unanticipated shocks from the labor market—such as an abrupt uptick in wage indexation or another minimum wage hike—combined with the current up-tick in core inflation, could offset the effects of falling real wages and de-anchor inflation expectations, pushing inflation up even further.

Figure B2.1: Average real wage vs. labor productivity (2000-2022Q2).
(year-on-year; x-axis: real wage; y-axis: labor productivity)
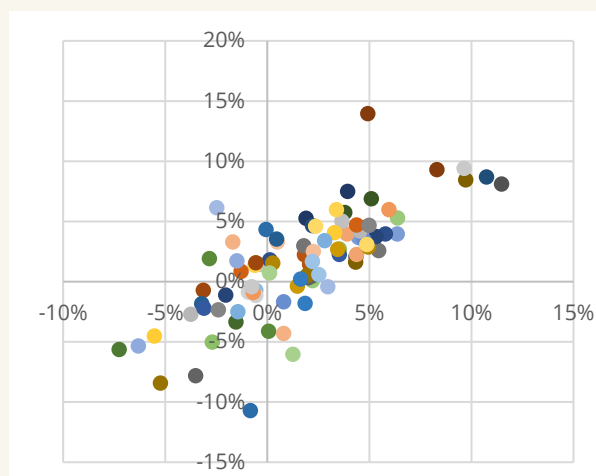
Source: NESDC, NSO.

Figure B2.2: Predicted cumulative effects in employment outcomes six quarters after the October 2022 minimum wage hike.
(estimated impacts are shown in percentage points)
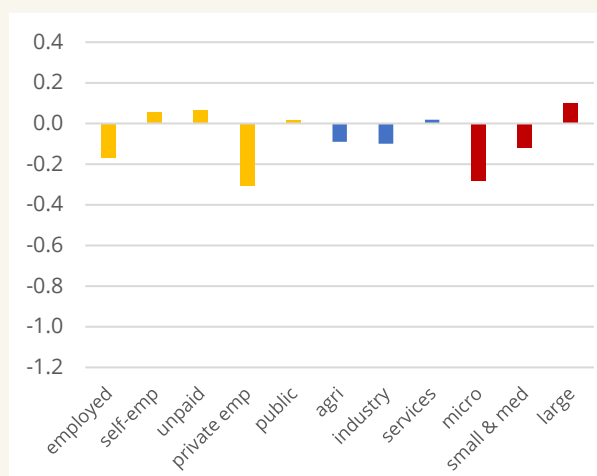
Source: NSO.

v.   Thailand's financial system remained stable amid improving asset quality.

The Thai banking system remains resilient with sufficient capital and liquidity buffers in the third quarter.

System-wide regulatory capital to risk-weighted assets (CAR) remained adequate as of Q3, at 19.2%, above the minimum regulatory requirements (Figure 20). Thai commercial banks also maintained adequate liquidity, with a liquidity coverage ratio of 186.5% as of Q3, well above the minimum regulatory requirement of 100 percent. The loan-to-deposit ratio also increased to 94.5%, as loans expanded at a higher rate than deposits.

Banking asset quality and profitability have continued to improve relative to their pre-pandemic levels in recent quarters.

Banking sector profitability has stabilized after a significant decline from pre-pandemic levels with return on assets and return on equity at 1.0% and 7.5% respectively in Q3 (Figure 21). Loans from commercial banks registered a 4.6% growth in Q3, compared to 3.9% in the previous quarter. Nonperforming loans to total gross loans decreased to 2.8% in Q3 from 3.1% at the end of 2021. The NPL coverage ratio also increased to 171.6% in the third quarter of 2022, showing that banks have continued to set aside enough provisions as a cushion against potential loan quality deterioration. Other forward-looking indicators such as special-mention loans improved. However, protracted forbearance measures, some only expiring at the end of 2023, may continue to mask vulnerabilities in asset quality.

The corporate and household sectors debt levels could potentially negatively impact the financial sector.

Risks associated with high household debt levels – at above 90 percent of GDP as of Q1 2022, the highest among major ASEAN economies – and corporate debt – at 87 percent of GDP, well above Malaysia (64.8 percent) and Indonesia (23.9) may be amplified by tightening financial conditions. Small and medium enterprises (SMEs) are particularly exposed due to liquidity constraints. As a proportion of total loans to SMEs, NPLs remained high at 7.4 percent as of Q3 2022, well above pre-COVID levels of 4.5-5 percent. Authorities have shifted from broad-based to more targeted measures over the course of the pandemic. The central bank has extended the SME soft loan facility until end-2022, while several businesses have entered debt restructuring through asset warehousing programs.

Figure 20: The banking system remains resilient with sufficient capital and liquidity buffers
(Percent)
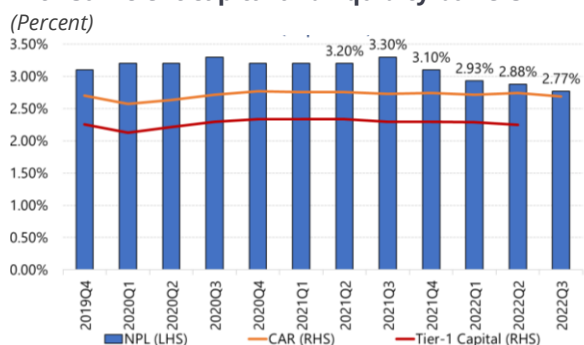
Note: NPL: Non performing loans, CAR: Capital Adequacy ratio
Source: Bank of Thailand; IMF FSI; World Bank staff calculations.

Figure 21: Banking sector profitability has stabilized
(Percent)
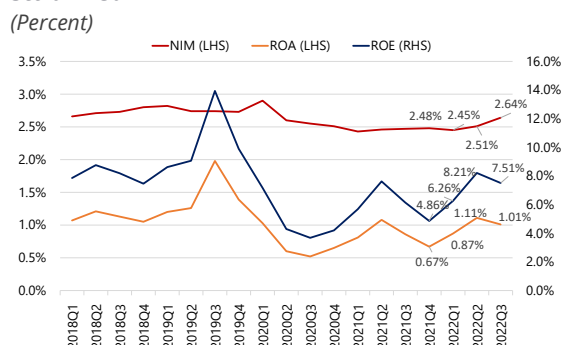
Note: NIM: Net Interest Margin, ROA: Return on Assets, ROE: Return on Equity.
Source: Bank of Thailand; IMF FSI.

vi. Fiscal responses to the pandemic and high energy price have slowed the path to consolidation.

The fiscal deficit narrowed in FY22 amid a slow pace of fiscal consolidation.

The central government's deficit remains substantial in FY22, narrowing only slightly to 5.5 percent of GDP in FY22 (Oct 2021-Sep 2022) from 7.9 percent in the same period last year, as emergency spending for COVID relief started to decline while revenues stayed close to the previous year (Figure 22). Expenses on interest increased marginally from average of 1.0 percent of GDP between FY17 and FY19 to 1.3 percent of GDP in FY22, in line with the rising interest rate environment and amount of debt outstanding. Nonetheless, the fiscal path was slower than expected, causing the deficit to remain larger than the pre-pandemic average of 2.2 percent in FY 2017-19, on account of lower revenue collection to GDP and higher spending on social assistance and subsidies (Figure 23 and Figure 24).

The government has disbursed 92 percent of the THB 1.5 trillion budget for the COVID-19 response.

The disbursement of THB 1.38 trillion (8.7 percent of GDP) out of the THB 1.5 trillion budget for the COVID-19 response (9.4 percent of GDP) was driven mainly by the spending on Covid-19 reliefs (5.4 percent of GDP) such as cash transfers, while the spending on health and boosting economic recovery were relatively low (Figure 25). The latest Covid-related measures, effective September to October 2022, include the subsidy program (Kon La Krueng) in which the government subsidizes 50 percent of goods and services up to THB 800 per person and cash transfers to 13.3 million low-income earners at THB 400. The remaining amount from health-relating spending and recovery spending can be disbursed until the end of 2022 (calendar year).

Despite being less cost effective than targeted transfers, the government continued to roll out broad-based energy subsidies and transfers to mitigate the impact of energy price increases.

Apart from the COVID-related measures, the government extended the cash handout and subsidy measures to mitigate effects of rising energy prices to December, after the previous set of measures expired in September. Households that use up to 500 units of their electricity a month will be given discounts on electricity bills and welfare cardholders will receive an additional THB 100 subsidy for the purchase of cooking gas. The diesel price will remain capped at THB 35 per liter, subsidized by the State Oil Fund and excise tax cut on diesel[4]. The cap on diesel prices is estimated to have incurred a quasi-fiscal cost of 1.1 percent of GDP in 2022, including 0.4 percent of GDP from the excise tax cut and an additional 0.7 percent of GDP[5] (Figure 26). However, targeted cash transfers are a more cost-effective policy for poverty alleviation. According to World Bank estimates, reducing poverty in Thailand by one percentage point would require THB11.2 billion worth of fuel subsidies, five times more than the THB2.2 billion worth of cash transfers. Therefore, more targeted measures that offer support to vulnerable households (or even firms) would be cheaper for governments (see part 2: Fiscal Policy and an Equitable Economic Future).

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[4] The excise tax cut on diesel of THB 5 per liter has been extended until January 2023.

[5] The cabinet recently approved a law to guarantee up to THB 150 billion (0.9 percent of GDP) of the State Oil Fund's additional borrowing to replenish the fund due to supports on diesel and cooking gas prices, should the need arise.

Figure 22: The central government's fiscal deficit narrowed in FY22.
(% of fiscal year GDP, GFS basis)

Legend:
- Central Government revenue
- Central Government expenditures
- Central Government surplus/deficit, RHS
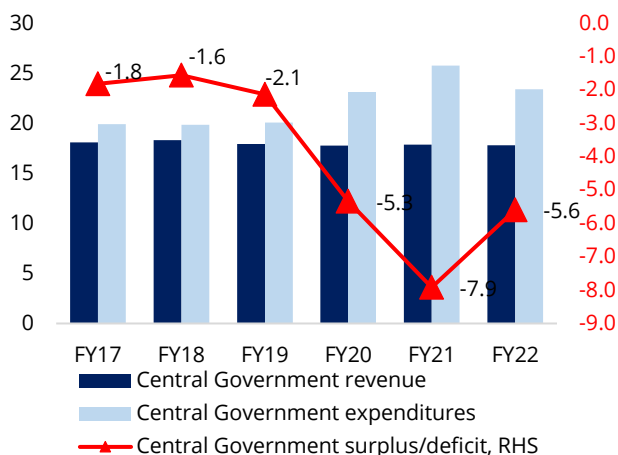
Source: Fiscal Policy Office, Ministry of Finance.

Figure 23: Central government fiscal deficit remained below the pre-COVID-19 average.
(% of GDP)

Legend:
- FY 2017-19
- FY 2020
- FY 2021
- FY 2022
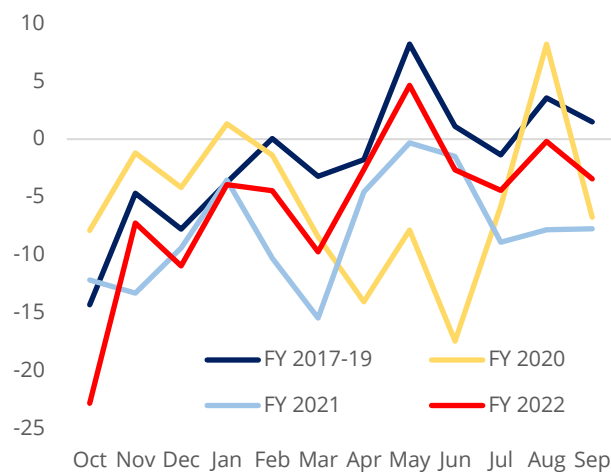
Source: Fiscal Policy Office, Ministry of Finance.

Figure 24: Central government expenditures dropped in FY 22.
(% of fiscal year GDP, GFS basis)

Legend:
- Capital spending
- Others (including COVID-19 emergency spending)
- Subsidies, social benefit, and grants
- Interest
- Wage, capital consumption, and purchases
- Current expenses
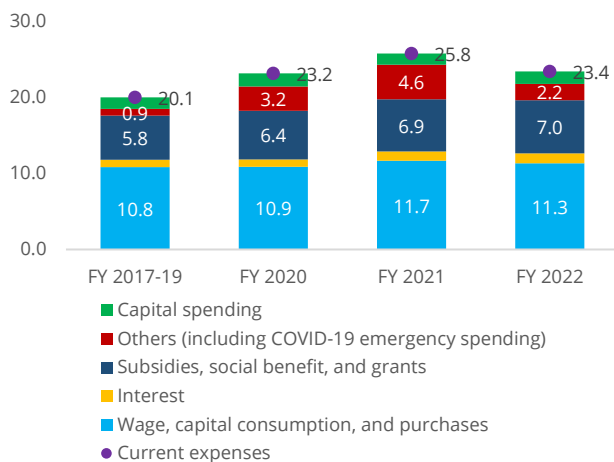
Source: Fiscal Policy Office, Ministry of Finance, NESDC.

Figure 25: The THB 1.5 trillion for the COVID-19 response has been almost fully disbursed.
(% of fiscal year GDP, GFS basis)

Legend:
- Envelope
- Disbursed
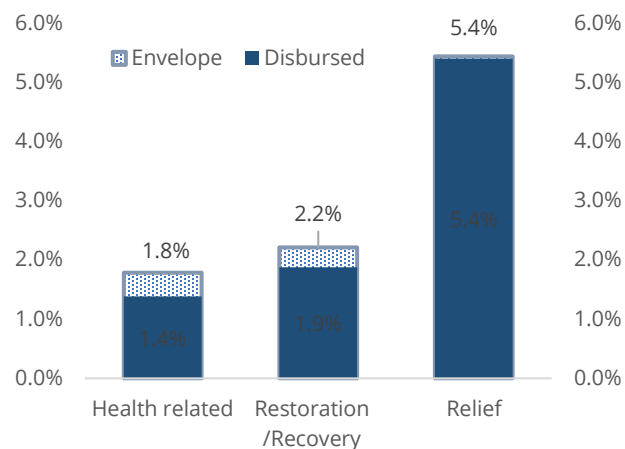
Source: Fiscal Policy Office, Ministry of Finance, NESDC.

Figure 26: The diesel price cap is subsidized by the State Oil Fund and excise tax cut on diesel
(% of GDP, annual)
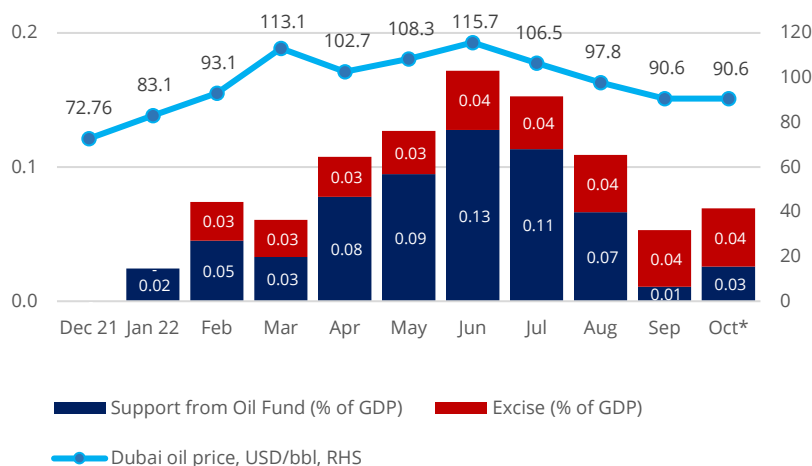
Source: Fiscal Policy Office, Ministry of Finance, OFFO, Ministry of Energy; World Bank staff calculations.

Central government revenue remains stable, despite the economy recovery.

Central government revenue remains stable at 17.8 percent of GDP in FY 22, lower than an average of 18.0 percent to GDP in the past 5 years, due to the falling excise tax revenues as the government maintained the excise tax cut on diesel. Collections of personal income tax, corporate income tax, and value-added tax increased substantially above the pre-pandemic level in response to the recovering economic activity and the effect of elevated inflation.

However, there is significant scope for boosting revenue mobilization over the medium and long term.

Tax revenues (averaging around 16 percent of GDP) and overall revenues have remained relatively low over the past two decades by the standards of upper-middle-income countries, as well as regional and OECD comparators (Figure 27**Error! Reference source not found.**).

Enhanced revenue mobilization efforts, especially in the areas where the collections remain substantially lower than its potentials, such as VAT, personal income tax, tax on e-commerce, and wealth tax, could reduce overall spending constraints. Tax revenue reforms that focus on expanding the personal income tax base, removing some deductions, and improving taxation on wealth will increase revenue and the progressivity of the tax system. A combination of reforms to VAT and social assistance could result in a substantial increase in tax revenues and a reduction of poverty and inequality (See Part 2: Fiscal Policy and an Equitable Economic Future)

The (cash-based) budget deficit is projected to narrow in FY23 in line with the consolidation objectives.

Compared with the FY22 budget, the fiscal budget deficit was narrower in FY23 at 3.8 percent of GDP (Table 1). The budget for spending is set to decline to 17.2 percent of GDP, due to a lower budget for current expenditures, while the budget for investment increases. Disbursement in many flagship investment projects is expected to improve in FY23, such as the high-speed rail project connecting Bangkok and Nong Khai, the Mass Transit Purple Line Project (Tao Pun - Rat Burana), and the phase 2 double-track railway project. However, the risk of

further delays remains, due to structural bottlenecks in public investment management such as the complexity of procurement, changes in project design and estimated cost, and limited capacity of implemented agencies. Under the 2023-2026 medium-term fiscal framework, the government aims to gradually reduce the size of budget deficit from 3.9 percent of GDP for FY23 to 3.6 percent of GDP for FY26, while the public debt to GDP and interest costs will continue to rise. The pace of consolidation is slower than the World Bank projection, as tax revenue to GDP is projected to decline over time in the government's baseline, while the World Bank expects a broadly stable revenue-to-GDP share over the same period.

The public debt stock continued to rise while remaining sustainable due to low external debt and prudent fiscal management.

Public debt rose to 60.7 percent of GDP at the end of FY22, up from 58.3 percent at the end of FY21, which was 20 percentage points higher than the pre-COVID period. This was driven by the additional borrowing to finance the budget deficit and off-budget spending for COVID-19 response (Figure 28). The public debt has remained fiscally sustainable, despite the recent increase of the public debt stock and the global financial uncertainty, triggered by aggressive monetary policy tightening in the US. This reflects the low level of foreign currency-denominated debt at 1.7 percent of total public debt, the government's commitment to fiscal consolidation over the medium term, and its ability to maintain fiscal discipline (Table 2). However, additional borrowing to finance fuel-related subsidies requires close monitoring as fiscal risk may rise (Box 2: Responding to high energy prices in Southeast Asia and Thailand).

Figure 27: General government tax revenue remains significantly lower than peers.
(% of GDP, General Government, GFS)
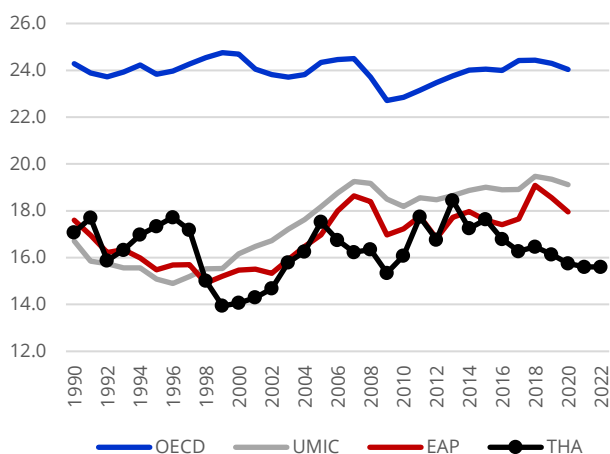
Figure 28: Public debt to GDP continued to increase.
(% of fiscal year GDP)

Source: Fiscal Policy Office, Ministry of Finance, NESDC.
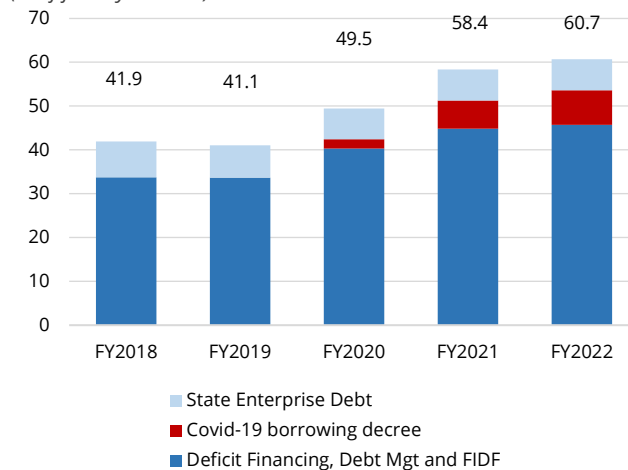
Note: *SOEs include SOEs, SFI guaranteed and agency debt.
Source: PDMO

Table 1: The fiscal budget deficit is narrower in FY23

Budget Structure (THB million), Share of GDP in parenthesis	Budget		Actual (cash-based)		
	FY 2022	FY 2023	FY2020	FY2021	FY2022
Total Revenues	**2,400,000**	**2,490,000**	**2,344,494**	**2,446,630**	**2,550,799**
	[14.0]	[13.5]	[14.8]	[15.3]	[14.9]
Total Expenditures	**3,100,000**	**3,185,000**	**3,168,729**	**3,208,653**	**3,146,241**
	[18.1]	[17.2]	[20]	[20.1]	[18.3]
Current expenditures	2,360,543	2,390,000	2,575,945	2,583,799	2,516,574
	[13.7]	[12.9]	[16.2]	[16.2]	[14.7]
Capital expenditures	624,400	695,000	367,916	428,357	415,990
	[3.6]	[3.8]	[2.3]	[2.7]	[2.4]
Fiscal Surplus/Deficit	**-700,000**	**-695,000**	**-824,235**	**-762,023**	**-595,442**
	[-4.1]	[-3.8]	[-5.2]	[-4.8]	[-3.5]

Source: Ministry of Finance; World Bank staff calculations.

Table 2: Key fiscal-responsibility indicators remain well within their established parameters.

Key fiscal responsibility, % or otherwise specified	Ceiling (%)	FY20	FY21	FY 22
Public Debt / GDP	**70**	49.5	58.3	60.7
Government Debt Service / Revenue	**35**	6.5	8.6	8.1
External Debt / Public Debt	**10**	1.8	1.8	1.7
External Debt Service / Exports	**5**	0.07	0.08	0.15
Principal repayment / Annual budget expenditure	**1.5-3.5**	1.1	2.1	2.1
Average Time to Maturity		9 years 10 months	9 years 1 month	8 years 9 moths

Source: Public Debt Management Office, Ministry of Finance; World Bank staff calculations.

Box 2: Responding to high energy prices in Southeast Asia and Thailand

Southeast Asia is currently grappling with high energy prices[a]. The issue is particularly important for Thailand, the largest net energy importer among the major ASEAN economies. Thailand is therefore heavily exposed to movements in international fuel prices. Increases in prices raise the cost of living and impact on production costs across all economic sectors. Although in 2022 much of the global focus has been on higher natural gas prices following the conflict in Ukraine, oil and coal prices in SE Asia have increased substantially too. It is possible that fuel prices may remain elevated for some time to come. This has led to problems with the State Oil Fund, which subsidizes fuel costs when prices are high. Originally designed as a measure to reduce volatility in domestic fuel prices, it has become a large-scale subsidy mechanism that has put pressure on government finances, either directly or indirectly through quasi-fiscal measures.

Fuel subsidies encourage higher levels of fuel consumption, distorting economic activity and increasing long-term dependence on volatile global markets. They also lead to higher levels of greenhouse gas emissions and make it more difficult for Thailand to meet its emission-reduction commitments. However, despite these shortcomings, Thailand and many other countries have implemented fuel subsidies because it is the most effective way to reduce pressures on low-income households.

Thailand has the means to introduce more targeted support to low-income households. World Bank analysis suggests that these measures could reduce the public or contingent cost and be more effective at reducing poverty[b] by drawing on established infrastructure such as the national ID system and the PromptPay payment service.

In the longer term, Thailand must reduce its dependence on imported fuel if it wants to limit exposure to future price shocks. For example, the goal to expand rapidly the share of electric vehicles will reduce oil imports substantially in the second half of the decade. A shift to renewable electricity generation, for example from wind and solar power, would also lead to much lower coal and gas imports.

Further policy action could accelerate these trends in Thailand. Electric vehicles are still expensive and vehicle charging infrastructure needs to be expanded. The share of wind and solar power remains low and could benefit from electricity market reform.

The issue of future energy security is thus closely linked to that of reducing greenhouse gas emissions and developing a bio-circular green economy. A move to targeted subsidies that are independent of energy consumption could improve sustainability in Thailand while reducing public costs. In the longer term, increases in excise duties and regulatory measures to reduce energy consumption would also help reduce energy imports, as would increase in renewable electricity generation. In addition, Thailand's commitment to expanding electric vehicle production could lead to substantial reductions in fuel imports in the late 2020s.

a/ For further details, see The Road Not Taken: Responding to Energy Prices in East Asia World Bank November 2022 https://documents1.worldbank.org/curated/en/099531111162236219/pdf/IDU0a4c631d305bfb04cc5096590546f0c9b1379.pdf
b/ World Bank East Asia Update October 2022 https://openknowledge.worldbank.org/handle/10986/38053

vii. Poverty declined in 2021 driven by social assistance

Labor market indicators have steadily improved since the end of 2021.

In the 12 months between October 2021 and September 2022, more than 800,000 net jobs were created. The accelerating recovery in the service sector buoyed by tourism created more than 1 million jobs, offsetting a decline in farm employment, while manufacturing employment remained relatively stable. The unemployment rate stood at 1.2 percent in Q3 2022, down from 2.3 percent in the same quarter last year and hovering above its pre-pandemic level at 1.0 percent in 2019. Underemployment also fell substantially from 8.4 percent to 4.6 percent over the same period, reflecting a robust labor market recovery. Male and low-skilled workers saw faster job recovery than their counterparts.

Younger and less experienced workers bore the brunt of the pandemic unemployment shock.[6]

Wage growth accelerated over the past-year but lagged behind rising inflation.

As the labor market conditions improved, the average monthly wage for employees rose 5.4 percent over the year to mid-2022, compared to a 0.9 percent increase in the preceding year. Inflation, which surged to 7.7 percent year-over-year June 2022, eroded these wage gains. Compared to pre-pandemic levels, average real wages stagnated - an increase in the average wage earnings was fully offset by the rising cost of living. Most service sectors experienced real wage losses. Only in agriculture, manufacturing, and few service industries (finance, health, entertainment, and recreation) that wage gains were able to keep pace with inflation.

Poverty declined in 2021, driven by social assistance.

The national poverty rate fell from 6.8 percent in 2020 to 6.3 percent in 2021, and the international poverty rate (measured at $5.5 a day in 2011 PPP) declined from 6.4 percent to 5.9 percent during the same period. Amid wage stagnation and deteriorating non-farm business income, public assistance drove poverty reduction. Social assistance programs such as the state welfare card and old age allowance, and the COVID-19 relief measures and stimulus packages that were continued in 2021 including cash handouts and rebates helped support income of poor families. Average farm income also rose in 2021 owing to higher agricultural prices and production[7], but the increase was concentrated among richer households and had little impact on poverty reduction.

Figure 29: The unemployment rate declined from its pandemic high.
(Percent of labor force aged 15 and over)

Figure 30: Underemployed and unemployed persons have declined.
(Percent of labor force aged 15 and over,)
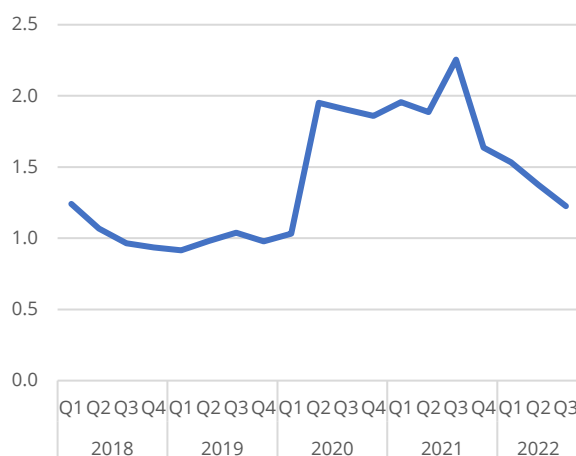
Source: National Statistical Office of Thailand
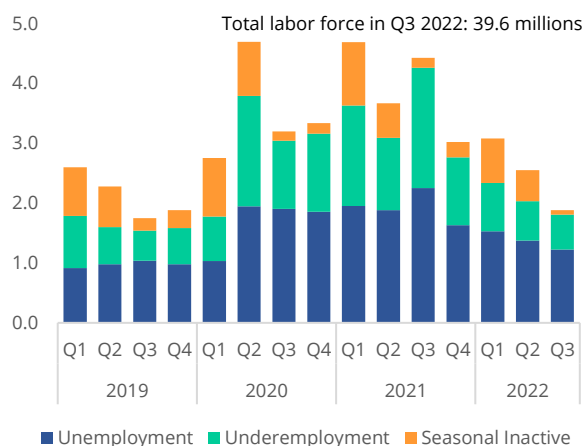
Source: Bank of Thailand
Note: Underemployment is defined as working less than 35 hours per week and available for additional work.

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[6] The employment of young people is often affected more during recessions than that of other age groups because reduced demand ceases hiring of school leavers and because younger people are less costly to terminate due to their shorter tenure and lower firm-specific knowledge (ILO 2020).

[7] The farm income index rose by 3.1 percent in 2021. NESDC. (2022). NESDC Economic Report: Thai Economic Performance in Q4 and 2021 and Outlook for 2022.

2. Outlook: Slowdown Amid Global Headwinds

i. The economy is projected to recover faster-than-expected in 2022, but growth is projected to be slower-than-expected in 2023 owing to global headwinds

Economic activity recovered in 2022, fueled by resurgent private consumption and strong tourism inflows.

Economic growth is estimated to expand by 3.4 percent in 2022, up from 2.9 percent in the previous projection (*Thailand Economic Monitor* June 2022) (Figure 31). Growth was supported by stronger private consumption and services exports, due to the nascent tourism recovery and strong pent-up demand after the relaxation of the lockdown measures and travel restrictions. The impact of the rising cost of living due to the war in Ukraine on households' purchasing power has been partially offset by subsidy and social assistance measures. Private investment was bolstered by improved business sentiment and rising capital utilization in the manufacturing sectors. Goods export expanded as pandemic-related supply chain disruptions have been resolved, but slower-than-expected due to weaker demand from the major trading partners.

Growth in 2023 is projected be weaker-than projected earlier, but slightly faster than in 2022 on

GDP is expected to continue to expand in 2023 and 2024 at 3.6 percent and 3.7 percent respectively with tourism sector recovery and private consumption remaining the major drivers of growth (Figure 32). The growth forecast in 2023 was revised by 0.7 percentage point down from the June forecast, reflecting the impact of the global economic slowdown on goods trades and investment. Private consumption growth is projected to moderate in 2023 to 4 percent as the

the back of recovering tourism. reopening boost fades. Strengthening employment, which is expected to return to the pre-pandemic level, following the economic recovery will continue to support consumer spending. Given the projected path to recovery, the lingering negative output gap is expected to be closed by 2024.

Table 3: The pace of recovery is expected to continue

Percentage change	Share of GDP (2021)	2021	Forecast 2022F	Forecast 2023F	Forecast 2024F	Contribution to GDP growth 2022F	Contribution to GDP growth 2023F	Contribution to GDP growth 2024F
GDP	100%	1.5	3.4	3.6	3.7	3.4	3.6	3.7
Private Consumption	**54%**	**0.3**	**6.0**	**4.0**	**3.3**	**3.2**	**2.2**	**1.8**
Government Consumption	**16%**	**3.2**	**-0.2**	**-0.2**	**0.2**	**0.0**	**0.0**	**0.0**
Fixed Investment	**25%**	**3.4**	**2.3**	**4.5**	**3.7**	**0.6**	**1.1**	**0.9**
GFCF-Private	18%	3.3	4.2	4.6	3.8	0.7	0.8	0.7
GFCF-Public	7%	3.8	-2.7	4.4	3.5	-0.2	0.3	0.2
Exports of Goods and Services	**66%**	**10.4**	**10.0**	**4.6**	**5.8**	**6.6**	**3.2**	**4.2**
Exports of Goods	62%	14.9	4.8	-1.4	1.0	3.0	-0.8	0.6
Exports of Services	5%	-23.1	65.5	44.5	28.3	3.6	3.9	3.4
Imports of Goods and Services	**68%**	**17.9**	**8.6**	**3.2**	**4.1**	**5.9**	**2.3**	**2.9**
Import of Goods	58%	18.3	10.5	7.2	4.1	5.8	4.3	2.5
Imports of Services	10%	16.0	2.1	-11.6	4.1	0.3	-1.4	0.4
Net Export of Goods and Services						**0.8**	**0.9**	**1.2**
Change in Inventories*						**-1.1**	**-0.6**	**-0.3**

	2021	2022F	2023F	2024F
Exports of Goods, USD term	18.8	8.1	-2.1	1.7
Imports of Goods, USD term	23.4	18.2	2.6	2.9
Goods trade Balance, USD Billion	40.0	20.0	6.8	3.5
Current Account Balance, USD Billion	-10.6	-12.8	0.8	13.4
Current Account Balance (% of GDP)	-2.1	-2.6	0.1	2.3
Headline CPI	1.2	6.2	3.2	1.2

Note: *including statistical discrepancies
Source: NESDC, Haver Analytics; World Bank staff calculations

Figure 31: Growth projections were revised upward for 2022 but cut for 2023
(Percent)
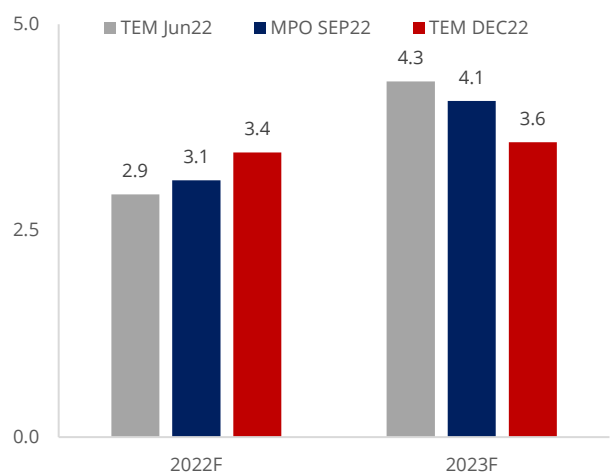
Source: World Bank staff projections.

Figure 32: Output is expected to be supported by private consumptions and exports of services
(Percent)
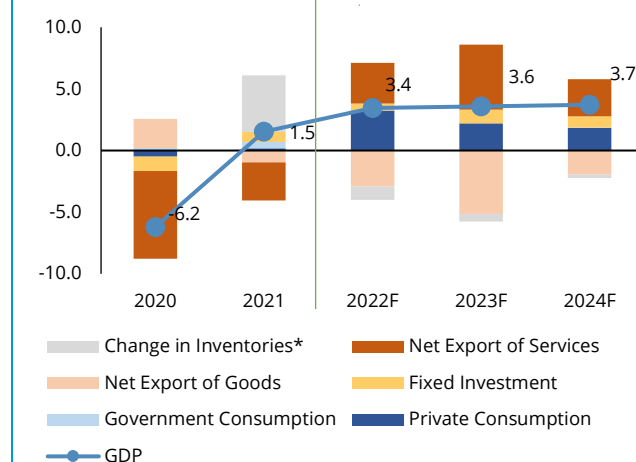
Source: World Bank staff projections.

Goods exports are expected to contract in 2023 in response to weaker global demand.

Exports of goods are expected to contract by 2.1 percent (US dollar terms) in 2023, a sharp decline from the projected expansion of 8.1 percent in 2022. This downward revision reflects weakening demand from the major trading partners, including the US, Eurozone, and China. According to the Consensus forecast, US growth is projected at 0.2 percent in 2023, down by 1.5ppts compared to the June projections, owing to the faster-than-expected monetary tightening (Figure 33). Output in the Eurozone is projected to contract due to the severe energy supply disruption. In China, growth is projected to expand by around 4.6 percent in 2023, significantly lower than 5 percent projected in June. Slower-than-expected growth in these major economies will have significant spillovers on Thai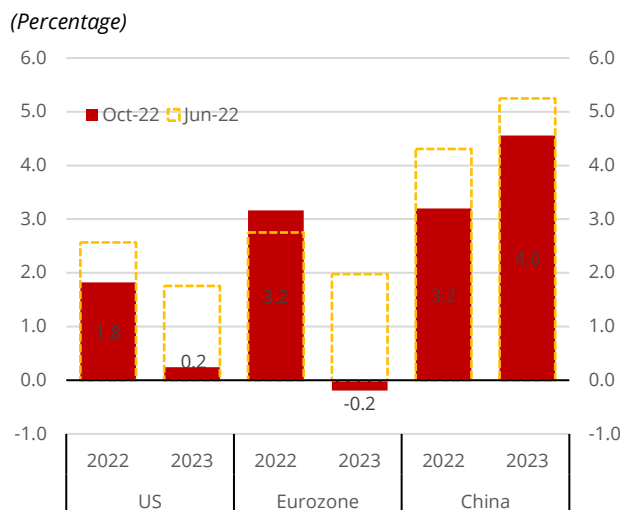land through trade in goods and services, as well as financial channels. It is estimated that an unexpected 1 ppt one-off drop in China's GDP growth would lower Thailand's growth rate by 0.4 ppts after 1 year (Figure 34). Similar shocks from G7 (excluding Japan) growth would lower Thailand's GDP by 0.6 ppts (EAP update October 2022).

Figure 33: Major trading partners' growth was revised down substantially.

(Percentage)

Source: Consensus forecast.

Figure 34: A slowdown in major advanced economies and China will negatively affect growth.

(Cumulative impact on growth after 1 year, percentage points)
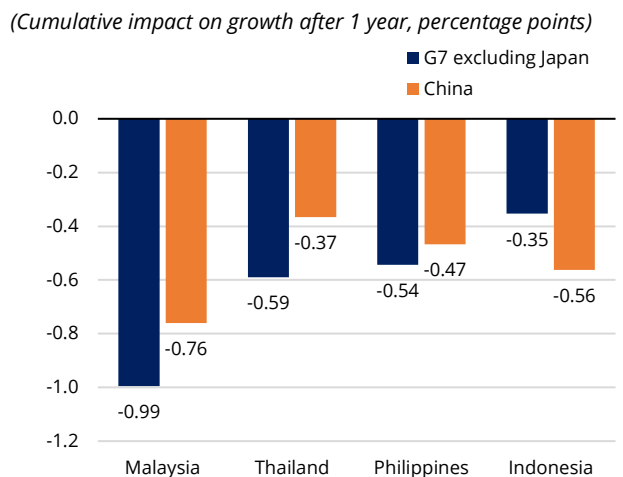
Source: EAP update October 2022.
Note: Estimates based on a Baysian SVAR, using quarterly data from 1998 to Q1 2018, a lag of 4 quarters is adopted.

Relaxation of border restrictions and related recovery in tourism will partly offset the negative impact of weaker goods exports.

The path to tourism recovery is projected to be stronger than previously estimated, supported by the removal of all entry restrictions, including the requirement for a vaccine certificate on October 1 and further relaxation of border restrictions elsewhere. The number of tourist arrivals is projected to reach 10.7 million in 2022 and increase further to 22.5 million in 2023, or 64 percent of the pre-pandemic level (2019) in the fourth quarter of 2023 and 90 percent by the end of 2024. The tourism rebound in 2023 is estimated to contribute more than 3 ppts to the overall growth. The projection assumes that the tourism flows from all countries excluding China will fully recover by 2024 (Figure 35). At the same time, the recovery is expected to be significantly slower for Chinese tourists remaining below their pre-pandemic levels in 2024.

But the path toward full recovery of tourism hinges on China's policy and air travel capacity.

The number of tourists from China, which accounted for 28 percent of total arrivals in 2019, is expected to remain small in 2022 and early 2023 as it continues to reaffirm a strict "zero-Covid" policy. However, arrivals are expected to improve gradually in 2023 as travel restrictions in China are expected to be removed in the second half of 2023. In November, China started to relax several restriction measures for international travelers, relating to flight bans, testing and quarantine times. In addition, the rising cost of airline service operators due to the impact of the war in Ukraine and staffing shortages in the airline industry continues to be the major risk to the tourism recovery[8] (Figure 36).

The government's efforts to attract high income tourists are expected to help support sustainable tourism recovery in the medium- to a long- term

Thailand has taken steps to revive the tourism industry towards high value and sustainable growth, focusing on markets with high incomes and no travel restrictions, hyper-personalization groups (health and wellness, sports tourism, and responsible tourism), and new segments (digital nomads and remote workers). The government aims to boost the international tourism business by increasing the air seating capacity in Thailand, introducing the new Long-Term Residence (LTR) visa, and expanding airport capacity.[9]

Figure 35: Tourism sector is expected to continue to recover.

(Percent of pre-pandemic level)
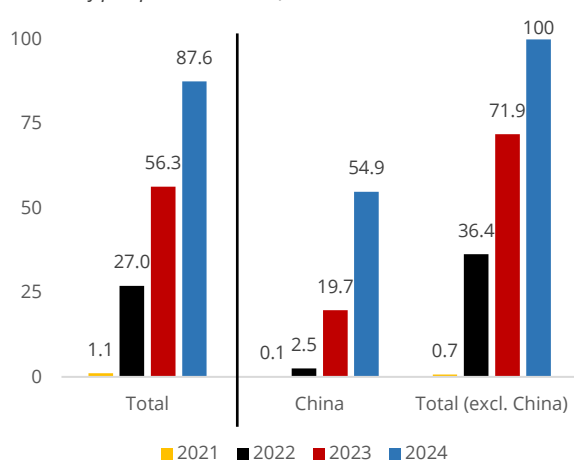
Source: World Bank staff projections.

Figure 36: Air travel faces the risk of supply bottlenecks.

(Left: Thousand flights; Right: Million passengers)

Source: CEIC; World Bank staff calculations.

Headline inflation is expected to stay above the Bank of Thailand's target in the first half of 2023

Headline inflation is projected at 6.2 percent in 2022—the 24-year high level driven mainly by higher fuel and transportation costs, raw food and prepared food prices. Inflation in Thailand has been the highest among its ASEAN peers due to its high dependence on energy imports. Headline inflation is projected to decelerate to 3.2 percent in 2023 as global crude oil and food prices moderate, but will remain above the Bank of Thailand's target range of 1-3 percent through

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[8] https://www.bangkokpost.com/business/2397021/prices-of-airline-tickets-stay-high-as-upkeep-woes-crimp-fleets

[9] https://www.bangkokpost.com/thailand/general/2341977/airport-to-lift-capacity-by-15m-people

the first half of 2023 (Figure 37). Core inflation (excluding raw food and energy) is likely to remain elevated at 2.4 percent in 2023, with ongoing cost pass-through to prices of some consumer staples and services, coupled with rising demand fueled by a strengthening labor market and higher minimum wages. Inflation is expected to fall thereafter to the lower bound of the BOT's target range, as energy prices pressures fade and domestic demand slowdown in line with the path to monetary policy normalization. Over the medium term, second-round pressures on prices are expected to remain contained, similar to the ASEAN peers, due to the existing price administration, supported by subsidies, and slow output growth (Figure 38).

Figure 37: Headline inflation has reached its peak.

(Percent year-on-year)
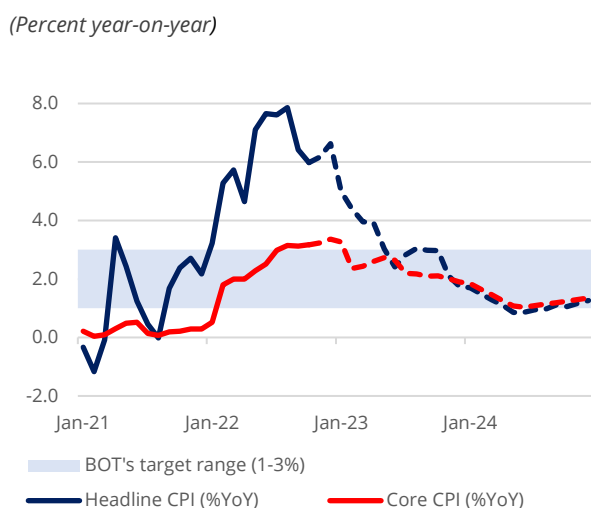
Source: CEIC; World Bank staff projections.

Figure 38: Inflation is projected to be among the highest in EM Asia, but lower than other emerging market peers.

(Percent, projection for 2022)
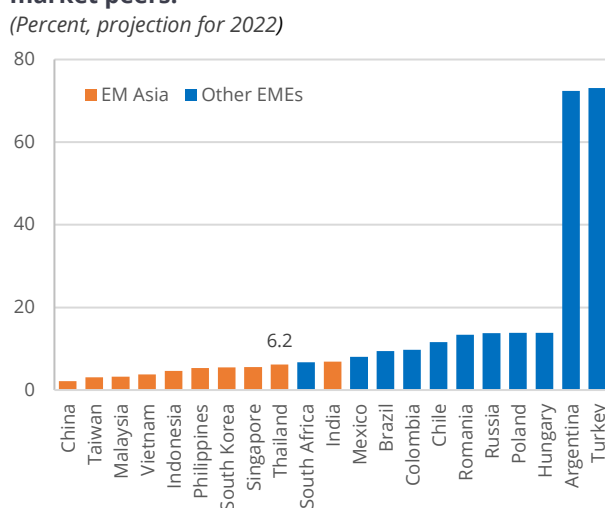
Source: CEIC; IMF forecast; World Bank staff forecast for Thailand.

The fiscal deficit is projected to narrow in FY23, but the path of fiscal consolidation will slow, owing to energy subsidies and measures to mitigate the cost-of-living crisis.

The fiscal deficit is projected to narrow from an estimated 5.5 percent of GDP in FY22 to 2.6 percent in FY23, largely on the account of reduced Covid-related spending (Figure 39). The path of fiscal consolidation will be slower-than-expected, owing to the government's energy subsidies, excise tax cut on diesel, and relief measures to mitigate the cost-of-living crisis, such as targeted cash transfers for low-income households, and targeted subsidies on electricity and cooking gas. Public investment is projected to improve in FY 23, after experiencing some setbacks in the past 2 years. Overall public debt to GDP is expected to reach its peak in FY 22, while the level will remain higher than the pre-pan demic level afterwards, in line with the regional peers (Figure 40). Over the medium term, the public debt is projected to remain sustainable as the debt will gradually decline, driven by the narrowing fiscal deficit and recovering output, and Thailand's continues to be largely denominated in local currency. The public debt projection is lower than the government's medium-term target, due to a higher revenue path projection.

Figure 39: The general government deficit is projected to narrow as spending wanes...
(Percent of GDP)
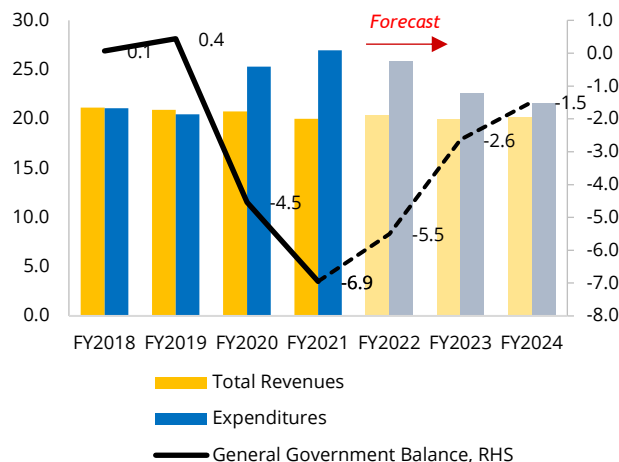
Source: FPO; World Bank staff projections.

Figure 40: ... and the public debt stock is projected to peak in FY 2022
(Percent of GDP)
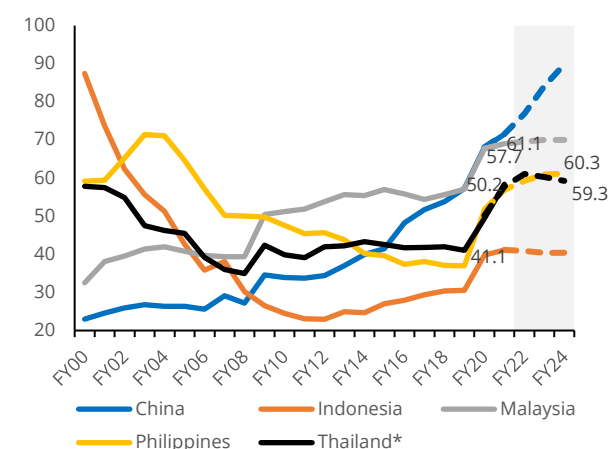
Source: IMF WEO; World Bank staff projections.

Thailand's current account balance is projected to reverse to positive territory in 2023, with support from a tourism recovery

The current account balance is expected to reverse from the deep deficit in the past 2 years to positive territory in 2023 (Figure 41). The improvement will be driven by the tourism rebound alongside the lowering of the freight cost after the surge in global shipping costs is reversed. However, the goods trade balance is expected to deteriorate as goods export growth is projected to contract due to the weakening global demand, while the cost of energy imports is likely to remain higher than prior to the war in Ukraine.

Figure 41: The current account balance is projected to return to positive territory in 2023
(Percent of GDP)
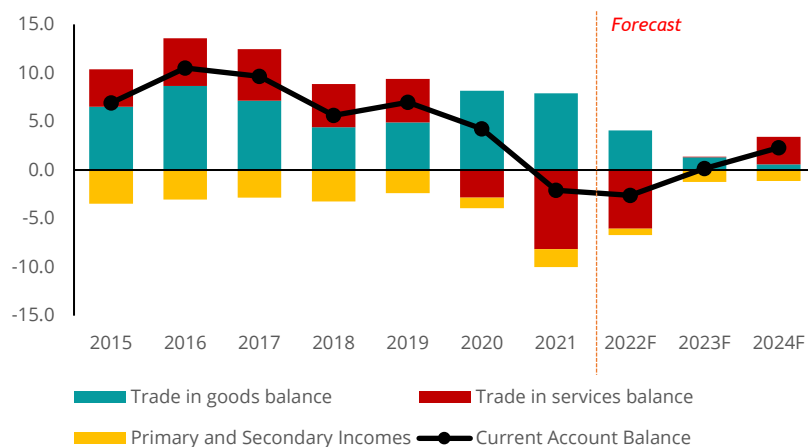
Source: World Bank staff forecast.

ii. Risk to growth remains on the downside, reflecting the global economic slowdown, elevated fuel prices, and prolonged weak economic growth

Weaker-than-expected global growth and intensifying geopolitical conflict may further set back Thailand's recovery.

Thailand will be vulnerable to spillovers from a sharper Chinese economic slowdown and the zero-covid policy, through the goods trade, investment, and tourism channels due to its strong linkages to the Chinese markets. A prolonged war in Ukraine could intensify the commodity shortages, and further derail growth in the advanced economies, raising the risk of a global recession. The Thai economy would be negatively affected through trade and financial channels. Persistently high cost-push inflation could destabilize inflation expectations and cause an unexpected aggressive tightening of Thailand's financial condition, while the recovery is incomplete.

In the long-term, output may fall further below the pre-pandemic trend unless productivity growth is revitalized.

The output level is expected to remain well below the pre-pandemic trend, despite recent resurgent growth (Figure 42). The subdued recovery and long-term growth path could be dampened further by the global economic outlook, and concerns over rising energy prices. Structural challenges, such as an aging population, low capital investment accumulation, declining export competitiveness, and high household debt, may further limit potential growth. The potential growth rate is estimated to decline from 3.6 percent in the past decade to 3.0 percent. Lifting potential output requires efforts to (1) boost public investment in areas such as innovation, skills, and digital infrastructure to improve human capital, and clean energy to reduce reliance on fossil fuel (2) liberalize the services sector, (3) accelerate the process of household debt restructuring, while also (4) ensuring adequate welfare for the poor and unemployed.

Additional prolonged periods of high energy prices and blanket energy subsidies may put pressure on fiscal space.

The recent rise in public debt levels has made it harder to reconcile the pressures for ongoing fiscal support with the need for fiscal consolidation – as the fiscal and quasi-fiscal cost of subsidy continues to rise. The cap on diesel prices is estimated to have incurred a cost of 1.1 percent of GDP in 2022, including the excise tax cut and contingent risk from the State Oil Fund borrowing[10]. The fiscal cost of energy subsidy could be significantly larger if the global energy supply shock is prolonged and if Thailand continues to boast the highest dependency on energy imports within ASEAN. To manage these competing pressures, more targeted means-based social assistance spending and further effort on revenue mobilization will be necessary.

Fiscal policy can play an important role in building a more equitable society able to better withstand shocks.

As Thailand looks towards resuming its path towards high-income country status post-pandemic, raising adequate fiscal space will be necessary to meet the additional spending need and provide a fiscal buffer for future shocks. The demands from an aging society and pressure to increase the availability and quality of basic public services and social protection systems will lead to increased spending needs, which in turn will help support inclusive growth. The current crisis also serves as an impetus to undertake much-needed structural

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[10] The cabinet recently approved a law to guarantee up to THB 150 billion (0.9 percent of GDP) of the State Oil Fund's additional borrowing to replenish the fund, should the need arise.

reforms required to improve the quality and allocation of spending as well as to raise structurally low revenue. Meeting the spending need, while also improving distributional impacts of fiscal policies and undergoing fiscal consolidation, requires more efficient and targeted spending and further effort on revenue mobilization.

Figure 42: Output will remain below its potential level until 2024.
(World Bank GDP forecast Index, 2019=100)
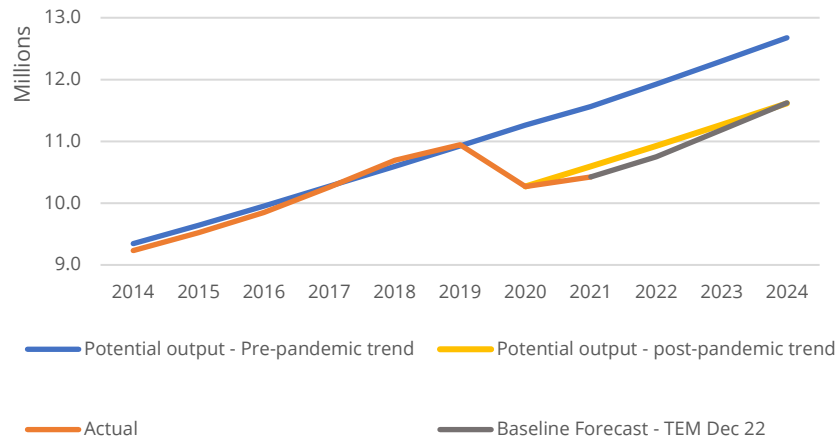
Source: World Bank staff projections.

Part 2. Fiscal Policy and an Equitable Economic Future

i. The fiscal response to COVID-19 has significantly mitigated the full impact of the crisis on household welfare

Prior to the pandemic, Thailand has made remarkable progress in reducing poverty; but income inequality remains high

Between 1990 and 2019, the national poverty rate fell from 58 to 6.3 percent, and the international poverty rate (measured at \$5.5 a day in 2011 PPP) declined from 65 to 6.2 percent. From 2015 onwards, only Malaysia had a lower poverty rate than Thailand in the upper-middle income country (UMIC) group. Thailand has also achieved important reductions in inequality, but it is still high. With an income Gini[11] coefficient of 43.3 percent in 2019, Thailand ranked as the 13th most unequal out of 63 countries for which income Gini coefficients are available, and first in East Asia and the Pacific (EAP). In terms of consumption inequality, Thailand performed better. With a consumption Gini coefficient of 35.0 percent in 2019, it ranked 45th out of 72 countries with available consumption Gini coefficients, but it continues to rank higher than half of countries in EAP. Inequality can undermine progress in human capital accumulation and tends to reduce the pace and sustainability of growth and poverty reduction.

Despite the severe shock of COVID-19 on the economy, the

Poverty increased slightly in 2020 before falling back to its pre-COVID level in 2021; the national poverty rate rose from 6.3 to 6.8 percent between 2019 and 2020 before declining back to 6.3 percent in 2021. Poverty rose equally for both urban and rural areas between 2019 and 2020—with a 0.6 percentage points

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11 The Gini index measures the extent to which the distribution of income or consumption among the population or households deviates from a perfectly equal distribution. The Gini index varies between 0 (perfect equality) to 1 (perfect inequality).

impact on poverty was relatively mild

increase, the poverty rate reached 5.3 percent in urban areas and 8.7 percent in rural areas. However, poverty declined at a much faster pace for rural areas between 2020 and 2021, falling 0.9 percentage points to 7.8 percent; in contrast, poverty in urban areas remained virtually unchanged between the two years, falling 0.1 percentage points to 5.2 percent in 2021.

The impact of the pandemic on inequality was also relatively mild

Inequality remained stable. The consumption-based and income-based Gini coefficients held constant at, respectively, 35 and 43.3 percent over 2019-2021. However, the pattern varied by area: while both consumption and income-based measures of inequality rose between 2019 and 2021 in urban areas, for rural areas, they rose marginally between 2019 and 2020 before falling in 2021 to levels slightly lower than before the pandemic. Between 2019 and 2021, the rural income-based Gini fell from 41.6 to 41.2 while the rural consumption-based Gini fell marginally from 32 to 31.9.

The scale of government response to the pandemic has been unprecedented

To mitigate the impact of the pandemic, total government expenditure on social assistance more than tripled between 2019 and 2020, rising from 0.8 percent to over 3 percent of GDP. The government's response was one of the largest in the EAP region, with social assistance estimated to have reached about 30 million people, adding about 14 percent to the already high share of social assistance beneficiaries prior to the pandemic (World Bank 2021). Among the programs introduced to mitigate COVID-19 impacts were temporary emergency programs for farmers and informal workers who would not have been able to avail of the transfers prior to the pandemic as well as an expansion of existing social assistance programs, particularly for people with disabilities, children of poor families, the elderly as well as the recipients of the Social Welfare Card (SWC) program.

Social assistance surged, offsetting loss of employment and business income

The surge in social assistance thwarted the deterioration of household incomes. Estimates from the Thailand Socio-economic Survey (SES) reveal that household income from social assistance increased 46 percent between 2019 and 2021, which helped offset the relatively large decline in nonfarm business income and remittances, both of which fell over 10 percent. It also helped buffer the decline in wage income, which fell 2 percent during this period.

These fiscal measures prevented a significant increase in poverty and inequality

The massive government response helped mitigate a substantial increase in poverty and inequality. Without these measures, poverty would have reached 8.1 percent (27 percent higher than 2021 figures), while the depth of poverty would also have been considerably worse, with the poverty gap at 1.7 percent (41 percent higher than 2021 figures). Inequality would have risen as well: absent the government's response, the consumption-based Gini coefficient would have reached 36.3 percent from 35 percent in 2019 while the income-based Gini coefficient would have reached over 44 percent from 43 percent in 2019. While the government maintained total social assistance spending at about 3 percent of GDP through 2021, it is likely to decline in 2022.

However, COVID highlighted and widened pre-existing disparities, putting upward pressure on inequality in the long-term

Considerable gaps in employment and learning outcomes already existed prior to the pandemic, but COVID-19 risks widening these gaps. Data from the COVID-19 High Frequency Survey (HFS) from April to June 2021 reveal that almost a quarter of those in the poorest quintile experienced job loss during the pandemic, compared to 14 percent in the richest quintile; with this, 85 percent of the poorest households experienced a decline in income, over 20 percentage points higher than better-off households. The pandemic may also have a disproportionate effect on the learning outcomes of students from low-income families, adding to the already considerable gap that existed prior to the pandemic. This could be due to poorer students lacking access to resources that help facilitate remote learning, with data from the HFS revealing that the lack of access to learning devices was cited as the top barrier to effective learning by 30 percent of households in the lowest income quintile, compared to 1 percent among better-off households. This is particularly concerning, as poorer learning outcomes could limit future employment opportunities and with it, prospects for income mobility.

Despite the recovery, poverty reduction may slow down in 2022 as the COVID-19 relief measures start to phase out and inflation remains elevated

A new round of registration for the state welfare card scheme from September 5 to October 27, 2022, received more than 19 million applications, compared with the current number of beneficiaries of 13.3 million. While coverage of the scheme will likely expand, it will take effect in 2023. GDP growth, which is projected to accelerate to 3.7 percent in 2022 and accompanied by improvements in labor market conditions and labor income, will not be strong enough to compensate for the phasing out of COVID-19 relief transfers and the loss of purchasing power due to high inflation. Heavy reliance of households on social assistance combined with the low response of poverty to growth and the concentration of the recovery in modern services and industries which employ better-off people will likely result in a deterioration of incomes of vulnerable households and a slowdown of poverty reduction.[12]

A path to sustainable poverty reduction will hinge on the resumption of labor income among the poor and success in alleviating household debt

Thailand's labor markets in recent years have failed to provide sufficient opportunities for low-income families, resulting in labor income stagnation and a heavy debt burden among this group. The social protection system has been ramped up to help reduce poverty and protect the poor and vulnerable from crises and shocks. However, most of the programs are in the form of cash transfers and income support and less on improving employment opportunities and productivity. A recovery from COVID-19 provides an opportunity to reformulate the strategy for sustainable poverty reduction. This requires investing in initiatives to improve jobs and earnings opportunities among low-income groups, while creating fiscal space to achieve adequate spending on social assistance for the most vulnerable groups including elderly, disabled and extreme poor people. Meanwhile, tackling high levels of household debt, which could undermine household consumption in the medium term, will also be critical for achieving sustainable poverty reduction.

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[12] Estimates from a macro-micro simulation model show that the poverty rate may slightly increase to 6.6 percent in 2022.

ii. A progressive fiscal policy helped lower poverty and inequality pre-pandemic

Fiscal policy can play an important role in promoting equity

The COVID-19 pandemic brought into sharp relief the role that fiscal policy can play in mitigating shocks. It is also an important part of financing the necessary public investments in physical and digital infrastructure and human capital needed for countries to transition to higher incomes. Fiscal policy is also one of the few instruments which governments can use to reduce inequality in the short-term. It is not just that fiscal policy finances public investments which can promote growth as well as reduce poverty and inequality in the long-term; it can also affect the household income distribution today. Different households pay various taxes and benefit from public spending in different ways. The net effect determines the extent to which fiscal policy directly reduces poverty and inequality. The choice of public spending can also affect how much poverty and inequality are reduced in the longer-term.

Lower inequality can drive higher economic growth and help Thailand's transition to a High-Income Country

Lower inequality tends to be associated with faster and more sustainable growth. Inequality can undermine progress in human capital accumulation, dampen demand, cause political and economic instability that discourages investment, and undercut the social consensus required to adjust in the face of shocks. Thus, high inequality tends to reduce the pace and sustainability of long-term growth. Ostry et al. (2014) find that, for a given level of redistribution, lower post-fiscal inequality is correlated with faster and more durable growth. Similarly, Dabla-Norris et al. (2015) show that an increase in the income share of the bottom 20 percent of the population is associated with higher GDP growth. Other studies have found that the relationship between income inequality and economic development is non-linear, switching from positive to negative at relatively low levels of income inequality (Grigoli and Robles, 2017). Fiscal policy is the main instrument used by governments to address acute needs and promote long-term growth, with wide-ranging impacts on poverty and inequality (World Bank, 2022).

The Commitment to Equity approach is used to assess how much fiscal policy in Thailand helped reduce poverty and inequality before COVID-19

The Commitment to Equity (CEQ) method (Box 3) is used to estimate the distributional welfare consequences of Thailand's public revenues and expenditures, quantify the impact of these fiscal activities on both inequality and poverty, and estimate how effectively they redistribute income between the rich and the poor. Nearly two-thirds of tax revenues are included (personal income taxes—PIT and value added tax—VAT and excises; corporate income tax is excluded) and just under half of all spending (social assistance, education and health) are included.

Box 3: The CEQ methodology

To determine the impact of fiscal policy on household welfare, the Commitment to Equity (CEQ) framework of fiscal incidence analysis is used (Lustig 2018). Under this framework, household income is assessed at different stages, as outlined in Figure B4.1. First, a household's market income or pre-fiscal income is the total income it received from wages and salaries, rents and dividends, private transfers, remittances and contributory pension income. Some households pay PIT and non-pension social security contributions which reduce their market income. Some households receive direct transfers (including social pensions) from the government as part of the social safety net, which increases their market income. The net effect after direct taxes and direct transfers is a household's disposable income: how much money does it have to spend on goods and services, or to save? Disposable income is equivalent to the measured consumption in the Thailand Socio-Economic Survey (SES). Second, when a household does buy goods and services, it pays indirect taxes (such as VAT, GST or Sales tax or special excises on particular goods), but it might also benefit from indirect subsidies (such as cheaper fuel or electricity). How much of different goods and services a household can afford to buy, after considering both indirect taxes and subsidies, is called consumable income. When considering only cash-based fiscal instruments, this is also a household's post-fiscal income. Finally, a household may also use public services such as sending their children to a public school or visiting a health center or hospital. In this case, the public spending benefits are non-cash. Including this non-cash spending results in a household's final income (the post-fiscal income if non-cash spending is included).

Figure B4.1: Definition of income concepts and the role of fiscal instruments
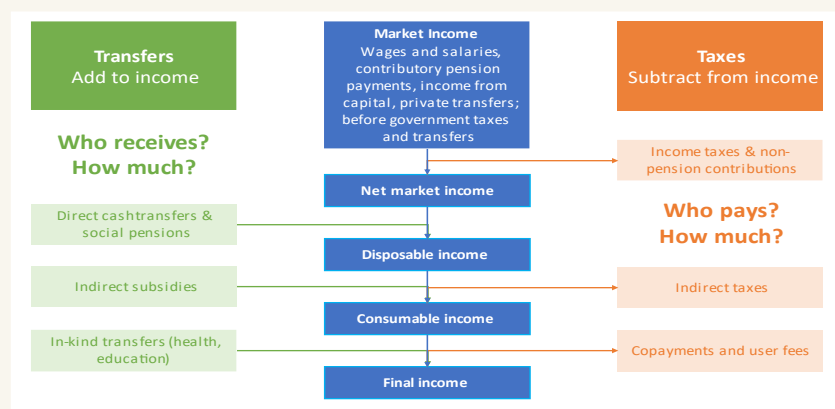
Source: Lustig (2018).

This framework allows to answer two key questions. First, who pays a particular tax or receives a particular benefit? Second, what is the net impact of all taxes and transfers on different households?

The CEQ framework has two important advantages. First, it assesses both tax and expenditure policies, including direct taxes (PIT, social security) and pension and social insurance contributions; indirect taxes on consumption (VAT, excise); indirect subsidies; and in-kind spending (for example, education and health benefits, which are not received by households as cash). Moreover, the framework not only assesses as much tax and spending as possible but also examines their joint effect, to estimate the net impact on households. Second, it uses a standardized methodology, making it comparable across countries and time and allowing international benchmarking.

Because the framework takes an accounting approach, it does not include behavioral effects, general equilibrium effects, or intertemporal effects. More details can be found in the forthcoming Thailand's expenditure review (World Bank forthcoming).

In 2019 the Thai fiscal system had greater net contributions from

Figure 43 shows the total taxes paid by each decile of the income distribution, the total public benefits received and the net impact. If we exclude non-cash benefits of health and education, Thais in the poorest two deciles are net beneficiaries – they receive more in cash benefits than they pay in tax. The next two deciles roughly break even, paying as much as they benefit, while the richest

richer households and greater net benefits to poorer ones

six deciles are all net cash contributors. Moreover, each of the richest six deciles contributes an increasing amount to the fiscal system, with the richest decile contributing three times more than the second richest decile.
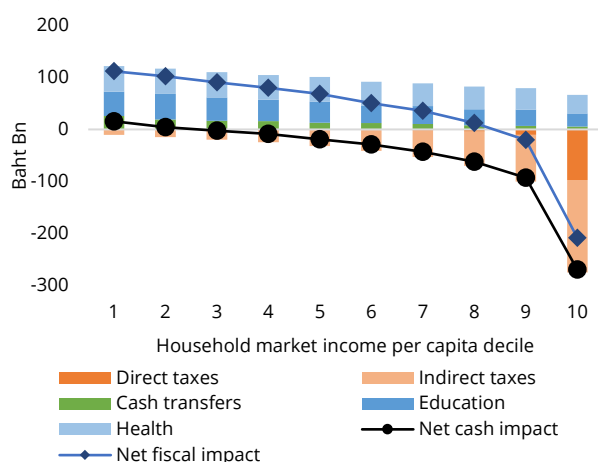
When non-cash health and education spending is also included, the first seven deciles become net beneficiaries and only the richest decile remains a significant net contributor, paying THB 209 billion more in taxes each year than they receive in benefits. By contrast, the poorest 20 percent receive nearly as much in net terms, or THB 225 billion. While a greater share of education, health, and cash transfers go to poorer households than richer ones, the main driver of the strong net contributions by the richest households is the high share of total tax they pay.

Fiscal benefits represent a large share of income for the poorest households, but not in cash terms; richer households could contribute more

The same pattern of taxes and benefits can be looked at relative to average income (Figure 44). The net benefits to the poorest decile represent 70 percent of their market income; that is, their incomes are 70 percent higher after paying taxes and receiving benefits compared to what they earn themselves or receive from friends and family. However, almost all of the benefits come from education and health benefits which are important for long-run incomes and welfare but do not pay the rent or put food on the table today. In cash terms, the poorest decile is only 10 percent better off. Moreover, net contributions from richer households are small as a percentage of incomes. The richest decile contributes 17 percent of their income, and the other deciles contribute 11 percent or less. Consequently, while the pre-COVID-19 fiscal system in Thailand was progressive, richer households could contribute more and poorer households would benefit from greater cash assistance.

Figure 43: Most households are net beneficiaries, although not in cash terms

(Concentration of taxes and transfers by decile, THB billions annually)

Figure 44: Benefits are significant for poorer households relative to their incomes, but contributions are modest for richer households

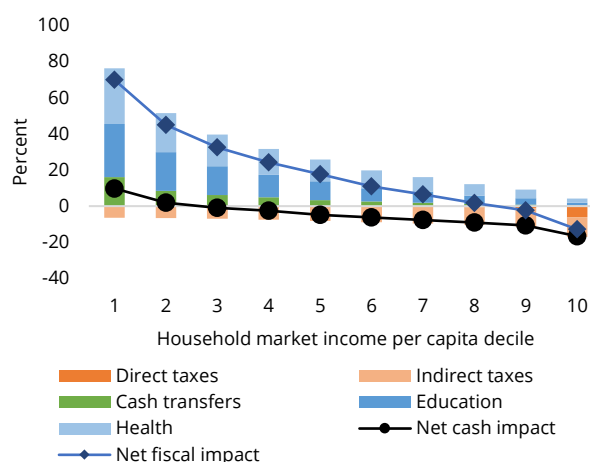*(Percent of household market income)*

Source: SES 2019 and World Bank staff calculations.
Note: The population is divided into ten equal groups, ranked from the poorest 10 percent according to market or pre-fiscal income ("decile 1") to the richest 10 percent ("decile 10").

Source: SES 2019 and World Bank staff calculations.

**The pre-pandemic fiscal system reduced inequality significantly**

In 2019, pre-fiscal income inequality – measured by the Gini Index using market income[13] – was 37.5 points. The progressive nature of the Thai pre-pandemic fiscal system means inequality falls with each set of taxes and transfers. After direct taxes (PIT and social security contributions) and direct transfers (targeted social assistance), inequality falls by 2.5 points to 35.0 (Figure 45). Indirect taxes reduce inequality slightly further to 34.0 (being paid proportionally more by richer households) but the largest drop in inequality comes from including health and education benefits, which reduce inequality to 28.6. In total, fiscal policy reduces the Gini Index of inequality in Thailand by 3.8 points in cash terms and by 8.9 points when including non-cash benefits.

Poverty is modestly reduced, with the greatest declines coming in areas with the highest initial poverty rates

If the incidence of poverty was measured in Thailand based on household's market income at the international poverty line of USD 5.50 per person per day for UMICs, the poverty rate would be 9.0 percent. However, after accounting for taxes paid and cash benefits received, the poverty rate falls to 8.1 percent, or a modest decline of 0.9 percentage points (Figure 46).[14] The largest poverty reductions from fiscal policy come in the poorest regions; poverty in the Northeast falls from 16 percent in pre-fiscal terms to 13.3 percent in post-fiscal terms, or a decline of 2.7 points, while in the North it falls from 12.8 percent by 1.5 points. Little reduction is seen in the already very low poverty regions of Bangkok and Central, although the South (with average poverty rates) sees little impact either.

Figure 45: Fiscal policy reduces inequality in both cash and non-cash terms

(Impacts of fiscal policy on Gini Index))
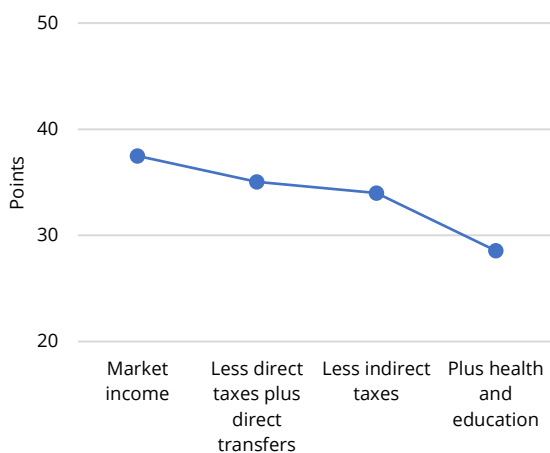
Source: SES 2019 and World Bank staff calculations.

Figure 46: Fiscal policy also reduces poverty, and by more in poorer regions

(Poverty headcount rate at different income stages, by region)
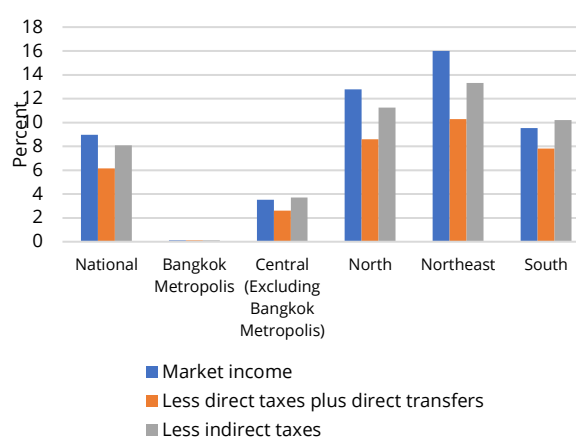
Source: SES 2019 and World Bank staff calculations.

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13 Because consumption is the welfare measure for official poverty rates, the CEQ analysis uses consumption as a proxy for income. In the analysis, market income is proxied by consumption before any taxes have been paid or transfers received.
[14] Health and education benefits are not included in the poverty analysis as they are not in cash and do not help households meet basic subsistence needs, even though they play a critical role in long-term incomes and poverty reduction.

Thailand's fiscal system reduces inequality by around the UMIC average, although it does much better in cash terms

Thailand's fiscal system does more to reduce inequality in cash terms than in most other countries with comparable data. The impact of taxes and cash benefits in 2019 was to reduce the Gini Index by 3.8 points from its pre-fiscal level. This is the 12th best out of 58 countries with available CEQ data and 4th best out of the 24 UMICs. Like most countries, direct taxes and transfers play the largest role.

However, after including non-cash health and education benefits, Thailand's net fiscal impact on inequality (8.9 points) is closer to average in international rankings, 22nd out of 58 countries and 13th out of 24 UMICs (Figure 47). While health and education benefits do reduce inequality in Thailand, they do so by less than elsewhere, where the 58-country average impact is 4.4 points and the UMIC average is 6.0 points. Nonetheless, cash impacts matter and are most relevant to immediate and subsistence needs for poorer households, and so Thailand's strong inequality reduction in cash terms merits recognition.

Figure 47: Fiscal policy reduces inequality in both cash and non-cash terms

(Impacts of fiscal policy on Gini Index))

Source: World Bank estimates based on SES 2019, CEQ Data Center on Fiscal Redistribution, OECD and World Bank data

Thailand achieves better than average poverty reduction with fiscal poverty

The poverty reduction achieved by Thailand's fiscal policy is also a strong outcome relative to other countries. Poverty at the UMIC $5.50 line is reduced by 0.9 points in Thailand, making it 15th best out of 56 countries with comparable data and 7th best amongst UMICs. In fact, the majority of countries outside of high-income countries (HIC) actually see short-term poverty increase as indirect taxes leave poorer households out-of-pocket relative to the cash transfers they receive (Figure 48).

Figure 48: **Thailand's fiscal policy reduces poverty unlike most middle income countries**
(Impacts of fiscal policy on Poverty rate (at $5.5 per person per day 2011 PPP international line))

Source: World Bank estimates based on SES 2019, CEQ Data Center on Fiscal Redistribution, OECD and World Bank data

While Thailand's fiscal policy is progressive, it suffered from pre-pandemic limitations

There were a number of important limitations to Thailand's pre-pandemic fiscal policy, from an equity perspective. While social assistance coverage is high and cash transfers are progressive, the value of benefits is mostly low, and targeting could be improved. Over 80 percent of Thais in the poorest bottom 40 percent of the income distribution benefit from some form of social assistance and receive around 60 percent of all transfers; social assistance coverage exceeds 90 percent in the poorest decile who receives about 20 percent of all transfers. However, average transfers are relatively low, equivalent to 17 percent of the pre-fiscal income of the poorest decile and dropping to 9 percent for the 2nd poorest decile. In addition, around a third of all social assistance transfers go to the richest half of the population and nearly 10 percent to the richest two deciles. Better targeting of transfers away from richer households would create budget space for more generous benefit levels for poorer population groups, which could achieve a greater impact on poverty and inequality at no extra cost.

Greater investment in human capital and social assistance could both increase future growth and achieve greater inequality reduction. Thailand's investments in human capital are pro-poor but the total spending level lags other UMIC countries, so their contribution to inequality reduction is also lower. For example, spending on health is 2.9 percent of GDP, compared to the UMIC average of 4.0 percent and the East Asia and Pacific average of 4.9 percent. Similarly, education spending is 3.0 percent, having declined from 4.2 percent half a decade earlier, below the 4.4 percent predicted by its level of income (see *Thailand Public Expenditure Review* - World Bank (forthcoming). Social assistance spending is also low at 0.8 percent of GDP, compared to an international benchmark of 1.5 percent (World Bank 2018), while existing budgets are used inefficiently, with many richer households benefitting from transfers (see World Bank 2022b).

Thailand's relatively low tax revenue collection is a key reason for underinvestment in pro-poor spending. Pre-COVID tax revenues were around 16 percent of GDP, below UMIC and non-OCED HIC averages and only half that of the OECD average (Figure 49). Moreover, it relies more on indirect taxes

which are less progressive than direct taxes, with PIT accounting for 1.7 percent of GDP, compared to the UMIC average of 2.8 percent. While Thailand's PIT is very progressive with most revenue coming from richer households, it contributes only a quarter as much revenue as VAT and excises. Consequently, Thailand both collects less total revenue than other countries and has a less progressive mix.

Figure 49: There is scope for Thailand to collect more revenue with a more progressive tax mix
(revenue as a percent of GDP)
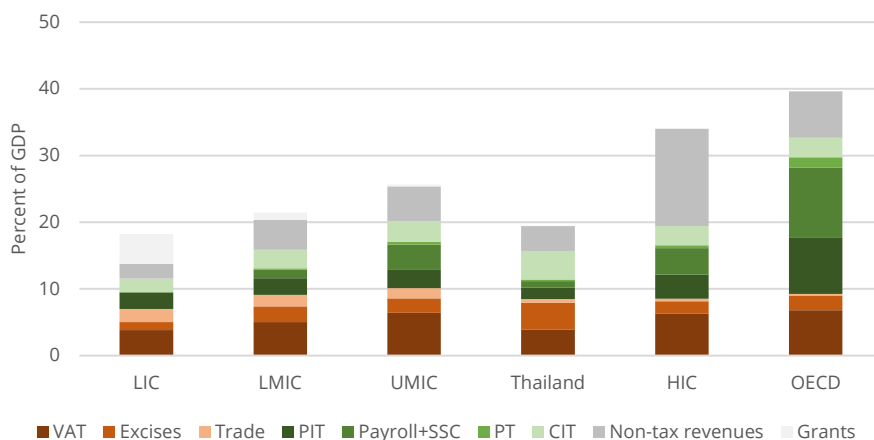
Source: *World Bank estimates based on IMF World database, in World Bank (2022)*

iii. Way forward for a better fiscal policy

International experience suggests some lessons for a more equitable fiscal policy

Thailand's fiscal policy already helped reduce poverty and inequality before the pandemic. Nonetheless, fiscal policy can still do more to promote a sustainable inclusive recovery while protecting the fiscal space. The World Bank's recent flagship *Poverty and Shared Prosperity* report focused on international experience and the lessons for more equitable fiscal policy. Most recommendations are relevant to Thailand and include:

- Increasing direct taxation, especially from PIT

- Increasing indirect taxation on general consumption through removal of costly and regressive exemptions

- Increasing health taxes, as well as introducing digital and carbon taxes

- Increasing spending on health and education

- Strengthening tax administrative capacity

- Avoiding spending on subsidies to mitigate higher fuel and food prices

- Improving targeting of direct transfers

- Assessing lessons from the pandemic on how to make the SP system better suited for shocks

In particular, Thailand should:
- Strengthen social protection programs and provide well-targeted assistance. Most foundational elements for social protection delivery – personal identification, financial inclusion, payment systems and mobile phone penetration – in Thailand are strong and well-established (World Bank 2021). However, beneficiary data management needs to improve by linking social assistance databases with other sources to create a virtual social registry. The quality of data in some program and administrative databases also need to be improved. For instance, the Low-Income Earners Registry, used for poverty-targeting in the SWC program, could be improved by establishing on-demand updating. A well-functioning virtual registry will allow targeting to be automated and to be more responsive to shocks. Simulations using the CEQ approach show that an increase of SWC transfers to THB 699 per capita per month (about 30 percent of the poverty line) with better targeting to the lowest income quintile would reduce poverty by 2.9 points and inequality by 1.2 points, yet it would cost THB 73 billion.[15] Better targeting of the Old Age Allowance (OAA) to the bottom 40 percent with a tapered increase of the benefits to between THB 2000 and THB 500 per month for elderly people (60 and above) would reduce poverty by 2.1 points and inequality by 1.2 points and would cost THB 71 billion (Table 4).[16]

- Increase tax revenue without burdening the poor. PIT is narrow due to the large number of exemptions and deductions, the prevalence of informality, as well as a large compliance gap. Excluding those who were exempted from tax, only 10 percent of the labor force paid tax in 2019, most of whom were salary workers (World Bank forthcoming). Expanding the tax base could be achieved by addressing the low number of self-declarations or under-reporting of income among the self-employed, business owners, as well as those workers in the informal sector. The expansion of the PIT base from 28.5 percent of labor force to the UMICs average of 32.5 percent is estimated to increase revenue by 0.3 percent of GDP. The removal of some generous deductions and allowances would also improve PIT collection while making the system more equitable, as would the expansion of property taxes. Meanwhile, improvements in tax administration could also improve collection. Expanding e-filing and e-payment while introducing behavioral initiatives and utilizing

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15 In the case of SWC, current payments range from THB 200 to THB 300 per month, depending on the beneficiary's household income. The program covers a larger proportion of the poor than the rich, but many poorer households remain excluded while many non-poor households are included. The reform scenario consists in increasing the coverage of the bottom two quintiles and excluding richer households (while keeping the overall number of beneficiaries constant) and increasing the transfers to 30 percent of the poverty line (THB 699 per month).

16 Currently, the OAA ranges between THB 600 and THB 1000 per month, increasing by beneficiary age. In the tapered increase OAA reform scenario, benefits increase by income quintile for 60 and older beneficiaries to THB 2,000 for quintile 1, THB 1,500 for quintile 2, THB 1,000 for quintile 3, and THB 500 for quintile 4; benefits are removed for quintile 5.

third-party data through firm networks could lower the burden of tax filing and help improve voluntary compliance.

- Increase public spending for human capital development, especially in the wake of COVID-19 learning losses. Reforms could focus on increasing education spending and providing adequate resources to improve learning and skills, while also increasing health spending.

[1] In the case of SWC, current payments range from THB 200 to THB 300 per month, depending on the beneficiary's household income. The program covers a larger proportion of the poor than the rich, but many poorer households remain excluded while many non-poor households are included. The reform scenario consist in increasing the coverage of the bottom two quintiles and excluding richer households (while keeping the overall number of beneficiaries constant) and increasing the transfers to 30 percent of the poverty line (THB 699 per month).

[2] Currently, the OAA ranges between THB 600 and THB 1000 per month, increasing by beneficiary age. In the tapered increase OAA reform scenario, benefits increase by income quintile for 60 and older beneficiaries to THB 2,000 for quintile 1, THB 1,500 for quintile 2, THB 1,000 for quintile 3, and THB 500 for quintile 4; benefits are removed for quintile 5.

In particular, short-term reforms to VAT and social assistance could result in a net increase of tax revenues by THB 100 billion and a reduction of poverty and inequality by 3.6 points and 2.6 points, respectively

The options above cover a range of potential fiscal reforms which Thailand could pursue. A specific combination of VAT and social assistance reforms is further quantified, in terms of both fiscal and distributional impacts. VAT reforms could increase tax revenues by as much as THB 245 billion, or VAT collection by 41 percent, through the removal of current VAT preferential rates and exemptions and an increase in the base VAT rate from 7 percent to 10 percent. This reform will affect poorer households, even if the impact is borne more by richer ones. If uncompensated, the full VAT reforms would increase poverty by 1.5 percentage points, though they would reduce inequality by 0.3 points due to their progressive form.

The impact on the poor of the VAT reforms could be more than offset by the social assistance reforms: a tapered increase of the Old Age Allowance (OAA) and an increase of Social Welfare Card (SWC) transfers to 30 percent of the poverty line with better targeting.[17] Together the VAT and social assistance reforms would raise THB 100 billion (0.6 percent of GDP) while reducing poverty by 3.6 points and inequality by 2.6 points.

Expansion of social assistance programs would have a much greater impact on poverty and inequality than the

The current diesel subsidy and temporary reduction in the diesel excise only reduce poverty by 0.5 points, with much of the benefit accruing to non-poor households; the Gini measure of inequality falls by only 0.2 points. These diesel measures cost around the same amount as the preferred OAA and SWC reforms combined, yet the OAA and SWC reforms have a seven times larger impact on poverty and ten times larger impact on inequality.

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[17] Currently the OAA ranges between THB 600 and THB 1000 per month, increasing by beneficiary age. In the tapered increase OAA reform scenario, benefits increase by income quintile for 60 and older beneficiaries to THB 2,000 for quintile 1, THB 1,500 for quintile 2, THB 1,000 for quintile 3, and THB 500 for quintile 4; benefits are removed for quintile 5. In the case of SWC, current payments range from THB 200 to THB 300 per month, depending on the beneficiary's household income. The program covers a larger proportion of the poor than the rich, but many poorer households remain excluded while many non-poor households are included. The reform scenario consist in increasing the coverage of the bottom two quintiles and excluding richer households (while keeping the overall number of beneficiaries constant) and increasing the transfers to 30 percent of the poverty line (THB 699 per month).

**current diesel
subsidies and
excise reductions**

Table 4: Increasing VAT revenues but expanding social assistance would result in both greater net revenues and lower poverty and inequality

		Fiscal (THB bn)	Inequality (Gini)	Poverty (points)	Cost per point of poverty (THB million)	Fiscal (% of GDP)
Revenue reforms						
	7% VAT, no exemptions	111	-0.1	0.8		0.7%
	10% VAT with current exemptions	87	-0.2	0.4		0.5%
	10% VAT, no exemptions	245	-0.3	1.5		1.5%
Household compensation						
Scenario 1	Raise OAA to poverty line	-196	-1.4	-2.6	76.9	-1.2%
Scenario 2	Raise OAA to THB 1250/month	-77	-0.6	-1.3	61.1	-0.5%
Scenario 3	OAA B40 - THB 2000/month, T60 keep baseline OAA	-83	-1.1	-2.1	40.3	-0.5%
Scenario 4	OAA tapered (from 2000 to 0, by quintile)	-71	-1.2	-2.1	34.9	-0.4%
Scenario 5	Increase SWC to 30% of poverty line	-73	-0.9	-1.9	38.6	-0.4%
Scenario 6	Increase OAA tapered and SWC	-145	-2.0	-3.6	40.2	-0.9%
Scenario 7	Improved targeting of SWC	-2	-0.1	-0.4	4.0	0.0%
Scenario 8	Improved targeting of SWC and increase to 30% of PL	-73	-1.2	-2.9	25.3	-0.4%
Scenario 9	Increase OAA (tapered), increase SWC (improved targeting)	-145	-2.3	-4.4	32.9	-0.9%
Scenario 10	10 THB price reduction of diesel	-133	0.2	-0.5	276.2	-0.8%
Preferred scenario						
	10% VAT, no exemptions, increase OAA (tapered) and SWC (targeted)	100	-2.6	-3.6	-27.8	0.6%

ANNEXES

1.1 Minimum Wage Effects in Thailand

Introduction

- ➢ This study evaluates the effects of minimum wage policies on labor market outcomes and wage distribution in Thailand. The study focuses on recent Thai minimum wage policy changes as follows:

  - From provincial-level to statutory minimum wage during April 2012 to January 2013 - A daily minimum wage of THB 300 was applied in seven pilot provinces (Bangkok and vicinities plus Phuket), while an increase of approximately 40 percent was applied to the minima in the other provinces in April 2012. This was then followed by the introduction of a statutory minimum of THB 300 per day for the whole kingdom in January 2013; and

  - Two smaller increases averaging around 3.8 percent cumulatively across all provinces were implemented over the period from January 2017 to April 2018, as Thailand reverted back to provincial-level minimum wage policy

- ➢ An average nominal increase in the minima of just 1.84 percent across all provinces also occurred in January 2020. However, the time periods after 2019Q4 were excluded from the analysis as we wanted to prevent 'contaminating' the results with the effects of the COVID-19 pandemic (see Figure 1, which presents the real daily minimum wage by province from 1986 to 2022 (in constant 2019 THB)

- ➢ The estimated parameters will be used to predict the labor market outcomes of the recent increases in the provincial minima in October 2022, which averaged around 5 percent across all provinces.

The impact of the minimum wage on employment outcomes

The empirical investigation employs a dynamic panel data model at provincial level of various employment outcomes on log minimum wage and covariates. The econometric model uses quarterly provincial-level panel data of 76 provinces from Q1-2002 to Q4-2019 to identify the effect of the minimum wage on an outcome variable y_{pt} in province p and time t. A distributed leads and lags specification (similar to Allegretto et al., 2011) is applied to detect any anticipation effect associated with the leading minimum wage terms, and to assess whether any delayed effects take place with the lagged terms:

$$y_{pt} = \sum_{k=-4}^{6} \beta_k MW_{pt+k} + \gamma X_{pt} + \phi_p + \phi_t + \varepsilon_{pt}$$

Similar to Allegretto et al. (2011), we estimate the cumulative response of the outcome variable of interest from a log point increase in the minimum wage by successively summing the coefficients β_{-4} to β_6 to show the time path of adjustment of the policy over a 10-quarter window.

Figure 1: Real daily minimum wage by province, 1986-2022 (constant 2019 THB)
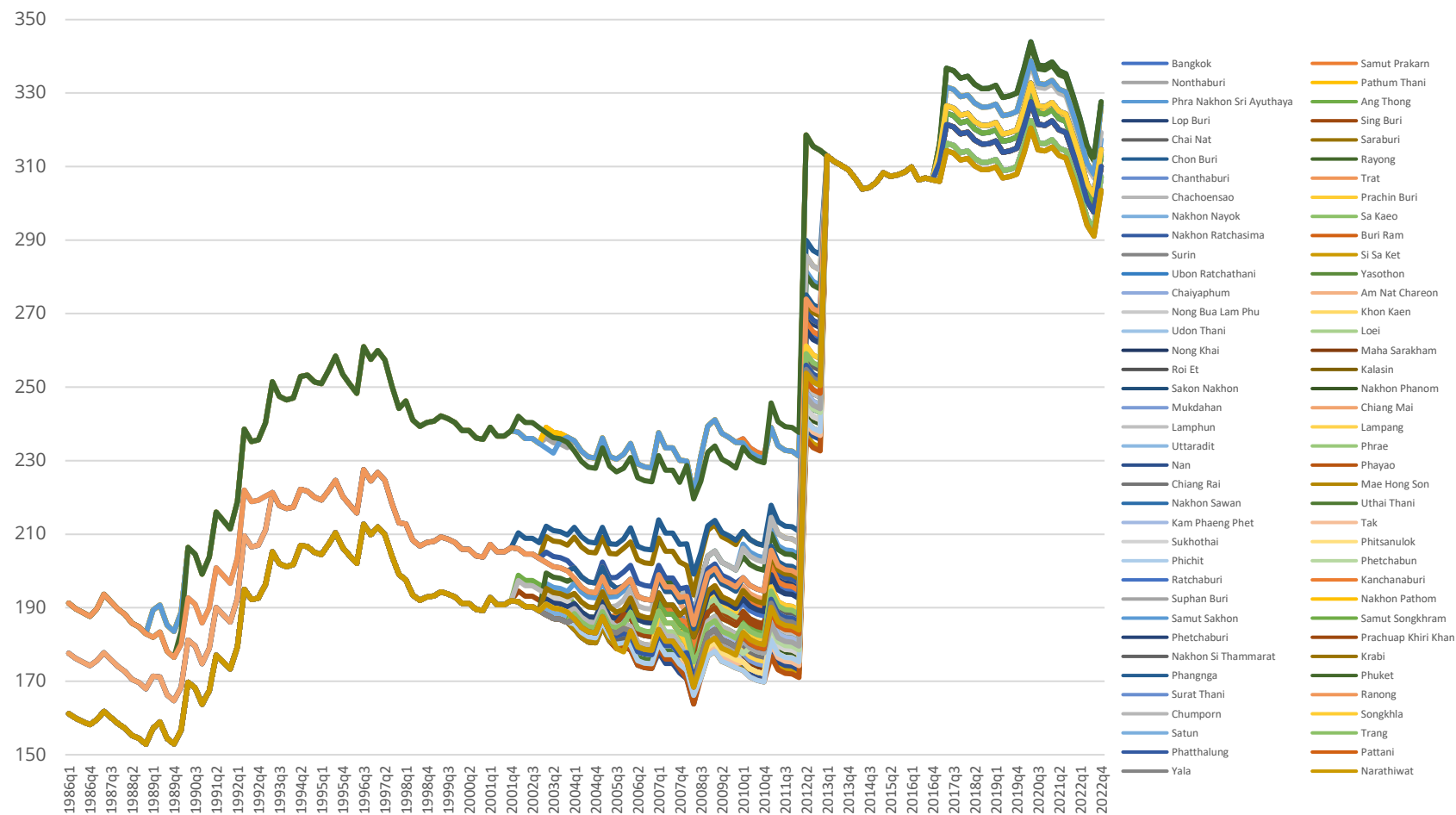
As outcome variable Y_{pt}, we investigate the employment-to-population ratios (overall, as well as by employment status, production sector, and firm size category[18]) and log weekly hours worked. We also investigate the differing effects by level of education and age group.[19] As minimum wage policy variable MW_{pt}, we use a direct measure of log real hourly minimum wage level in province p and time t. As provincial-level controls X_{pt}, we include a set of labor demand shifters representing provincial population characteristics (share of youth and elderly out of the total 15-65 population and share of population with greater than secondary education) and population group-specific controls (average years of schooling, female share, average years of potential work experience, and rural share). In order to control for unobserved provincial and time heterogeneity, we include in the reduced form equation province (ϕ_p) and time (ϕ_t) fixed effects, reporting robust standard errors clustered at the province level.

Figure 2 reports the cumulative response to the minimum wage of selected employment and weekly working hours elasticities. The left-hand column presents the elasticities for all working age population, while the right-hand column shows the results for the young (15-24) low-skilled subgroup. Panel I shows that the employment elasticity time path throughout much of the time horizon are small in magnitude for the working age population, while the response for the young low-skilled group is much greater. Six quarters after the minimum wage increase, the magnitudes of the cumulative employment elasticity for both population groups are negative and significant, with a contraction of -0.046 and -0.250 respectively.

Panel II again shows that private sector employment elasticities adjust downward by a greater magnitude for the low-skilled youth group. For the whole working age population, there is evidence of some anticipation (by a magnitude of -0.105 two quarters prior to the minimum wage change) with further downward adjustments by the sixth quarter (-0.226). The private sector cumulative employment elasticity of the low-skilled youth also shows signs of anticipation and even greater adjustments at the sixth quarter after the policy change (-0.636). These evidences suggest that an increase in the minimum wage produces much larger delayed adjustments for the low-skilled youth population.
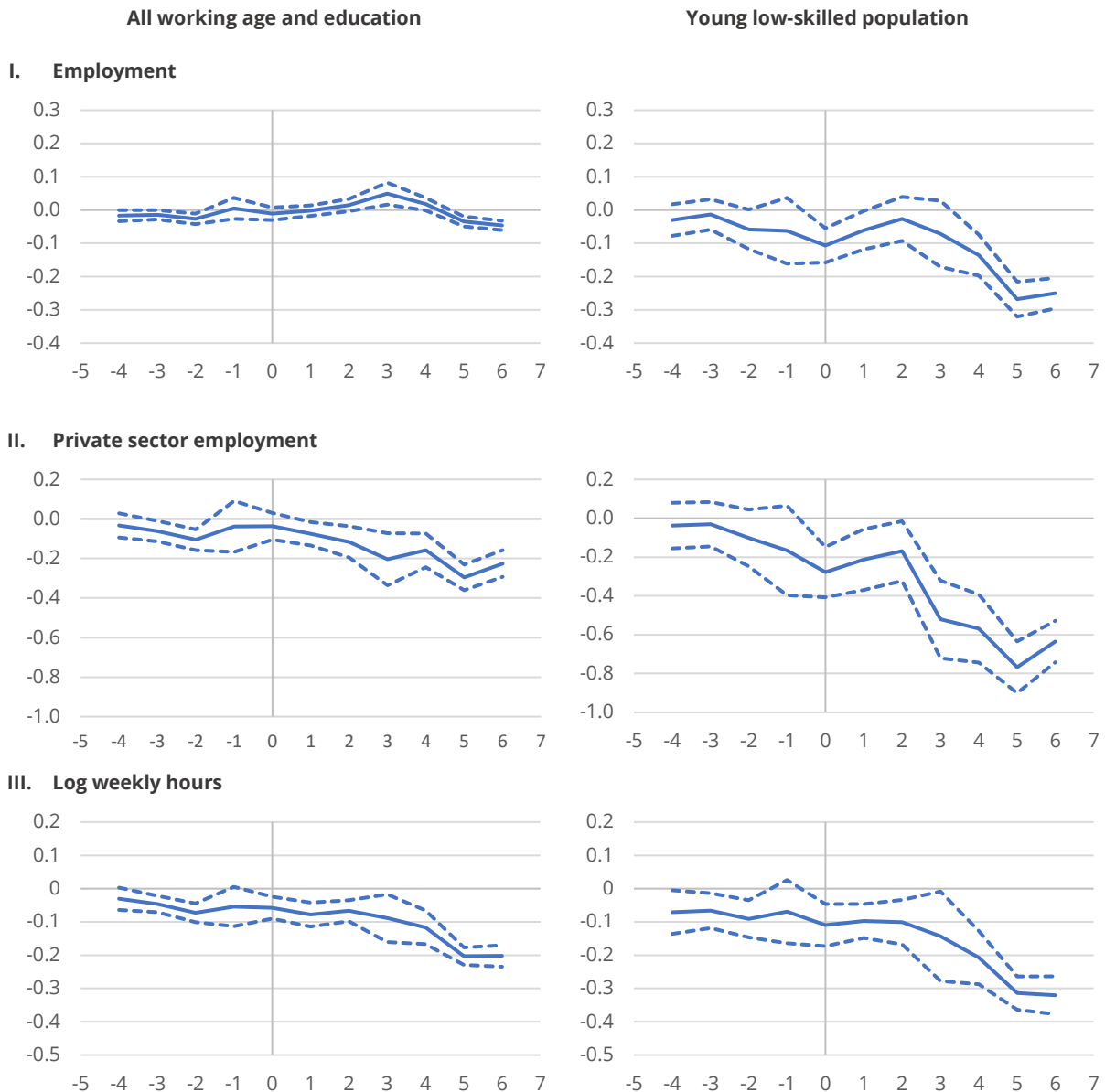
The time paths for weekly working hours elasticities are presented in Panel III. They show small negative but statistically significant reduction in weekly working hours for both population groups of interest prior to policy introduction. The effects persist at the time of introduction with elasticities of -0.058 and -0.110 respectively. The cumulative effects continue six quarters after the increase in the minimum wage, where the respective elasticities are -0.202 for the whole working-age population and -0.320 for the low-skilled hours. The findings clearly suggest that some substitution away from low-skilled youth employment is taking place.

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[18] Firm size is agglomerated in three groups: micro enterprises are defined as those with less than 10 employees, small-medium size firms employ between 10 and 99 people, while large firms employ 100 or more people.

[19] Age groups are divided in young (15-24), prime-age (25-54) and senior (55-65). A low-skilled worker is defined as having secondary or less education.

Figure 2: Real Cumulative response to changes in the minimum wage of employment and log weekly hours elasticities

All working age and education	Young low-skilled population

I.   Employment

II.   Private sector employment

III.   Log weekly hours

Notes: Quarterly LFS. Dynamic provincial panel model with distributed leads and lags in log real minimum wage. The specification covers a 10-quarter window (reported on x-axis, four quarters before the change in the minimum wage reported with negative sign and lags until six quarters after the change reported with positive sign). The solid line graphs represent the cumulative response of selected outcomes to a minimum wage increase. For employment, coefficients were divided by average employment-to-population ratios to represent employment elasticities. Each regression equation includes controls at province level for average years of schooling, female composition, average potential work experience, population shares of youth (less than 25 years of age), senior (more than 55 years of age), share of rural population and share of high skilled labour force (completed post-secondary education) , year and quarter dummies, and provincial fixed effects. The dotted lines represent the 95% confidence intervals, computed using robust standard errors clustered at the provincial level.
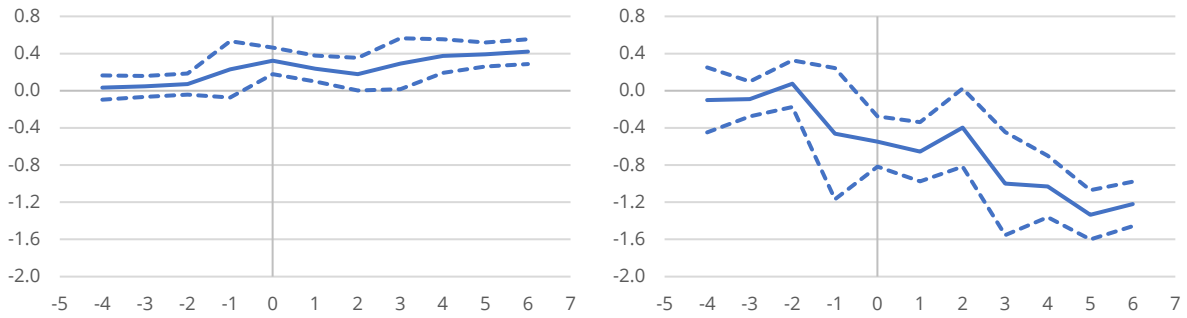
In Figure 3 we compare the low-skilled youth group to the high skilled group (working-age individuals with more than secondary education), finding that the private sector employment elasticity time path of high skilled workers have reacted positively to the increase in the minimum wage (Panel I), while the opposite is true for the low-skilled youth group. The estimated time paths for employment elasticity in large enterprises for the two groups are mirror image of each other (Panel IV), revealing an adjustment in employment composition in favor of the high skilled labor group in response to the minimum wage increase. Interestingly, Panels II and III in Figure 3 show that six quarters after the minimum wage increase, the magnitudes of the cumulative employment responses for micro and small & medium sized enterprises for both the high-skilled and the low-skilled youth groups are all negative and significant at conventional statistical levels.

Figure 3: Cumulative response to changes in the minimum wage of employment elasticity for high versus young low skilled populations.
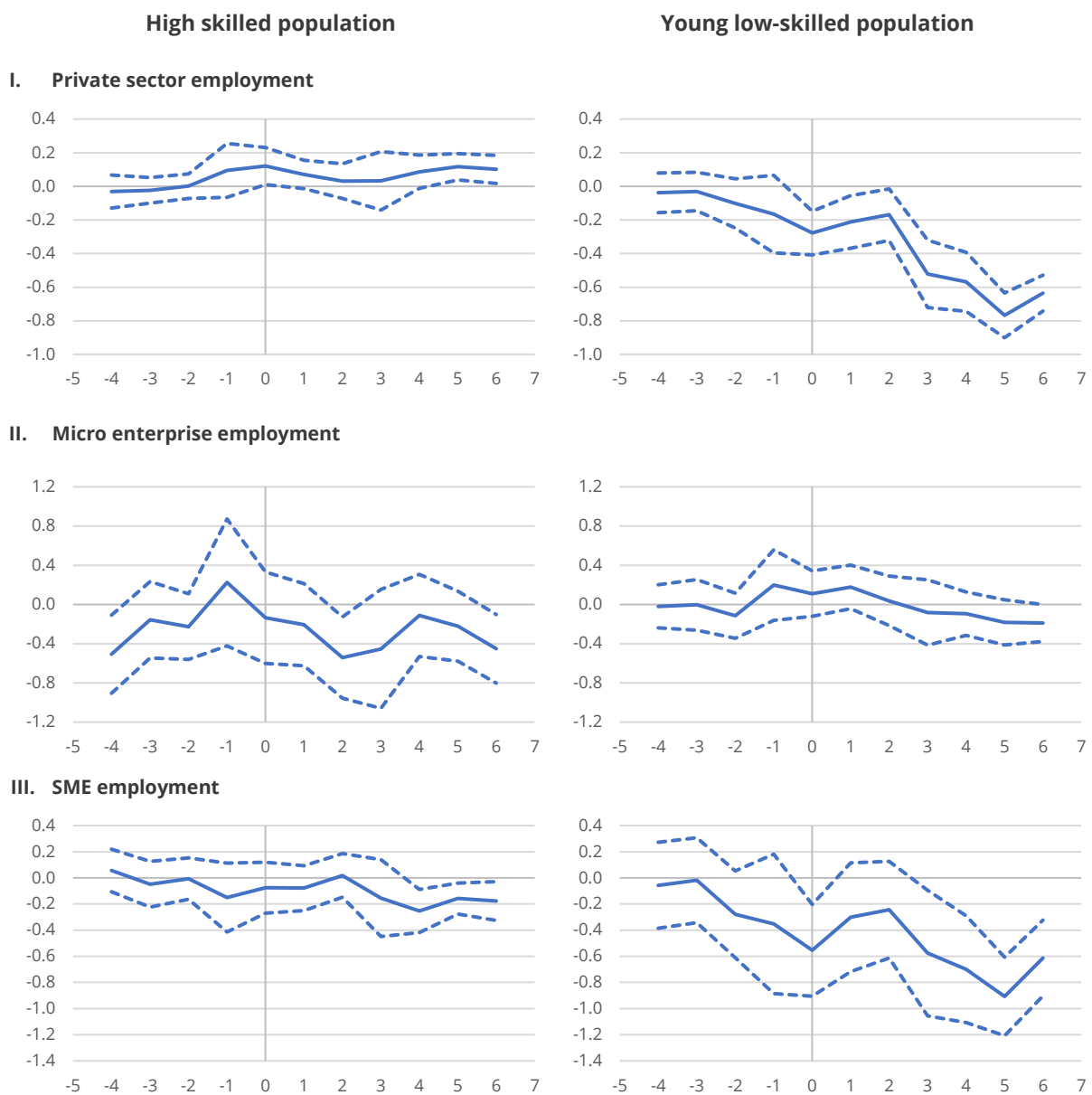
IV. Large firm employment

Notes: Quarterly LFS. Dynamic provincial panel model with distributed leads and lags in log real minimum wage. The specification covers a 10-quarter window (reported on x-axis, four quarters before the change in the minimum wage reported with negative sign and lags until six quarters after the change reported with positive sign). The solid line graphs represent the cumulative response of selected outcomes to a minimum wage increase. For employment, coefficients were divided by average employment-to-population ratios to represent employment elasticities. Each regression equation includes controls at province level for average years of schooling, female composition, average potential work experience, population shares of youth (less than 25 years of age), senior (more than 55 years of age), share of rural population and share of high skilled labour force (completed post-secondary education) , year and quarter dummies, and provincial fixed effects. The dotted lines represent the 95% confidence intervals, computed using robust standard errors clustered at the provincial level.

Armed with the cumulative employment elasticity estimates, we are able to anticipate the employment outcomes of the various demographic groups six quarters after the October 2022 increases in the provincial minima, which averaged around 5 percent in nominal terms (4.5 percent in real terms). The results of this exercise are presented below in Figure 4 for the 4 labor groups: All (top left), High-skilled (top right), 25-65 year-old Low-skilled (bottom left), and 15-24 year-old Low-skilled (bottom right).

Figure 4: Predicted cumulative effects in employment outcomes six quarters after the latest increase in the minimum wage (in October 2022) for different population groups (estimated impacts are shown in percentage points).

Secondary or lower - 25 to 65 years old

Secondary or lower - 15 to 24 years old
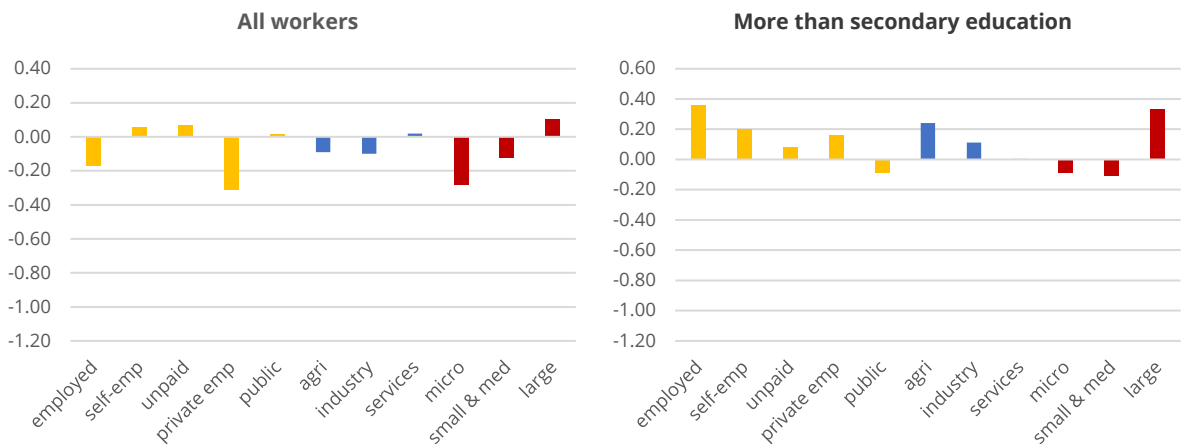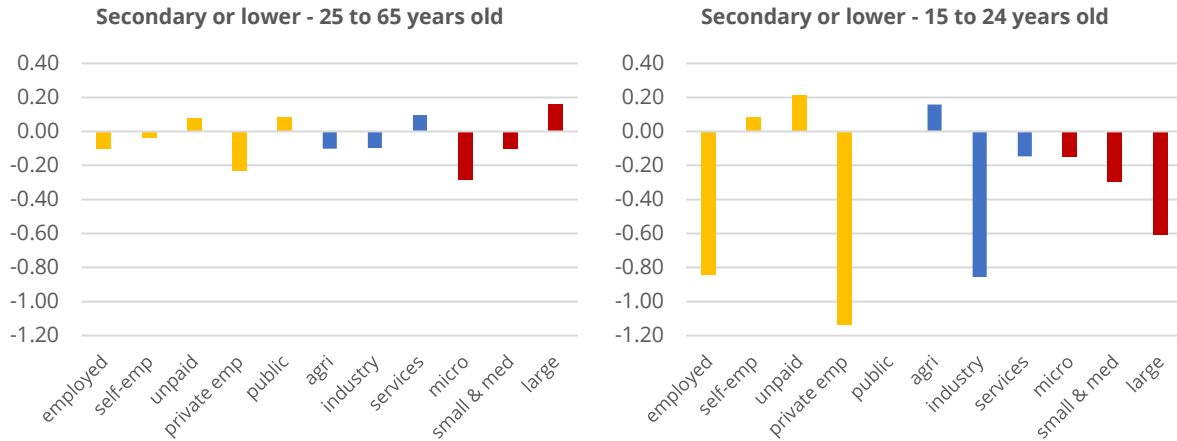
Consider first the bar chart for All workers (top left), we expect to see a small impact of just 0.171 percentage point decline in overall employment-to-population ratio six quarters after the increase in the minimum wage. Contraction in micro and small and medium sized private enterprises will likely be the key drivers behind this decline.

Closer investigation of the population subgroups reveals that the low-skilled youth group will be most adversely affected. The group's employment share is expected to contract by as much as 0.845 percentage point in response to the increase in the minimum wage. On the other hand, we expect to see the employment-to-population ratio for the high-skilled labor group rising by 0.358 percentage point as a result of the increase in the minimum wage. The expected patterns of labor mobility between sectors and employment statuses can easily be seen from the four bar charts shown in Figure 4.

The impact of the minimum wage on the national wage distribution

The impact of changes in the minimum wage policy on the wage distribution is evaluated using the Recentered Influence Function (RIF) Panel Data Regression method proposed by Lathapipat and Poggi (2016), which is in turn an extension of the RIF regression method proposed by Firpo, Fortin, and Lemieux (2009) to estimate the Unconditional Quantile Partial Effects (UQPE) of the explanatory variables of interest on the quantiles of an outcome variable (see Lathapipat and Poggi, 2016 for details of the RIF panel data regression framework). The estimated impacts (wage elasticities) of the hike in the provincial minima are presented in Figure 5.

We find positive spillover effects from the increase in the minimum wage on the wage distribution. Specifically, the policy appears to affect the wage distribution between the 15th and the 55th percentile (where the estimated elasticities are statistically significant at the 5 percent level). On average, an increase in the minimum wage of 1 percent is expected to increase average wage below the median by 0.31 percent. The effect appears to be much stronger between the 15th and 45th percentiles (averaging 0.35 percent). The effect starts to decline substantially around the median and does not bite beyond the 60th percentile.

Figure 5: The minimum wage effects on the national wage distribution.
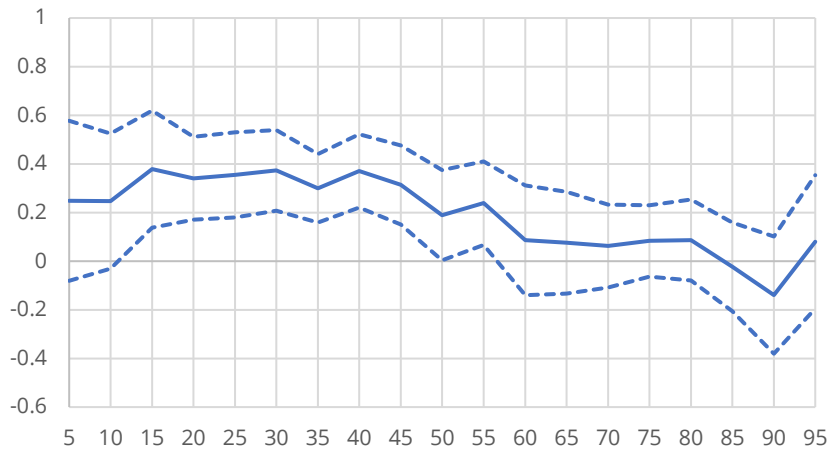
Note: Provincial panel RIF regressions of individuals' log real hourly wage (using pooled quarter 3 LFS 2002-2019). The figure displays estimated wage elasticity coefficients and confidence intervals at different percentiles along the entire wage distribution for real hourly minimum wage. Other control variables include years of schooling and a quadratic in years of potential experience interacted with year dummies, , marital status, gender, a set of industry indicators, provincial-level information (share of young population, share of elderly population, share of individuals in the labour force with secondary education or greater, in addition to time and geographic controls (rural binary, year, and province fixed effects). All monetary variables are deflated by national CPI (base 2019 Q3).

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