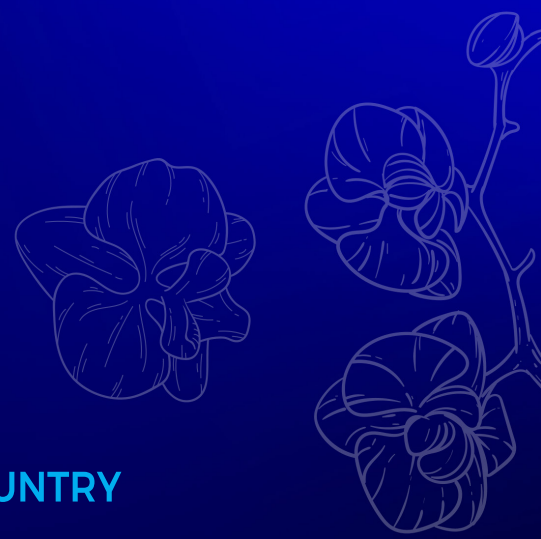




THAILAND SYSTEMATIC COUNTRY
DIAGNOSTIC UPDATE 2024

SHIFTING GEARS: TOWARD SUSTAINABLE GROWTH AND INCLUSIVE PROSPERITY



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Key messages

This report outlines updated reform priorities for Thailand's social and economic development. While the Thailand 2016 SCD remains broadly valid (see Annex 1), the current global and domestic environment brings new challenges and opportunities. Thailand has been facing a mounting series of shocks, with the COVID-19 pandemic being the most severe since the Asian Financial Crisis (AFC). Rising geopolitical tensions have contributed to volatility in commodity prices and fragmentation in global investment and the trade policy framework. Rapid technological advancements are transforming consumer behavior, production processes, and labor markets. An accelerated global response to climate change is driving the shift toward digital and green transformation.

Thailand has managed to navigate this complex global environment and uphold macroeconomic and financial stability, demonstrating responsible economic management, however, the country's growth faces setbacks. Costs incurred to adapt to the new normal have been compounded by critical domestic constraints, including an aging population, environmental stress, high wealth inequality, and persistent policy uncertainty. The economy has become trapped in a self-reinforcing cycle of low investment, slowing productivity, and sluggish growth. The deceleration of economic growth and the ongoing process of structural transformation have hindered progress in poverty reduction and slowed the pace of convergence toward achieving high-income status.

The SCD Update includes five High-Level Outcomes (HLOs) and a range of priorities to achieve these outcomes, including some 'very high' priorities which have been summarized in Table KM.1. This approach could help Thailand to revive growth and become a high-income country by 2037, while also fostering a more equitable society and building a sustainable, climate-resilient economy.

Table KM.1 Updated focus areas		
HLOs	Updated focus areas	2016 SCD priorities
1. Strong human capital	Ensure equal and lifetime access to good quality education for all and enhance social inclusion	Improve the overall education and skills of the workforce
2. A competitive and innovative economy	Foster markets for globally competitive low-carbon investment and promote innovation	Increase firm-level competitiveness through greater technology absorption and innovation
3. Low carbon urban development and connectivity	Area-based strategies to expedite the shift to sustainable urban development and enhanced connectivity	N.A.
4. Sustainable development and protection against natural disasters and climate change	Promote sustainable natural resource use practices to bolster resilience against natural and climate-related hazards	Reduce vulnerability to natural disasters and climate change by focusing on better land zoning and management to reduce flood/drought prone areas
5. Enabling institutions (cross-cutting solution)	Reform fiscal institutions and public finance	Strengthen the institutional capability of the public sector to implement reform priorities

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Acronyms

AFC	Asian Financial Crisis	REDD+	reducing emissions from deforestation and forest degradation
AI	Artificial intelligence	SCD	Systematic Country Diagnostic
BMA	Bangkok Metropolitan Area	SDG	Sustainable Development Goals
DPAI	Development Potential Analysis Index	SMEs	small and medium-sized enterprises
EAP	East Asia and Pacific	SOE	state-owned enterprise
EPI	Environmental Performance Index	SWC	State Welfare Card
ESG	Environmental, social, and governance	TFP	Total Factor Productivity
FDI	foreign direct investment	UMIC	upper-middle-income country
GHG	Greenhouse Gas	VC	venture capital
HLOs	High-Level Outcomes		
ICT	information and communication technology		
IFC	International Finance Corporation		
LGBTQ+	lesbian, gay, bisexual, transgender, and questioning		
LAOs	local administrative organizations		
LULUCF	land use, land-use change and forestry		
MIGA	Multilateral Investment Guarantee Agency		
MTFF	medium-term economic and fiscal framework		
NCDs	non-communicable diseases		
NDCs	Nationally Determined Contributions		
NESDC	Office of the National Economic and Social Development Council		
OAA	old age allowance		
OECD	Organisation for Economic Co-operation and Development		
ONESQA	Office for National Education Standards and Quality Assessment		
OTCC	Office of Trade Competition Commission		
PISA	Programme for International Student Assessment		
PM2.5	Pollutant Particulate Matter 2.5		
PPP	purchasing power parity		
PPPs	public-private partnerships		



EXECUTIVE SUMMARY

Executive summary

Context and emerging trends

1. Since the publication of the previous systematic country diagnostic (SCD) in 2016 (see Annex 1), Thailand has encountered formidable challenges. First, the country has been impacted by significant global turbulence leading to major changes in the macroeconomic environment and increased policy uncertainty (World Bank 2023a). In the last four years, the world has swung from the deepest global recession to the sharpest rebound since the Second World War, followed by an abrupt slowdown; from the steepest surge in oil prices since the 1970s to a period of partial relief, followed by sustained volatility; from a decade of ultra-low interest rates to the fastest policy rate tightening in advanced economies since the 1970s, in response to persistent inflation.

2. Second, the global trade and production landscape has undergone significant changes. It was triggered by rising trade tensions between the United States and China and propelled by the impact of the COVID-19 pandemic on value chains, Russia's invasion of Ukraine, and the escalation of the conflict in the Middle East. Consequently, the world has shifted from being highly integrated to increasingly polarized, with fragmented global investments, technology, and trade policy landscapes, as well as persistent geopolitical tensions. The post-pandemic rise of digital and disruptive technologies—such as Artificial Intelligence (AI), the Internet of Things, and 3D printing—could challenge Thailand's traditional export model which is based on low-cost labor and limited integration. It could also pose a challenge to Thailand's competitiveness amid a global shift in demand for low-carbon goods and the promotion of services. While the proliferation of digital innovations and transformative technologies offers growth opportunities, especially for boosting high-value manufacturing and services, Thailand faces hurdles in fully capitalizing on them due to skills gaps, regulatory complexities, carbon-heavy infrastructure financing, and financial constraints for implementing green and digital growth models (World Bank 2023b). Indeed, while Thailand has been a historical overachiever in export markets, it has been losing its edge over the past decade, with increasingly sizable untapped export potentials.

3. Third, the progress in poverty reduction has faced a notable slowdown. Declining economic growth, worsening terms of trade, and stagnant structural transformation have moved poverty reduction away from predominantly relying on labor income to a greater dependence on social assistance and in-kind transfers. This trend was exacerbated by COVID-19, which severely affected the tourism sector—a source of revenue for many low- and middle-income households. Notable initiatives, like the State Welfare Card program and COVID-19 relief measures, have been introduced, but their impact has not fully offset the effects of decreasing labor income. The challenge of poverty reduction has been aggravated by the rapidly aging population and intensified economic, health, and climatic shocks. Low social insurance coverage has resulted in a large share of elderly individuals becoming reliant on insufficient social assistance transfers upon retirement, while the social protection system lacks the mechanisms to help poor and vulnerable households cope with, and adapt to, shocks. Moreover, elevated levels of income and wealth inequality, as well as persistent spatial disparities, are impeding inclusive growth by sustaining an imbalanced allocation of resources and opportunities across society. The existing level of social exclusion (especially among older persons, persons with disabilities, women, LGBTQ+, irregular migrants, ethnic minorities, and populations affected by conflict) presents a major last mile challenge in eliminating poverty (see Annex 2).

4. Fourth, Thailand has been experiencing significant transformations in its institutional and political landscape. A new constitution, adopted in 2017, introduced changes to Thailand's political system, including to the role of the electoral system, and resulted in a shift in the balance of power between the executive, legislative, and judicial branches of government. In 2019, Thailand held its first elections since the 2014 coup. The second general elections were held in

May 2023, with the new government being formed at the end of August following months of political and legal uncertainty. Polarization and divisions with regards to the pace and direction of reforms are likely to remain significant relating to power structure and distribution of resources.

5. Fifth, the world came together for the Paris Agreement on climate change, with all countries committing to reduce greenhouse gas (GHG) emissions and work together to support adaptation, mobilize climate finance, and enhance resilience to climate-related shocks. This resulted in, for the first time, all 194 parties to the convention taking on Nationally Determined Contributions (NDCs) with specified GHG emission reduction targets. While Thailand pledged to achieve carbon neutrality by 2050, the country has taken limited action to reduce its greenhouse gas (GHG) emissions, which remained stagnant or increased prior to the pandemic. Thailand has recently begun to implement policies on energy efficiency to meet its emission reduction targets and is contemplating introducing carbon pricing through carbon tax or an emission trading system, building on the current voluntary market. As a crucial measure to address the climate change crisis, the Thai government has recently established the Department of Climate Change and Environment within the Ministry of Natural Resources and Environment. This newly established central government agency is dedicated to spearheading Thailand's initiatives in combating climate change. Currently, a Climate Change Act is in preparation, outlining the nation's comprehensive action plan for both climate change mitigation and adaptation, with a particular focus on emissions reductions.

6. Sixth, Thailand is vulnerable to the effects of climate change because of its long coastlines, fragile agriculture system, and susceptibility to extreme weather events. In the 2021 ND-GAIN Index, Thailand ranks 71 out of 181 countries, indicating its vulnerability and readiness to face global challenges. A higher rank signals lower vulnerability and better preparation for adaptation. The profound implications of climate vulnerabilities on Thailand's growth and development are evident. However, uncertainties persist regarding future climate impacts. An assessment, considering Thailand's susceptibility to climate shocks, suggests potential costs ranging from 5 to 6 percent of GDP annually, escalating to 20 percent in the event of extreme flooding events by mid-century (World Bank 2024). Overcoming challenges such as climate change, economic productivity, food and water security, and health is within Thailand's reach through more efficient use of its natural resources. Crucially, this can be accomplished without compromising the environment or the well-being of its citizens. Given the competing demands and limited resources faced by regions within Thailand, addressing inefficiencies stands out as one of the most cost-effective and economically attractive approaches to achieving sustainability objectives. Immediate actions taken within Thailand can contribute not only to an enhanced quality of life for its citizens but also play a crucial role in preserving a livable environment for future generations within the country.

7. These trends will continue to impact Thailand's economic and social development, along with its growth outlook. Thailand's economic recovery from the pandemic-induced shock is still underway. Growth resumed in 2021 and accelerated in 2022 and 2023, but recovery is lagging that of Thailand's ASEAN peers.¹ Output remains significantly below its pre-pandemic trend. This is partly due to sluggish tourism recovery amid unfavorable terms of trade, and convergence with advanced economies which has slowed substantially. The estimated potential growth for 2023-30 averages around 2.7 percent annually—0.5 percentage points lower when compared to the previous decade. Meanwhile, the country is facing the challenge of addressing the rising spending needs associated with an aging population, environmental degradation, climate change, and the need to rebuild the policy buffers to prepare for future shocks. While policy stimulus is constrained within Thailand's context, substantial potential lies in implementing comprehensive structural reforms and mobilizing private financing for low carbon growth.

¹ Structural peers are selected based on similar levels of income per capita and similar economic structure (limited dependence on natural resources, high degree of exports dependence, and similar population size). On this basis, the selected structural peers are Bulgaria (US\$8,294 per capita), Malaysia (US\$10,827 per capita), Mexico (US\$9,255 per capita), and Türkiye (US\$ 13,251 per capita). Higher income aspirational peers include South Korea and Poland. Other OECD countries are also included as aspirational peers in some cases; regional peers include Indonesia, Malaysia, Philippines, and Vietnam.

Major challenges and solutions for inclusive and sustainable growth

8. Against this backdrop, the SCD Update prioritizes five High-Level Outcomes (HLOs): Strong human capital, a competitive and innovative economy, low carbon urban development and connectivity, sustainable development and protection against natural disasters and climate change, and enabling institutions (cross-cutting solution) (Table ES.1). The HLOs synergize human capital and amplify economic revitalization through innovation, productivity, and entrepreneurship. Sustainable area-based development could unlock growth potential by attracting investment. It also aligns with environmental goals, while fortifying human capital by ensuring stability. These priorities combine for balanced and inclusive development, mutually reinforcing effectiveness. Achievement of the HLOs in five to ten years will elevate well-being, particularly for the most vulnerable.

9. HLO 1 Strong human capital: However, it shows poor learning outcomes compared to peers, resulting from inefficient resource allocation and inadequacy of the overall spending envelope. The country has a learning gap of four years, higher than its structural peers and twice as large as its aspirational peers. Unequal access to opportunities across groups and regions leads to persistent inequality and exclusion of vulnerable populations, preventing the economy from realizing the full potential of its human capital. The aging population adds challenges, including a shrinking labor force, an increasing number of migrant workers, and rising healthcare expenses. Climate change poses a further significant threat to human capital in Thailand, impacting health, labor productivity, and education, thereby jeopardizing the overall well-being and potential of the population. To transition into an innovation-driven inclusive economy, Thailand must improve learning outcomes and close skills gaps for all by investing more in early childhood education, increasing education spending, optimizing resource allocation, and aligning education with labor market needs. A holistic migration policy combined with reforms to increase female and elderly labor force participation, parametric pension reforms, and targeted social assistance will help reduce the impacts of aging on the labor market and improve fiscal sustainability. Targeted social interventions tailored to specific needs of groups at risk of exclusion and greater participation of these groups in the policy planning process are essential for promoting inclusion and reaching the last mile of poverty reduction. Adaptive social protection will help build the resilience of households to prepare for, cope with, and adapt to shocks, especially covariate shocks such as natural disasters, economic crises, and pandemics, which are likely to become more frequent and severe. The country should invest in resilient infrastructure, sustainable practices, and education to safeguard its people from climate impacts.

10. HLO 2 A competitive and innovative economy: Thailand's productivity growth faces challenges from weak competition and restrictive trade policies in the services sector, hindering business innovation and transformation in global value chains. Restrictions to FDI have remained relatively unchanged over the past two decades, while regional competitors have made significant progress.² Dominance by a few large firms and state-owned enterprises (SOEs) further limits competition and resource allocation efficiency. Low entry rates for small and medium-sized enterprises (SMEs) are hindering economic progress. This is being exacerbated by high household debt which is impacting financial stability. To foster an innovation-driven economy, Thailand must enhance tech competitiveness, strengthen competition regulations, attract skilled professionals, and empower SMEs through increased access to finance. The country should also manage household debt with financial education and consumer protection, and expand sustainable finance, as well as environmental, social, and governance (ESG) investments. Adopting these strategies will drive economic transformation, sustainable growth, and green opportunities. To foster a competitive and innovative economy, Thailand should also strategically transition towards a low-carbon framework, emphasizing sustainable practices, renewable energy, and eco-friendly innovation.

² The OECD FDI restrictiveness indicator shows that Thailand's policy stance towards FDI has not substantially changed between 1997 and 2020—particularly in services, while Vietnam, the Republic of Korea, India, Malaysia, or China have gradually opened up their economies to FDI.

11. HLO 3 Low carbon urban development and connectivity: Bangkok, as a hub reaping benefits from agglomeration economies, stands as a crucial economic driver and investment center for Thailand. However, this growth has resulted in uneven development, with secondary cities facing infrastructure challenges due to financial constraints and centralized planning. Thailand needs a dual focus, enhancing Bangkok's competitiveness in East Asia while harnessing the unique advantages of secondary cities. The 13th National Economic and Social Development Plan (2023-27) seeks to promote balanced regional development, fiscal decentralization, and sustainable growth in secondary cities. It is imperative that future development prevents urban sprawl and congestion in emerging areas, as well as considers the impact of climate change. Improving transport infrastructure, including land and sea links and cross-border agreements, is crucial for enhancing Thailand's domestic and regional connectivity. This approach addresses challenges related to imbalanced urban development and climate risks. Prioritizing resilient, low-carbon development and last-mile connectivity is essential for promoting equitable growth. In addition to physical infrastructure, digital development plays a pivotal role in modernizing service delivery and ensuring inclusive progress. Infrastructure resilience must extend beyond economic factors to encompass broader risks and impacts, particularly for vulnerable groups.

12. HLO 4 Sustainable development and protection against natural disasters and climate change: In the past two decades, Thailand has faced significant impacts from climate-induced extreme weather events, ranking among the most affected globally. This vulnerability is due to factors such as extensive coastlines, a vulnerable agriculture system, susceptibility to tropical storms, floods, droughts, poorly planned urban expansion, rising temperatures, changing rainfall patterns, and sea-level rise. Beyond immediate concerns, there are substantial long-term macroeconomic implications and social costs, necessitating Thailand to prioritize measures for green growth. Addressing these challenges involves integrating resilience into infrastructure investments, promoting adaptation in key sectors, and protecting vulnerable populations. Thailand's commitment to green growth must encompass strategic measures for both mitigating and adapting to climate change, ensuring a more resilient and sustainable future.

13. HLO 5 Enabling institutions (cross-cutting solution): Thailand has managed to uphold macroeconomic and financial stability, despite a challenging global environment, demonstrating responsible economic management. Thanks to the fiscal space the country built up prior to the pandemic, it was able to implement a substantial fiscal response to COVID-19, without undermining its macro-financial stability. As economic recovery takes hold, the country needs to normalize its fiscal and monetary policies and rebuild fiscal buffers amid heightened global uncertainty, while pursuing structural reforms. Thailand is also facing the challenge of addressing the rising spending needs associated with an aging population, environmental degradation, climate change, and in the areas of social assistance and education. Meeting these multiple objectives would require a gradual 'growth-friendly' fiscal consolidation supported by enhanced revenue mobilization and improved spending efficiency to crowd in private investments, while keeping public debt on a sustainable downward path. Considering significant fiscal challenges, the government might need to reevaluate its fiscal rules framework, introduce reforms to boost revenue collection, address bottlenecks holding back public investment, and align core economic functions to overcome institutional fragmentation, which poses obstacles to the implementation of the National Strategy.³ Subsidy reform is essential for economic efficiency, fiscal responsibility, and environmental sustainability. Thailand also needs a well-functioning system of central-local government relations, improved targeting of local needs, capacity building for local administrative organizations (LAOs), and enhanced transparency to collectively address persistent regional disparities in access to public services. Lastly, the promotion of accountability and transparency in public services and SOEs is of paramount importance. Measures to enhance SOE board independence, promote transparency, and strengthen financial sustainability would enhance institutional performance and would support a more accommodating environment for foreign direct investment (FDI) inflows and improvements in competitiveness.

³ More specifically, while the public debt rule serves as a critical anchor for fiscal policy, the presence of a complex fiscal rules framework.

Table ES.1 High-Level Outcomes (HLOs) and priorities

Binding constraints to strong, inclusive, and sustainable growth			
Inadequate and unequal human capital accumulation amid aging and high inequality	Lack of private sector dynamism and lagging structural change	Untapped economic potential and gaps in connectivity amid persistent spatial inequality	Degraded natural environment and more frequent and severe climate-induced natural disasters
High Level Outcomes			
HLO 1 Strong human capital	HLO 2 A competitive and innovative economy	HLO 3 Low carbon urban development and connectivity	HLO 4 Sustainable development and protection against natural disasters and climate change
Priorities (Expected impact on poor, B40, and environment is shown in parentheses)			
1.1 Ensure equal and lifetime access to good quality education for all (Very High)	2.1 Promote competition, innovation, and technology adoption (Very High)	3.1 Apply an area-based approach to development to unlock investment and growth potential (Very High)	4.1 Promote environmental sustainability
1.2 Enhance social inclusion and safeguards for vulnerable populations	2.2 Mobilize sustainable finance	3.2 Close infrastructure gaps to improve domestic and international connectivity	4.2 Increase resilience to natural shocks and the effects of climate change (Very High)
1.3 Strengthen the social protection, labor market, and health systems to address the impacts of the aging population and intensified shocks		3.3 Unlock the potential of digital data infrastructure	4.3 Support a sustainable energy transition
HLO 5 Enabling institutions (cross-cutting solution)			
5.1. Reform fiscal institutions and public finance (Very High)			
5.2. Move towards decentralization and more equitable distribution of resources			
5.3. Engage in open and participatory processes to build trust and accountability			
5.4. Improve the governance of state-owned enterprises			



01.

**COUNTRY
CONTEXT**

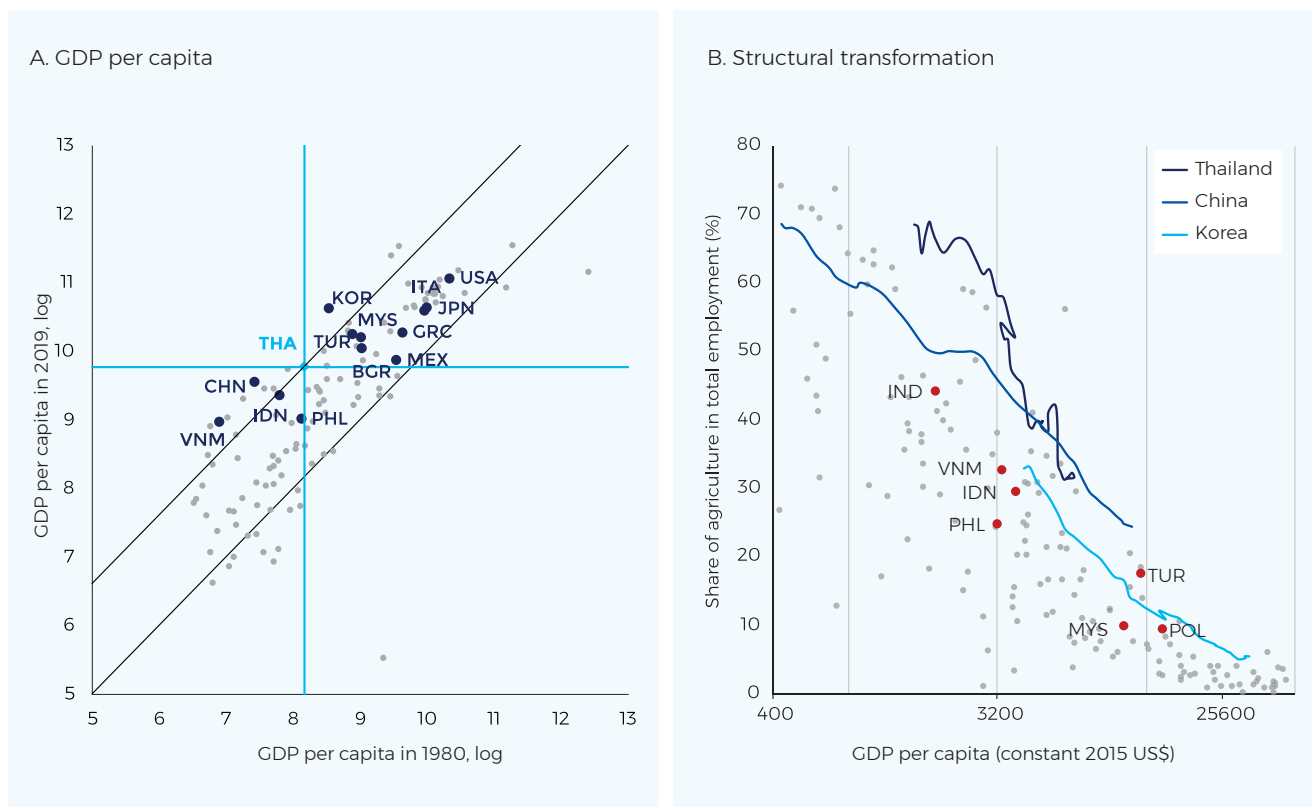
Country context

1.1 A big picture view: Impressive growth and poverty reduction

14. Several decades of rapid economic growth and development have helped Thailand transform from an agriculture-based country to a modern, industrialized, service-oriented, and export-led economy. Taking a big picture view of the country's achievements between 1980 and 2019, Thailand has witnessed a significant improvement in living standards for its citizens, accompanied by a substantial increase in the per capita income (Figure 1.A). Between 1980 and 2019, for example, the income disparity between Thailand and the United States narrowed, with the income gap shrinking threefold. It is also notable that during this period, only a handful of countries, notably China and Vietnam, managed to effectively reduce their income gaps on par with Thailand.

15. During this period, poverty experienced a steep decline, supported by rapid structural transformation. Within four decades, poverty declined almost six-fold, from 77.2 percent in 1981 to 13.5 percent in 2019. The movement of labor from low-productivity jobs in the agricultural sector, to higher-productivity jobs in the manufacturing and service sectors, helped improve household income (Figure 1.B). The poverty reduction path diverged from that of upper-middle-income countries in the early 1990s and poverty has fallen considerably since then, narrowing the poverty gap with high-income countries.

Figure 1. GDP per capita and employment



Source: Penn World Table, version 10; World Development Indicator Database, World Bank's Poverty, and Inequality Platform; Our World in Data.

A. Figure shows GDP per capita (constant price PPP) in 1980 and in 2019. Gray lines show 45-degree lines crossing the origin and Thailand. The latter line indicates constant income gap with Thailand. The sample includes countries with a population of more than two million.

B. 1980–2019 for Thailand, China, and Korea. 2020 for other countries. ILO Modelled Estimates.

1.2 Sequential slowdown: Impact of intensified shocks and reform stagnation

16. The pace of growth has entered a pronounced and enduring downturn. The AFC marked a critical turning point for Thailand's economy, inflicting significant economic damage, fostering a resistant attitude towards change, and leading to a state of stagnation regarding reforms (World Bank 2023b). The post-AFC period has been marked by an increased occurrence of adverse economic shocks that have had lasting impacts on its potential growth (World Bank 2023c).

17. The primary transmission channel for these shocks has been the slowdown of investments, contributing approximately two-thirds to the average GDP decline between 1980-96 and 2000-19. The deceleration in investment and growth in Thailand can be attributed to various adverse shocks, beginning with the Asian Financial Crisis (AFC) and followed by subsequent crises such as the Global Financial Crisis (2008-09), the 2011 floods, and the 2013-14 political crisis. These shocks have had a lasting impact on the country's potential growth, fostering a conservative macroeconomic stance and dampening investor confidence. Investment growth averaged only 3 percent between 1999 and 2019, with both public and private investment slowing. The COVID-19 pandemic further impacted investment in 2020 (see Annex 2).

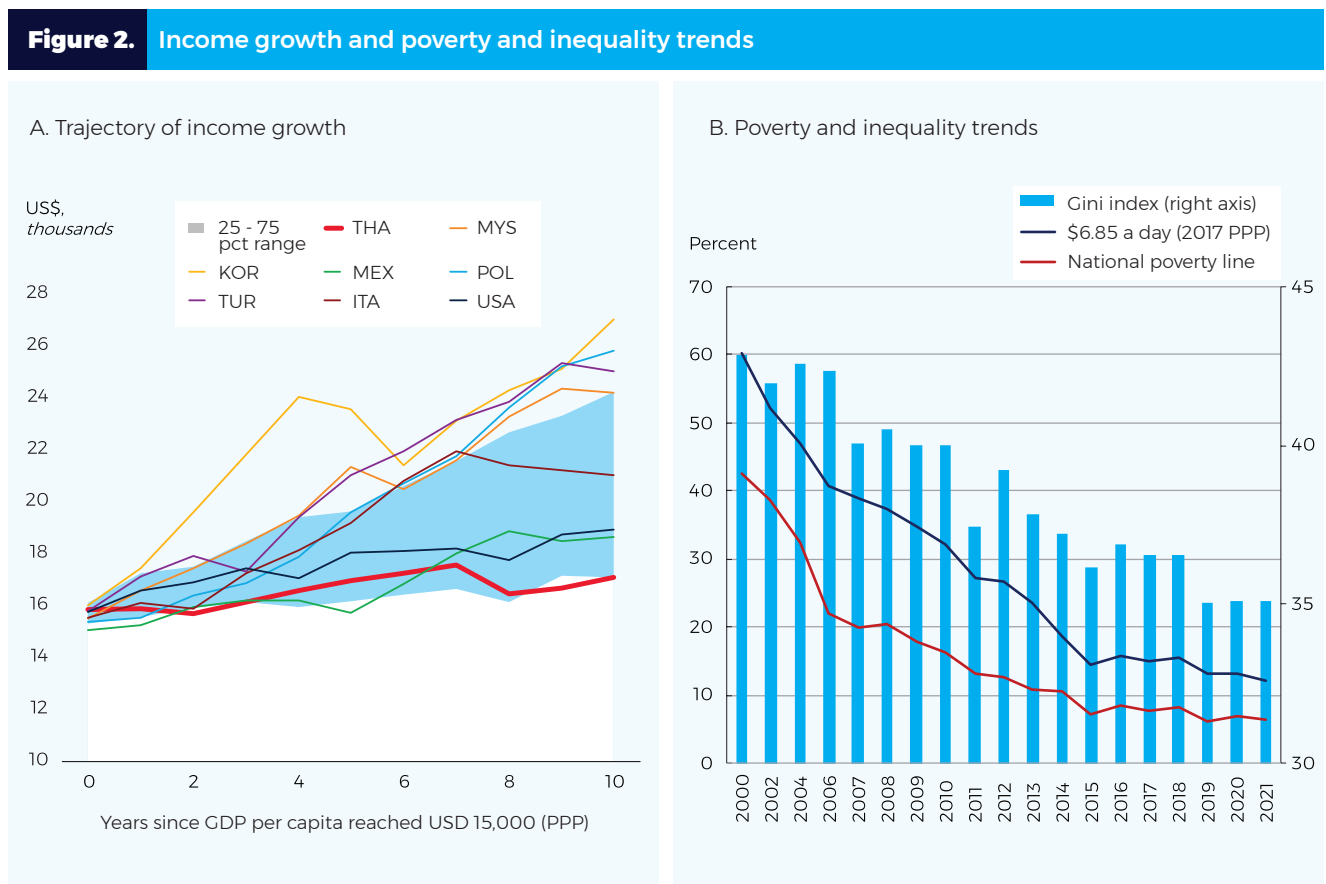
18. The country's unique political landscape may have moderated the response to these shocks. The frequent political transitions and changes in government add an extra layer of uncertainty, and likely contributed to a more conservative approach among policymakers and civil servants towards implementing structural reforms. This cautious stance could stem from the need to navigate the complex and shifting political landscape, prioritizing stability and aiming to minimize potential disruptions. While this reflects a measured response to the evolving political context, it could have contributed to prioritization of policies away from investing in difficult reforms with longer-term payoffs.

19. Productivity growth has stalled due to a lack of innovation and limited competition. Productivity growth has fallen to 1.3 percent over 2010-16 from 3.6 percent over 1999-2007, influenced by slower investment, aging demographics, and increased regulations. At the firm level, the slowdown has been linked to reduced dynamism associated with a lack of creative destruction and limited access to innovative ideas. Firms that are more integrated with the global economy tend to be more productive, while limited competition in domestically oriented industries slows creative destruction and inhibits productivity growth. Inefficiencies in the regulatory framework, restrictions on accessing service sectors, the presence of price control, and the dominant role of SOEs, are deterring competition and limiting productivity gain.

20. The average contribution of export growth to Thailand's GDP growth between 2000 and 2019 was initially solid (around 5 percent on average during 2000-08), but subsequently slowed (below 3 percent on average during 2011-19), due to the slowdown of global trade and maturing of Global Value Chains. This shows in 'missing exports': the difference between what Thailand is expected to export given its characteristics (size, frictions to trade, factor endowments) and what it actually exports. During the first decade of the twentieth century, Thailand exported about 30 percentage points of GDP above what would be expected. This over-performance started fading, post-GFC. Currently, Thailand's exports are below what would be expected by about 5-10 percentage points of GDP.⁴

⁴ Export potentials are estimated based on a gravity model of trade. Missing exports are the difference between the prediction of the gravity (based on Thailand's characteristics) and actual exports.

21. Because of a growth slowdown, Thailand’s income growth trajectory has fallen behind that of its structural and aspirational peers since reaching a per capita income level of US\$15,000 in power purchasing parity (PPP) terms in 2012 (Figure 2.A).



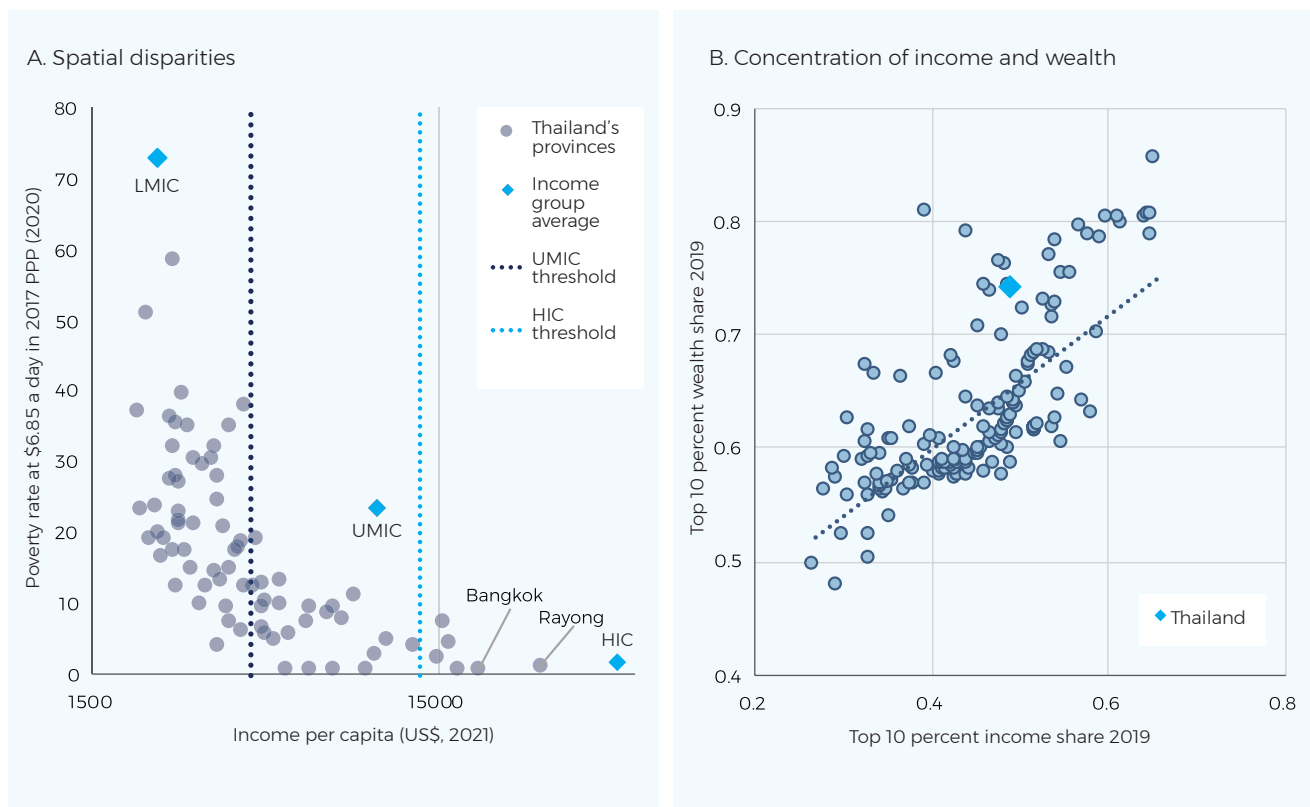
Source: Haver Analytics; Penn World Table, version 10; International Monetary Fund; WDI; Thailand’s Labor Force Survey and Household Socio-Economic Survey. World Bank staff calculations.
 A. Y-axis shows GDP per capita (constant PPP basis), and X-axis shows years since the country reached US\$15,000 (Thailand is in 2012). The latest datapoint is 2022.

22. Up until 2015, Thailand had made remarkable strides in poverty reduction. The national poverty rate dropped from 42.5 percent in 2000 to 7.2 percent in 2015 (Figure 2.B). Solid growth and rising agricultural commodity prices were the key engines of Thailand’s rapid poverty reduction during 2000-08 (World Bank 2016b) (see Annex 3). The pace of poverty reduction was subsequently sustained despite a growth slowdown during 2009-15. This was underpinned by improved wage and farm incomes. Agricultural commodity prices continued to rise until 2011, while a policy to double the minimum wage in 2011 triggered labor movement out of agriculture and raised household labor income. However, the achievement masks underlying weaknesses of the engine of Thailand’s poverty reduction, characterized by the lack of agricultural productivity improvement and productivity-driven structural transformation, amid rising household debt. Household debt accelerated in 2008 and reached 86 percent of GDP in 2015, fueled by consumption stimulus policies.

23. Progress in poverty reduction has stalled since 2015. This occurred concurrently with the slowdown in the transition of labor out of agriculture and falling labor income growth. Wage incomes stagnated, and farm income declined after 2016 due to worsening terms of trade and more frequent and severe disasters and climatic events. The rapidly aging population has also negatively affected household labor income. The main driver of poverty reduction has shifted from increased labor and farm incomes to greater reliance on social assistance and in-kind.⁵ Nevertheless, these measures did not fully compensate for the decline in labor incomes, and the official poverty rate only marginally decreased from 7.2 percent to 6.3 percent between 2015 and 2019.

24. The pace of inequality reduction has also decelerated, and persistent spatial disparities and wealth inequality have posed significant obstacles to achieving inclusive growth. The significant reduction in inequality from 2000 to 2015 was partly driven by the narrowing wage gap, as less-educated workers shifted from low-skilled to middle-skilled occupations and saw relatively rapid wage increases (see Annex 3). However, these trends have started to reverse in recent years. Between 2015 and 2019, the consumption Gini index slightly decreased from 36.2 to 35.0, and the income Gini index dropped from 44.5 to 43.1. While six provinces, including Bangkok and Rayong, obtained an income level greater than the HIC threshold, more than half of the provinces still fall behind the upper-middle-income country (UMIC) threshold (Figure 3.A). Wealth is highly concentrated, with 10 percent of the population holding 75 percent of wealth, placing Thailand among the countries with the greatest inequality in the global ranking (Figure 3.B). Persistent spatial disparities and high inequality have curtailed economic opportunities for disadvantaged regions and socio-economic groups, obstructing the path to upward social and economic mobility.

Figure 3. Inequality



Source: NESDC and World Development Indicator Database; World Inequality Database; Thailand's Household Socio-Economic Survey. A. GDP per capita for Thailand's provinces. GNI per capita for income group averages and thresholds. Poverty rate based on US\$6.85 a day in 2017 PPP. The UMIC and HIC income thresholds as of July 2022 are US\$ 4,256 and US\$ 13,206, respectively.

⁵ The State Welfare Card (SWC) program—a large-scale unconditional cash transfer program—was launched in 2016, and in 2019 provided cash to 14.6 million citizens (World Bank 2021b).

25. Thailand's economic growth has come at a high cost to the environment. Thailand's economic development has been marked by heightened resource consumption, coupled with widespread industrialization, urbanization, increased waste generation, and significant land use changes. Unfortunately, the pace of economic growth has outstripped the development and enforcement of robust environmental regulations and standards, resulting in a lack of oversight and compliance with environmental protections. Fragmented and inadequately enforced environmental regulations have frequently allowed both companies and individuals to operate with little regard for the environment. This lax oversight has contributed to heightened levels of air and water pollution, increased waste generation, deforestation, water degradation, and soil erosion. Over the period from 2001 to 2022, Thailand experienced the loss of 2.41 million hectares of tree cover, representing a 12 percent decrease since 2000, and resulting in the emission of 1.36 gigatons of CO₂e. The primary drivers of deforestation include the rapid expansion of the agriculture, infrastructure, and tourism sectors.

1.3 COVID-19 impacts

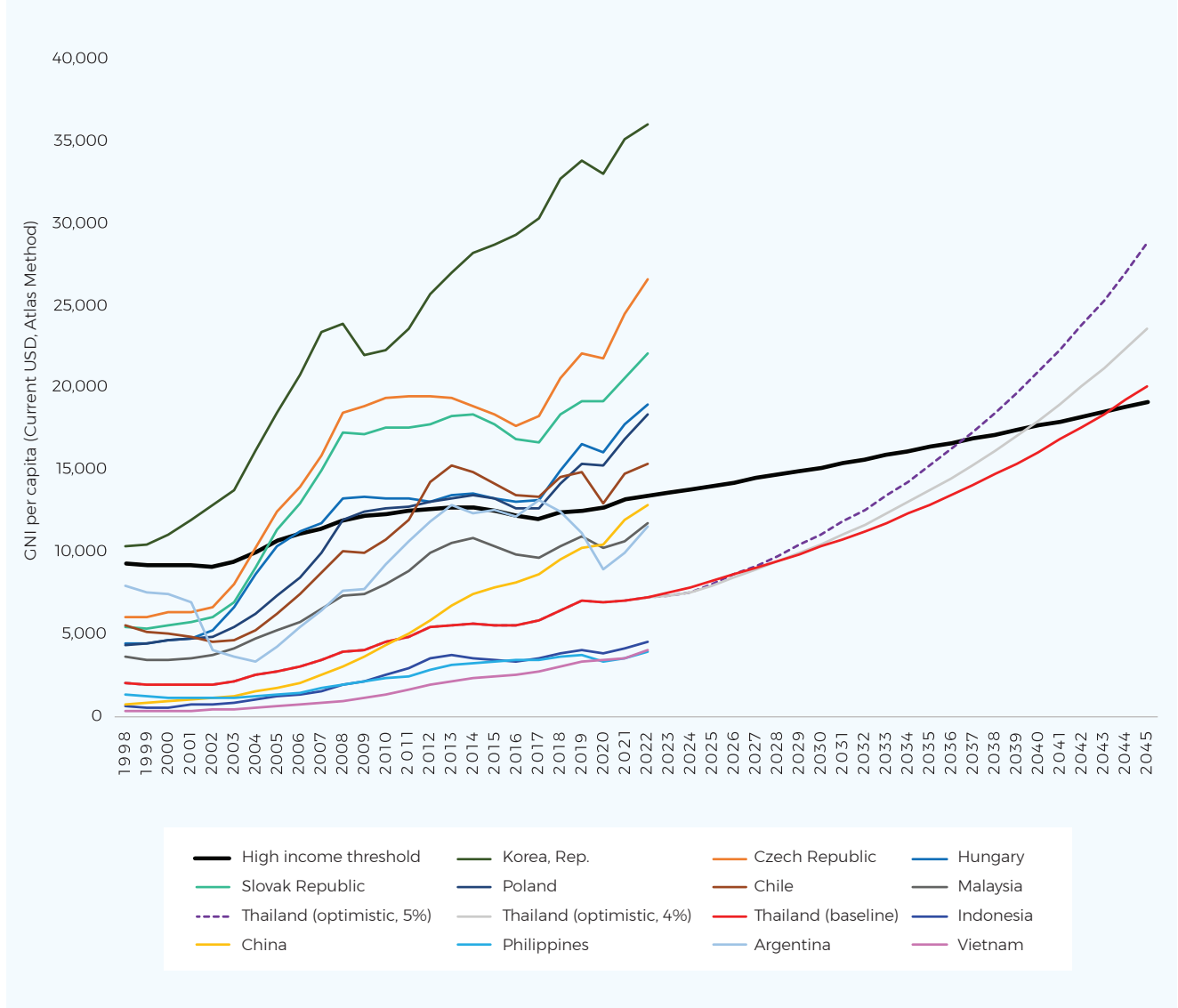
26. The COVID-19 pandemic was the most severe in the series of adverse shocks that have impacted Thailand since the AFC.⁶ The government's strong fiscal response during the pandemic helped alleviate the immediate impact. Nonetheless, the heavy reliance on tourism and export-oriented industries resulted in a disproportionately large impact and slower recovery in Thailand compared to its regional peers. By early 2023, Thailand's output rebounded to pre-pandemic levels but still lagged its previous trend. The scars from the pandemic, including large learning losses and sharp increases in public and private debt, could further exacerbate the slowdown in the underlying drivers of Thailand's long-term growth. Achieving the government's goal of becoming a high-income country by 2037, as outlined in Thailand's 20-year National Strategy, is now at risk.⁷ To meet this target, growth needs to accelerate to 5 percent by 2025 and be sustained for almost a decade, necessitating a doubling of both public and private investment and a robust Total Factor Productivity (TFP) growth trajectory (Figure 4) (World Bank 2020).

27. The government's rapid and generous response helped mitigate the impact of COVID-19 on poverty, but the pandemic may have exacerbated the existing challenges to reducing poverty and inequality. Poverty increased slightly to 6.8 percent in 2020 before reversing to the pre-pandemic rate of 6.3 percent in 2021, while inequality reduction has stalled since the pandemic. The increase in poverty would have been higher without massive social transfers by the Government of Thailand, which initiated a rapid and comprehensive social assistance response that is estimated to have reached more than 30 million individuals. Spending on social assistance rose from 0.8 percent of GDP to 3.1 percent of GDP between 2018 and 2021. Nevertheless, COVID-19 disproportionately affected low-income households and vulnerable populations through employment and learning losses and exacerbated the household debt situation. Household debt jumped from 84 percent of GDP to 95 percent of GDP between 2019 and 2021. In the private sector, SMEs were hit hardest, with over 50 percent experiencing a severe drop in income in the months immediately after the pandemic struck (Asia SME Monitor 2021). As economic activity stalled, firms also faced rising indebtedness and while NPL levels have stabilized, roll-back of forbearance measures could reveal risks in the financial sector.

⁶ The post-AFC period has also been marked by an increased occurrence of adverse economic shocks, including the 2008-09 global recession and two country-level shocks—the 2011 floods and the 2013-14 political crisis.

⁷ Thailand reached upper-middle income status in 2011.

Figure 4. GNI per capita projections under various GDP growth scenarios



Source: World Bank.



02.

**CURRENT
CHALLENGES**

Current challenges

28. Thailand has been experiencing a persistent decline in its potential growth, with the contributing factors to this deceleration continually evolving. Prior to the AFC, the country witnessed a significant drop in potential growth, falling from over 6 percent before the AFC to around 3 percent during the period of 2000-10. This was primarily attributed to a sharp and enduring decrease in investment growth. More recently, Thailand has continued to experience a moderation in its potential growth. However, the factors contributing to this deceleration have evolved. This recent moderation can be attributed to diminishing labor force growth and a deceleration in Total Factor Productivity (TFP) growth, all occurring amid persistently subdued investment.

29. Without the urgency of policy reforms, projections indicate a sustained structural slowdown in Thailand's growth. The potential growth rate is expected to decrease by around 0.5 percentage points, dropping from an average of 3.2 percent in 2011-21 to 2.7 percent in 2022-30. The slowdown in TFP growth is expected to persist, partly due to a less productive labor force that is aging and shrinking, and amid the subdued transformation from agriculture to higher productivity sectors. The contribution of capital stock growth will increase slightly from its low base (see Annex 2). However, this increase will not be enough to offset the anticipated decline in the other drivers of potential growth. Subdued growth, in the absence of structural transformation, will continue to hamper progress in reducing poverty and inequality.

2.1 Inadequate and unequal human capital accumulation

30. Human capital inadequacy is a major obstacle to achieving inclusive growth in Thailand. Challenges related to the country's education and training system are resulting in poor learning outcomes and socio-economic disparities, leading to learning and skills gaps (see Annex 6). Certain vulnerable groups face exclusion from resources and education opportunities, further hindering human capital accumulation. Human capital inadequacy, coupled with a prevalence of the informal economy, unequal access to employment opportunities, and low female labor force participation, has led to underutilization of human resources. This is preventing the country from achieving an inclusive society and hampering its transition to a skills-based, innovation-driven economy—crucial for economic revival and long-term growth, which are identified in HLO 2.

Poor learning outcomes and lack of foundational skills

31. Thailand faces challenges in achieving better learning outcomes. While the country has made progress in expanding education services, with nearly universal participation in primary education and relatively high net enrolment rates in pre-primary and secondary education,⁸ learning outcomes are lagging. Despite an expected 12.7 years of schooling by age 18, the quality of learning only corresponds to 8.7 years, resulting in a learning gap of four years, higher than its structural peers and twice as large as its aspirational peers. COVID-19 is estimated to have further exacerbated the learning loss by 1.2 years. The latest Programme for International Student Assessment (PISA) score in 2022 underscores Thailand's educational crisis. While a decline in PISA scores between 2018 and 2022 is a global phenomenon, the drop was significant for Thailand, resulting in a wider gap between Thailand and OECD countries in all three subjects (mathematics, reading, science).

⁸ The pre-primary net enrolment rate estimated at 78.5 percent in 2019, was about 20 percent higher than expected given Thailand's level of GDP per capita. The secondary net enrolment rate of 74.5 percent in 2019 was, however, slightly below the expected 81 percent rate. Nevertheless, this was significantly higher than the 64 percent rate observed in 2000.

32. Poor learning outcomes are more evident among low-income households. Poor and disadvantaged youth have lower school attendance and completion rates, and thus lower educational attainment than youth from better off households: 39 percent of youth from the poorest quintile completed upper secondary education compared to 86 percent from the richest quintile. They also fare worse in terms of learning outcomes (World Bank 2023f). Factors such as parent's background, access to learning materials and information and communication technology (ICT) tools, and location and characteristics of schools and communities contribute to the learning gap.

33. Inefficiencies in the school system, coupled with inadequate education spending, contribute to poor learning outcomes. The education system suffers from spending inefficiencies arising from a large network of small schools (57 percent of basic education schools), which are costly to operate and face a shortage of teachers (World Bank 2023d). These schools enroll predominantly rural and low-income students. Public spending on education has decreased, and per-student spending in pre-primary and secondary education is below expected levels, leading to insufficient resources and outcomes. The lack of regular and accurate school quality assessment hinders effective monitoring and evaluation, affecting performance accountability.⁹

34. Poor performance of the initial education system and the inability of the continuing education and training system to effectively deliver remedial, upskilling, and reskilling programs leave a very large proportion of youth and adults without foundational skills. The Adult Skills Assessment in Thailand administered in 2022 shows that 64.8 percent of youth and adults are below the threshold levels of foundational reading literacy, meaning they can barely read and understand short texts to solve a simple problem. Moreover, 74.1 percent of youth and adults are also under-performers in foundational digital skills, which means they have difficulty using a pointing device and keyboard on a laptop and cannot perform simple online tasks. The economic costs of having a large proportion of youth and adults who have skills below the threshold levels of literacy and digital skills can be considerable, amounting to 20 percent of GDP in 2022 (World Bank 2024).

35. Climate change poses a considerable threat to human capital in Thailand, with rising temperatures, altered precipitation patterns, and extreme weather events affecting various aspects of life. Heatwaves and prolonged heat exposure directly impact health, productivity, and well-being, leading to increased risks of heat-related illnesses. Changes in rainfall patterns are disrupting agriculture, a significant livelihood in the country, affecting food security and the overall economy. Additionally, extreme weather events such as floods and storms damage infrastructure, disrupt education, and displace communities, thereby hindering access to quality healthcare and educational opportunities. The cumulative impacts of these climate-induced challenges are putting a strain on Thailand's human capital, posing challenges to health, education, and economic productivity, which necessitate comprehensive strategies for adaptation and resilience building.

⁹ Specifically, while student performance was declining, the number of schools that passed the assessment increased dramatically from the first (2001-05) to the second round (2006-10) of the external quality assessment (Tangkitvanich and Sasiwuttivat 2012). During 2019 and 2020 (part of the fourth round covering the 2016-20 period), ONESQA conducted external quality assessment on 2,132 schools. In their published summary of the results, a remarkable 2,086 schools (97.84 percent) obtained the result of 'Good' or higher and none obtained the result of 'Need improvement'.

An aging population

36. Aging in Thailand will have a dampening impact on inclusive growth and poses fiscal challenges. The country has experienced a rapid demographic transition, resulting in a fast-aging population compared to other upper-middle-income countries. As of 2023, there were approximately 13.3 million people above 65, and by 2030 Thailand will become a super-aged society.¹⁰ This demographic shift will lead to a higher average age of workers, a declining share of the working-age population, lower returns to human capital, and a higher demand for migrant workers. It could also potentially lead to a decrease in labor force participation, especially among women who may leave the workforce to care for elderly parents. Thailand already has low female labor force participation. In 2022, the labor force participation rate among females was 58.7 percent, notably lower than 74.8 percent among males. Aging will not only constrain potential growth but also increase spending needs on pensions and healthcare, putting pressure on fiscal sustainability (World Bank 2023d).

37. Thailand's old age allowance (OAA) is low and has not seen an increase in over a decade. The amount of B 600-1,000 per month is much lower than the official poverty line and has little impact on poverty among older persons.¹¹ In 2021, over one million elderly individuals still lived in poverty despite receiving the OAA (World Bank 2021a). In the absence of reform, the number of elderly people living in poverty is expected to increase given limited social insurance coverage.

38. Migrant workers have filled labor shortages arising from population aging, but they form a large vulnerable population. Thailand is a regional migration hub within South-East Asia. Of the estimated 4-5 million migrant workers, most are low-skilled from neighboring countries (Cambodia, Lao PDR, Myanmar, and Vietnam), and 1.4-2.4 million are believed to hold irregular status. Higher wages, better employment opportunities, and in some cases conflicts in origin countries are drivers of migration from neighboring countries. Irregular migrant workers do not have access to health and education services nor social protection, and are susceptible to exploitation, making them among the most vulnerable in society (see Annex 4).

39. The aging population is placing greater demand on the health system, both in terms of service delivery and cost escalation. Non-communicable diseases (NCDs), which often affect the elderly, are on the rise, and progress in reducing premature mortality from NCDs has been limited. A recent study estimated that the annual cost of major NCDs to the Thai economy was approximately B 1.6 trillion, equivalent to 9.7 percent of GDP in 2019. Public spending on treatment accounted for about 9 percent of this cost, while the majority was attributed to the loss of productivity due to premature death or disability (United Nations 2021).

Lack of social inclusion

40. Thailand faces significant social exclusion among various population groups, hampering human capital development and poverty reduction (see Annex 4). Groups at particular risk of exclusion include older persons, persons with disabilities, women, LGBTQ+, irregular and low-skilled migrants, ethnic minorities, and populations affected by conflict. Various factors contribute to their exclusion, ranging from stigma and discrimination to disadvantageous laws and policies. Persons with disabilities, irregular migrants, and ethnic and indigenous peoples together account for nearly 10 million people. The exclusion of large numbers of vulnerable people has detrimental repercussions for poverty reduction and human capital accumulation (Cuesta et al. 2022). Climate change disproportionately impacts vulnerable population in Thailand, exacerbating their susceptibility to extreme weather events, disrupting their livelihoods, and increasing their exposure to health risks and economic insecurities.

¹⁰ According to the United Nations, 'super-aged' and 'aging' societies refer to societies in which more than 20 percent and 7 percent of the total population, respectively, is aged 65 years and older: <https://pdp.unfpa.org/>.

¹¹ In 2022, about 72 percent of the population aged 60 and older received the old age allowance, with an average payment per month of B 671 (Source: The Comptroller's General Department: <https://govwelfare.cgd.go.th/welfare/reportWelfareprov>). The national poverty line in 2021 was B 2,803 per person per month (NESDC 2022).

41. Socially excluded groups often lack access to opportunities, which is hindering their ability to achieve their full potential. These groups experience limited access to land, jobs, finance, and public services—and have less decision-making power. Working women face additional household responsibilities, limited flexible working arrangements, and restricted access to loans, resulting in lower labor force participation compared to men. LGBTQ+ individuals face discrimination, harassment, and violence, limiting their opportunities. Migrant workers have become an indispensable part of Thailand’s economy, constituting over 10 percent of the labor force. However, they encounter social and financial barriers that prevent them from accessing healthcare and education.

42. Social exclusion is more pronounced in conflict zones and areas inhabited by ethnic minorities, which are associated with low economic development. Some provinces, such as Mae Hong Son, Pattani, and Narathiwat, have low income and high poverty levels, where ethnic minority groups face language barriers and lack access to basic services. The ongoing conflict in the Deep South (Narathiwat, Pattani, and Yala, and four districts of the province of Songkhla) has resulted in the loss of human capital.

43. Social assistance has been a key driver of poverty reduction since 2015, however, policies to safeguard vulnerable populations are not well-targeted, leading to gaps in social assistance and small benefit sizes. The great majority of Thais receive some form of social assistance, but benefit amounts are low, limiting the overall impact on poverty. For instance, the old age allowance and disability allowance are not effectively targeted, benefiting individuals in the upper end of the welfare distribution. The State Welfare Card, while means-tested, fails to consider informal income, leading to inefficiencies in poverty reduction efforts. Migrants encounter obstacles in accessing benefits, further exacerbating their challenges.

2.2 Economic inertia and lagging structural reforms

44. The business landscape in Thailand is hindered by a lack of progress in reforms, an uneven playing field, and insufficient investment. Large corporations dominate industries like telecommunications, banking, finance, energy, retail, and automotive. Over 99.5 percent of registered businesses are small and medium-sized enterprises (SMEs). The rate of entry of small and innovative disruptors in Thailand is one of the lowest among peers, with 1.1 new registrations per 1,000 people aged 15-64, second lowest to Mexico. SMEs employ around 80 percent of the private sector workforce but contribute only about one-third of the GDP.¹² They face significant obstacles to expansion, including limited access to financing, uneven competition against large interest groups, lack of managerial skills, and low delegation efficiency for scaling up.

45. The informal sector remains substantial, constituting about half of total output and two-thirds of employment.¹³ These figures are significantly higher than those of structural peers (35 percent of employment in Türkiye and 58 percent of employment in Mexico). Informal employment is prevalent in rural areas, especially in agriculture and services, and among self-employed individuals and micro and small enterprises. The country’s stagnant capital investment and TFP growth are partly due to an underdeveloped innovation and knowledge ecosystem, resulting in diminished returns on capital investment. Addressing these challenges is crucial to foster a more dynamic and inclusive business environment in Thailand.

¹² Over 41.7 percent of Thai SMEs are in the wholesale and retail sectors, followed by 39.6 percent in services, 17.3 percent in manufacturing, and 1.4 percent in agriculture.

¹³ Figures for 2018 based on Elgin et al. (2021). Informal employment rates are obtained from the harmonized ILOSTAT database, which are higher than the officially reported figures (55 percent in 2018 and 51 percent in 2022) due to differences in definitions.

Decline in competitiveness

46. In the Global Competitiveness Indicator, Thailand ranked 40th in 2019, down six places from 2016-17. It ranked third within ASEAN, behind Singapore (1st) and Malaysia (27th). Thailand's main strength is market size (18th) and financial system (16th), but the country ranks relatively low on product market efficiency (84th), skills (73rd), and innovation (50th). Thailand's low ranking on product market efficiency appears to be undermined by the distorted effect of taxes and subsidies on domestic market competition, high level of market concentration, and lack of competition in services (see Annex 2).

47. Thailand has yet to capitalize on numerous emerging opportunities in the global market. Over the past two decades, technology-intensive electronics and telecommunication exports have expanded significantly due to trade liberalization and global supply chains. The trend toward more production, use, and sale of services by manufacturing firms, and the rise of digital technologies have redefined competitive advantages for export manufacturers, with implications for the labor force and supply-chain operations. Artificial intelligence and automation will play a more prominent role in the future. Thailand can also capitalize on, and take advantage of, the global transition to low-carbon economies by strategically investing in renewable energy infrastructure, promoting sustainable practices across industries, and positioning itself as a leader in green innovation and technology.

48. Thailand's manufacturing sector has lost market share, especially in sophisticated exports. The country lags regional peers in reaping the benefits of manufacturing export booms in sectors like advanced electronics, telecommunications, pharmaceuticals, and medical devices.¹⁴ Countries like Malaysia and Vietnam have developed better innovation ecosystems, attracting international firms like Samsung. Malaysia's global share of tech exports increased from 2.7 percent in 2012 to 3 percent, while Vietnam's global share of tech exports almost quadrupled from just 1 percent in 2021 to almost 4 percent in 2021, surpassing that of Thailand (2.7 percent). Moreover, Thailand's share of medical and pharmaceutical exports remains low compared to India and Singapore.

49. Thailand's presence in advanced service sectors is below expectations given its income level. Service sectors are driving global economic transformation, but Thailand's structural transformation has mainly led to labor moving into low-skill tradable and non-tradable sectors, with limited productivity and diversification prospects. The country's performance in global innovator services, such as professional, technical, and financial services, is poor due to trade restrictiveness in services.

50. The creation of a level playing field in Thailand is hindered by inadequate law enforcement and insufficient autonomy of the competition regulator, the Office of Trade Competition Commission (OTCC). Legal restrictions and non-tariff barriers prevent foreign firms from entering the service market, posing a significant challenge to upgrading the service sectors. Addressing these issues will be crucial for Thailand to tap into its full economic potential.

Challenges related to access to finance

51. Thailand's financial sector has grown significantly, with total assets reaching 212 percent of GDP by the end of 2021. Financial inclusion has improved, with 96 percent of adults having a bank account in 2021, a seven-fold increase in mobile money accounts since 2017 (World Bank 2021c). However, challenges persist, including relatively high household indebtedness and limited access to finance for SMEs. Household debt in Thailand is relatively high at 91.4 percent of GDP at the end of 2022, with a significant share being uncollateralized lending, including personal loans, credit card loans, and agricultural loans. This lending was encouraged by COVID-19-related relief measures, which may reveal underlying bank asset risks as these measures expire.

¹⁴ Analysis of high-tech intensity in manufacturing exports shows that Thailand lags peers, with untapped potential of US\$12.5 billion or 2.5 percent of GDP.

52. While overall credit available to the private sector remains robust, SMEs face challenges accessing finance.

Despite Thailand's relatively high private sector credit-to-GDP ratio (164 percent at the end of 2022)—which is on par with regional peers such as Singapore and Malaysia and higher than many other emerging markets—SMEs are underserved, and many have loan applications rejected.¹⁵ SMEs face higher interest rates on the loans they obtain from financial institutions with more stringent clauses. Also, because of the limitations on their business size and production capacity, most SMEs have weaker bargaining power with suppliers over prices and credit terms, resulting in cost control and liquidity constraints. Key constraints include lack of reliable financial statements and low financial literacy, high collateral requirements, low coverage of SMEs in credit information systems, and limited access to alternative funding sources (crowdfunding, venture capital etc.). Limited bargaining power with suppliers also contributes to higher costs and liquidity constraints for SMEs.

53. Several demand-side and supply-side constraints limit SMEs access to finance. SMEs lack credit history, reliable financial statements, and adequate collateral to access bank financing. While credit infrastructure has improved over the last 15 years, it has limited credit information on SMEs and does not include information from new financial service providers (e.g., fintech). The corporate insolvency legislation is strong, however, implementation needs to be strengthened to reduce time taken for court proceedings on insolvency matters. Alternate funding sources, such as venture capital and crowdfunding, are at a nascent stage and do not adequately meet the financing needs of innovative SMEs.

54. Thailand's sustainable finance market has shown growth, but several barriers need to be addressed to scale up private financing for green investments. Although the country issued its first green bond in 2018, sustainable finance remains limited compared to conventional markets (less than 1 percent of GDP). The lack of information about green projects, unclear global green activity definitions, and insufficient ESG disclosure hinder private financing opportunities. The availability of sustainable capital market instruments is low, limiting long-term financing for sustainable projects. As fiscal space is limited, government support needs to be market-enabling to crowd in private capital. This could be done by de-risking commercial lending and sharing risks to mobilize private financing for sustainable investments instead of direct government financing. The challenges of green finance in Thailand also stem from limited awareness among financial institutions, the absence of standardized green investment criteria, and the lack of a supportive regulatory framework, hindering the widespread adoption of sustainable practices and investments in the country. Moreover, barriers such as a lack of clarity on the legal definition of carbon credits could deter financial institutions from engagement in carbon markets in the future.

Slowdown in innovation as a driver of productivity

55. Technology adoption rates and the prevalence of innovation have been disappointing in recent years. Although it has increased over time, Thailand's R&D expenditure as a percentage of GDP (1.14 percent), continues to lag its aspirational peers (2.97 percent on average). The percentage of Thai firms that hold international quality certifications was 7.9 percent, lower than regional peers (11.5 percent) and all countries (14.8 percent) in 2016. Benefits from investments in 'knowledge capital' also remain modest in comparison with peers. Equally worrying, the rate of entry and exit of firms—a key determinant of productivity growth—is low for a country at Thailand's income level, and well below structural peers like Chile, Czech Republic, Poland, Mexico, and Malaysia.

56. Limited competition and an uneven playing field are constraining the emergence of an innovative private sector.

The absence of a level playing field, market restrictions in services, and barriers to foreign competition have all contributed to a slowdown of innovation in the Thai economy. The economy remains dominated by a small number of large firms, family-owned businesses, and state-owned enterprises (World Bank 2022c). Venture capital (VC) and equity finance, critical to innovation, are limited by several regulatory and other challenges, including concentration

¹⁵ The percentage of Thai firms with a bank loan/line of credit is lower than the average for the East Asia and Pacific (EAP) region, and a relatively high share of small enterprises (44.8 percent) have had loan applications rejected, compared to medium-size and large enterprises (World Bank 2016a).

of VC activity in these larger conglomerates that can stifle the emergence of a dynamic VC market (World Bank 2022c). Large firms face little pressure from local or international competitors to innovate. In addition, FDI has been falling in Thailand, which deprives the economy of critical technological learning and innovation spillovers. Lack of competition is particularly harmful to innovation within service sectors, including transport and logistics, professional services, digital technologies, and construction.

57. The recent upsurge in global environmental and social governance is adding pressure on Thai companies to reshape their business models and strive towards meeting international standards, which will require innovation.

Meeting quality requirements from global buyers is especially important for open economies like Thailand that are deeply integrated into global value chains. A report by Standard Chartered in 2021 found that, by 2025, 78 percent of multinational companies plan to cut suppliers that do not take sufficient action to reduce their carbon footprint.¹⁶ A potential US\$1.6 trillion worth of annual global production could relocate as a result. Furthermore, the net-zero transitions taking place within Thailand's major trade and investment partners (i.e., China, the EU, and US) are set to have ripple effects on the Thai economy. While not so relevant at this stage, the EU's Carbon Border Adjustment Mechanism could have a much bigger impact if it is expanded to a wider set of products.

2.3 Untapped economic potential and gaps in connectivity amid persistent spatial inequality

Untapped potential of secondary cities and restricted emissions reduction

58. Urbanization has been a driving force of economic growth in Thailand, but this shift has also generated negative congestion forces. The urban population share increased from 44.7 percent to 52.2 percent over the past decade. This shift has boosted positive agglomeration economies, which have contributed to higher productivity, however, it has also placed tremendous pressure on basic services and infrastructure, thus hampering overall productivity and livability. Thailand's spatial development is highly centralized in Bangkok, leading to an array of challenges like environmental deterioration, traffic congestion, flooding, and waste management issues (OECD 2012).^{17,18}

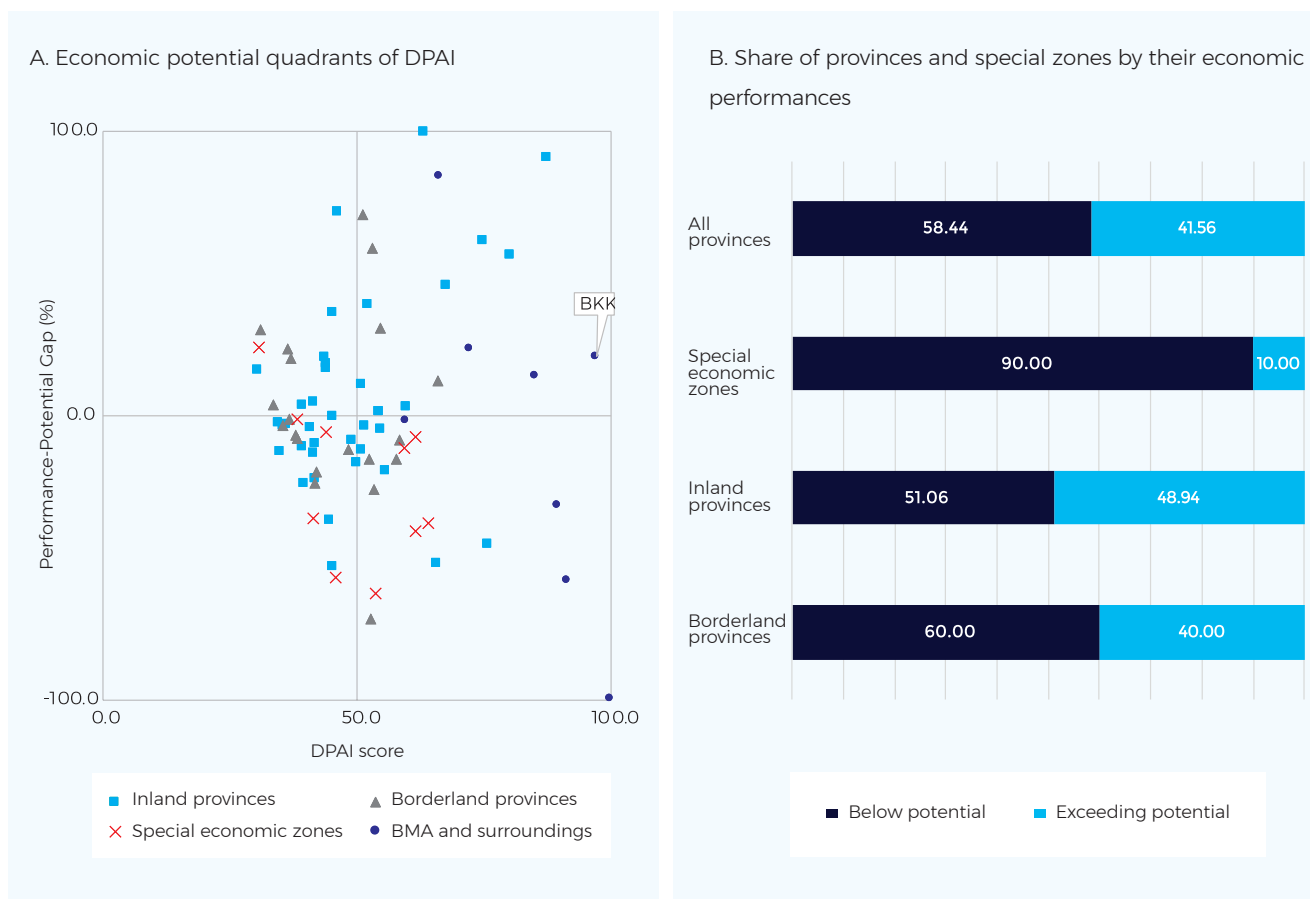
59. The centralization of resources and investment has resulted in infrastructural deficiencies outside Bangkok and its peripheral provinces. Around 70 percent of government expenditure is utilized in Bangkok, despite the capital city accounting for only about one-third of GDP. This has hindered the growth potential of secondary cities and peripheral provinces, exacerbating the urban-rural and socio-economic gaps in access to services and economic opportunities. The Development Potential Analysis Index (DPAI) suggested that more than half of Thai provinces are underperforming relative to their economic potential, with a higher proportion of underperforming provinces in borderland regions and borderland special economic zones (Figure 5). Access to improved water sources varies notably from 96.7 percent in urban areas to 87.2 percent in rural areas, and from universal access in Bangkok to 83 percent in the South (World Bank 2023f). Non-farm economic opportunities are more limited in the Northern, Northeastern, and Southern regions than in Bangkok and the Central region which are more urbanized. A large share of households in these regions rely almost exclusively on farm income yet they suffer from limited access to irrigation systems and markets. Unbalanced development has resulted in large income gaps across regions. In 2021, the average per capita income in Bangkok was close to double that of the Central region and over 6.5 times that of the Northeast.

¹⁶ <https://www.sc.com/en/media/press-release/carbon-dated-multinational-companies-planning-to-cut-suppliers-by-2025-for-failing-to-curb-carbon-emissions/>

¹⁷ <https://www.tandfonline.com/doi/epdf/10.1080/13467581.2022.2077736?needAccess=true&role=button>

¹⁸ Water use in the Bangkok area is six to eight times higher than in other urban areas. On average, water demand has roughly doubled each decade since 1980 and has been growing at a rate of about 10 percent annually.

Figure 5. Development potential score of Thailand's provinces



Gaps in infrastructure connectivity

60. Thailand has made significant progress in developing its transport infrastructure, including roads, railways, maritime ports, and airports. The road network has expanded by 54 percent since 2017, reaching 702,989 kilometers in 2021. The railway network has also grown, serving 47 provinces across the country. The main seaports, Laem Chabang and Bangkok, have been improved to enhance their capacity. Thailand has 38 commercial airports, and ongoing efforts aim to improve air transportation capabilities (see Annex 2). These developments have led to better rankings in transport and trade infrastructure perception (#25 in 2023 compared to #41 in 2018) and a high Logistics Performance Index (LPI) ranking (#34 in 2023 globally) within ASEAN. However, more public and private investment is needed to improve disaster preparedness and early warning systems given the country's vulnerability to extreme weather events and climate change.

61. Thailand, however, faces integration challenges between transportation and logistics networks, leading to bottlenecks. Insufficient investments in facilities like transshipment centers, logistics hubs, and cold storage warehouses have resulted in higher transportation costs and hindered import-export activities and connections with neighboring countries. Additionally, the lack of integration between transportation and logistics networks in urban areas and border regions poses further challenges. Road and railway networks have been developed independently, and trade and logistics facilities at borders are driven by domestic interests without considering the broader regional trade perspective. This continuing gap in infrastructure directly impedes the country's competitiveness and potential for economic revival.

Challenges of leveraging data for digital transition and development

62. Despite a well-established digital infrastructure—a comprehensive whole-of-government approach to utilizing data is yet to materialize. Certain sectors, like finance and health, demonstrate promising data use, but overall governance and data sharing across the government are inconsistent, which is hindering progress. Social protection programs face limitations due to insufficient data reusability, impacting beneficiary targeting. The lack of accessibility to government data for the private sector and civil society contributes to Thailand's low ranking in the ASEAN region for data accessibility. The new government's recognition of the importance of digital technologies provides an opportunity for Thailand's development, with support from the World Bank's proposed Accelerating Digitalization Global Challenge Program. Digitization could play a crucial role in addressing climate change and natural resource challenges by enhancing data-driven decision-making, enabling efficient resource management, and fostering innovation in sustainable technologies.

63. Thailand has made notable progress in internet connectivity, however existing gaps pose hindrances to economic growth. Despite increased internet usage and the development of 5G infrastructure, mobile internet prices remain relatively high, impacting affordability—and a digital divide persists across regions and income levels. Rural areas face difficulties in accessing reliable internet, and income inequality is reflected in lower internet usage rates in provinces with lower GDP per capita (Dafferro 2022). Efforts to improve rural connectivity face challenges like geographical obstacles and high deployment costs, hindering widespread internet access. Moreover, the adoption of digital technologies by domestic enterprises in Thailand remains below its potential, standing at 13.8 percent. While basic technology adoption accelerated during COVID-19, sophisticated productivity-enhancing technologies, such as data analytics, are underutilized.

64. Additionally, there is a need to enhance data infrastructure in Thailand. Although data center capacity has grown since 2019, it lags high-income EAP countries. The weak regulations related to trusted and secured data storage and usage are concerning, as data privacy, protection, and cybercrime become growing socio-economic problems. Thailand requires adequate legal and regulatory frameworks to enable digital transformation potential while creating safeguards to mitigate negative consequences.

2.4 Environmental degradation and climate risks

Depletion of natural resources

65. Thailand's rapid economic growth has relied heavily on natural resources, leading to significant deforestation and destruction of critical ecosystems (Global Forest Watch 2023). Rapid industrialization, urbanization, and increased agricultural activities have exerted immense pressure on the country's ecosystems. Deforestation rates have surged due to the expansion of infrastructure and agricultural land, with estimates suggesting that Thailand lost approximately 1.4 million hectares of forest between 1990 and 2020. This deforestation has led to a decline in biodiversity and disrupted crucial ecosystems. Additionally, the expansion of manufacturing and energy-intensive industries has contributed to air and water pollution, adversely affecting both human health and the vitality of ecosystems. Inadequate environmental protection measures have resulted in poor air quality, causing 32,211 premature deaths, and inflicting an economic toll of about US\$33 billion (6 percent of GDP) in 2019. Balancing economic development with environmental sustainability presents a critical challenge for Thailand as it endeavors to address the long-term consequences of its growth trajectory (see Annex 2).

66. Thailand ranks 108 among 180 countries on Environmental Performance Index (EPI) (Table 1) although it performs better than most of its peers in the region (except for Singapore). The Environmental Performance Index distills data on many sustainability issues into a single score for each country—as well as providing a more disaggregated picture of specific environmental issues. Every iteration of the EPI incorporates the best available data and expands the scope of the sustainability scorecard as new research and insights emerge. Using 40 performance indicators, the EPI ranks 180 countries on their national efforts to protect environmental health, enhance ecosystem vitality, and mitigate climate change. These indicators measure how close countries are to meeting internationally established sustainability targets for specific environmental issues.

Table 1. Environment Performance Index: A regional comparison		
	Score	Rank
Indonesia	28.2	164
Malaysia	35.0	130
Thailand	38.1	108
Cambodia	30.1	154
Vietnam	20.1	178
LAO	30.7	149
Philippines	28.9	158
Singapore	50.9	44

Source: Yale University Environment Performance Index.

Vulnerability to climate shocks

67. Thailand is increasingly vulnerable to climate shocks, facing frequent extreme weather events such as droughts and floods (Eckstein et al. 2019; UNDRR 2020; Centre for Research on the Epidemiology of Disasters 2023). In the past, severe floods have caused significant economic and human consequences. Climate change-induced flooding is projected to cause average annual losses of US\$2.6 billion (0.5 percent of GDP) by 2030. Bangkok remains especially vulnerable to flooding, despite the introduction of flood control measures. A 1-in-50-year flood (like the 2011 floods) in 2030 would cost more than 10 percent of GDP in lost production. Coastal erosion and rising temperatures will further exacerbate the situation, impacting labor productivity and agricultural output (Marks et al. 2023). Vulnerable populations, particularly rural communities and women, will be disproportionately affected. Without proactive measures, climate change, and especially large floods, could reduce Thailand’s GDP by up to 20 percent by 2050. Urgent and comprehensive climate change mitigation and adaptation strategies are needed to protect the country and its vulnerable communities (Thailand Meteorological Department 2011; World Bank 2022b).^{19, 20}

¹⁹ The 2011 floods caused damage (US\$184 million) and losses (US\$1.1 billion) to the agriculture sector. Damage refers to direct impacts on physical assets, products, raw materials, machinery, and properties. Losses refer to reduced or lost production opportunities, i.e., loss of income, reduced production efficiency, and increasing expenditures over a period.

²⁰ The 20 percent estimate is broadly consistent with the findings of the Philippines Country Climate and Development Report which concludes that if nothing is done, climate change will reduce GDP in the Philippines by as much as 13.6 percent by 2040. The June 2023 Thailand Economic Monitor showed that a large flood alone could cost the Thai economy more than 10 percent of GDP.

Clean energy transition challenge

68. Thailand is not a major contributor to climate change, but emissions are expected to grow. Thailand's greenhouse gas emissions accounted for 0.71 percent of total global emissions in 2021 and its per capita emissions (3.88 tons) are lower than the global average rate of 4.81 tons per capita.²¹ Greenhouse gas emissions in Thailand, however, steadily increased during 1980-95 and 2000-19. Given its income levels, Thailand's emissions are comparable to those of other ASEAN countries. Thailand's emissions have primarily arisen from the energy sector, constituting approximately 260 MtCO_{2e}, with industrial processes contributing about 94 MtCO_{2e} and agriculture around 68 MtCO_{2e}, according to Climate Watch Data. Total emission levels fell during the COVID-19 pandemic but are likely to return to previous levels once the economy fully reopens. Thailand aims to become carbon neutral by 2050 and achieve net-zero greenhouse gas emissions by 2065. These targets support the goals set in the Paris Agreement and involved submitting a Long-Term Low Greenhouse Gas Emission Development Strategy to the United Nations Framework Convention on Climate Change in 2021—focusing on peaking emissions by 2030, with an emphasis on the electricity and transport sectors. The key question is how Thailand's ability to meet its key development goals will be affected by its own decarbonization policies and the net-zero transition of other countries.

69. To achieve its international commitments on carbon neutrality and net-zero emissions, Thailand needs to implement measures to coordinate and facilitate investments to support an energy transition. A range of policies could be implemented to reduce greenhouse gas emissions, and Thailand is taking initial steps towards comprehensive carbon pricing—imposing a cost on carbon emissions to discourage the use of fossil fuels by both companies and households. Carbon pricing, encompassing carbon taxes and Emission Trading Schemes (ETS), alongside other supportive policies and the phasing out of fossil fuel subsidies, could serve as a crucial instrument for achieving substantial reductions in greenhouse gas emissions. Effective carbon pricing could also alleviate financial pressure on Thailand's publicly funded healthcare system, as health damages linked to air pollution cost the country approximately US\$32.84 billion in 2019—equivalent to roughly 6 percent of its GDP. By reducing vehicle emissions, the implementation of a carbon price could contribute to a decrease in illness and mortality rates related to air pollution. World Bank model simulations suggest that carbon pricing could be further implemented to prevent emissions from rising, but additional measures such as building electric vehicle infrastructure and providing training in solar panel installation would be necessary in the long term to accelerate the adoption of low-carbon technologies. The current regulatory framework does not encourage private sector participation in renewable energy and energy efficiency projects. State-owned energy companies have ensured a stable energy supply, but have done little to improve sustainability and energy efficiency, leading to increasing carbon emissions. Recent discussions surrounding the introduction of carbon pricing through a carbon tax or an emission trading system (building on the current voluntary carbon market) are a step in the right direction.

2.5 Weak institutions (cross-cutting challenge)

70. In Thailand, the challenge of resistance to institutional reforms is nuanced, reflecting the country's unique history and political landscape which includes frequent political transitions and changes in government. Over recent decades, key stakeholders have shown resistance to reforms that could alter the status quo but without such reforms the country will be unable to achieve a sustainable prosperous future.

²¹ EDGAR data-base, https://edgar.jrc.ec.europa.eu/report_2022?vis=pop#emissions_table

Weak and inefficient institutions

71. Thailand's institutions need to be reformed if the country is to achieve strong, inclusive, and sustainable growth.

An assessment of global indicators relative to aspirational peers shows Thailand's governance and institutional capabilities are weak. This has contributed to poorer outcomes across various sectors, subdued FDI flows compared to its peers, declining competitiveness, and infrastructure gaps. There are challenges with combating corruption, ensuring transparency, and promoting accountability (Figure 6). This has negatively impacted the business climate and reduced trust. The business environment is marked by bureaucracy, complex regulations, and limited credit access for SMEs, which is hampering competitiveness, investment, and innovation.

Figure 6. Transparency and accountability of institutions



Source: Authors' elaboration using CLIAR's Interactive Online Dashboard.

Note: The chosen set of comparator countries include OECD countries, chosen as a group of aspirational peers.

72. Rising spending needs, due to a rapidly aging population and low tax revenue (around 16 percent of GDP) compared to similar income countries, pose challenges to long-term fiscal sustainability.

There will be pressure to increase the availability and quality of basic public services and social protection systems, driven by the needs of an aging population and rising expectations of a growing middle-class society. The government's goals to foster resilient growth, human capital development, and climate resilience also demand higher spending. Conversely, the tax system has a significant 'tax gap' estimated at around 5.6 percent of GDP.²² Thailand misses out on higher VAT collections because the rate of 7 percent is among the lowest of upper-middle-income countries. Personal income tax revenues are in the bottom 20th percentile of upper-middle-income countries due to a narrow tax base and low effective tax rates. The challenge will be to pursue these objectives while ensuring that overall spending remains sustainable, and that the fiscal incidence of taxation and public spending is consistent with an inclusive development path.

²² Tax gap measures a difference between tax collection capacity, based on the performance of peers at a similar income level, and actual tax revenue.

73. The fiscal response to high energy prices supported the recovery but slowed the path toward consolidation.

The government that was recently formed after the national elections in May 2023 supports the implementation of ongoing public investment projects, an increase in the energy subsidy, and the scaling up of social assistance transfers.^{23, 24} The subsidies and transfers may provide livelihood support to low-income households and play a significant role in reducing poverty. Nonetheless, these policies will limit the fiscal space available to respond to future potential growth-enhancing spending needs and economic shocks, such as a resurgence in energy prices and unexpected economic slowdowns, and they will be regressive unless social assistance expenditure programs are better targeted and replace energy subsidies.

74. Fiscal rules and investment management bottlenecks are undermining the quality and efficiency of public investment spending.

Thailand has a history of low execution of planned capital spending, despite legislation designed to increase public investment spending. While the execution of the current budget has consistently been around 100 percent, the execution rate on planned capital spending has remained around 60-70 percent. This decline in public infrastructure spending reflects long-standing challenges due to implementation capacity issues and other bottlenecks. Furthermore, while fiscal policy outcomes have been sound and policy decisions have been constrained in practice, it is not clear that the fiscal rules frameworks being used are fit for purpose (World Bank 2023d).

75. At present, the core economic institutions are fragmented and require improved capacity to formulate and execute complex integrated programs that underpin the National Strategy.

Institutional fragmentation has meant that each department has different processes, rules, and procedures. Institutions struggle to effectively plan, coordinate, and prioritize investments, allocate resources, and follow through with implementation. Owing to this fragmentation, no single entity has overarching responsibility or oversight for the achievement of economic and fiscal targets. Thailand is one of only a few middle-income countries without a fully operational medium-term economic and fiscal framework (MTFF) linked to the budget system.

Issues relating to centralization

76. Control of fiscal resources in Thailand is mostly concentrated in Bangkok, which is leading to regional disparities.

The distribution of public spending has historically favored the capital city, contributing to imbalances in service delivery across regions (Figure 7). Thailand has made important progress on the decentralization agenda in the past decade. LAOs' budget autonomy and share of government revenue have gradually increased.²⁵ However, the vision of a decentralized unitary government has not yet been fully realized and some of the past decentralization reforms have faced institutional challenges, making service provision at the local level less efficient. Unclear roles and responsibilities between central government entities and LAOs and a disjointed approach to decentralization have strained the service delivery framework. The large number of financially small LAOs further adds to inefficiencies and coordination difficulties.

²³ Starting from September 2023, the government reduced the cost of living further for all by lowering electricity and diesel prices, through tax cuts and subsidies. The Electricity Generating Authority of Thailand has been subsidizing the cost of electricity since September 2021. The government will cut an excise tax on diesel by B 2.5 per liter, which is estimated to incur a fiscal cost of 0.3 percent of GDP per year.

²⁴ The government plans to propose the B 10,000 digital wallet scheme, a one-time transfer for everyone aged above 16 to be spent over 6 months within 4 km, costing B 580 billion (3 percent of GDP), for Cabinet approval.

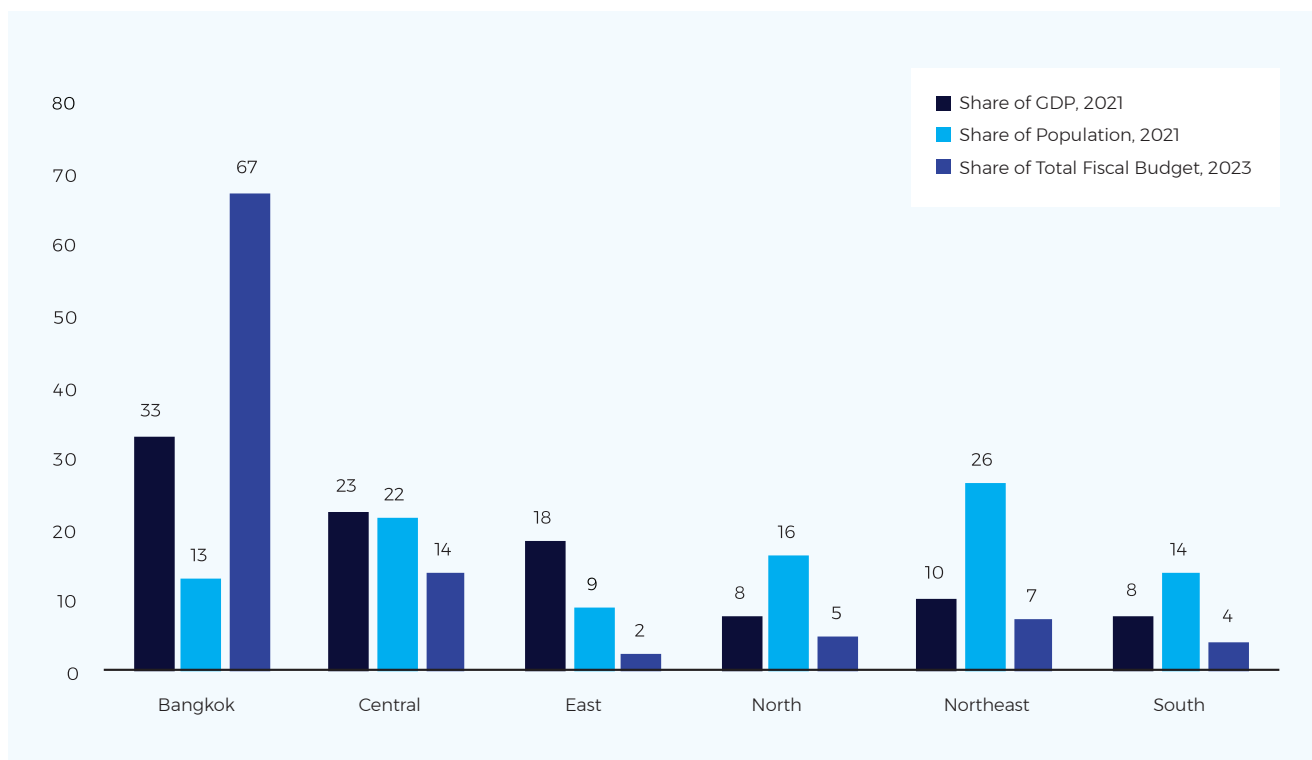
²⁵ In 2020, the government introduced a reform to the governance framework for central government transfers seeking to provide greater autonomy to LAOs by introducing 'Direct Allocations' from the Budget Bureau to 292 higher-capacity LAOs (3.7 percent of the 7,850 LAOs). The reform is plans to expand the LAOs coverage further in FY23- FY25. However, the central government still retains considerable influence over LAOs' budget allocations and retains control over key administrative functions.

Transparency

77. Thailand faces challenges in institutional progress due to gaps in accountability and transparency mechanisms.

Compared to peers, Thailand performs poorly in open data initiatives, as well as citizens' access to information and participation in anti-corruption efforts. This weakens collective action on reform and leads to stakeholder resistance and the entrenchment of vested interests. Unfair regulations and limited access to opportunities create resentment within society, leading to perceptions of unequal access to services and business opportunities.

Figure 7. Regional comparison: Fiscal budget allocation, GDP, and population



Source: NESDC, Budget Bureau, World Bank Staff Calculation.

The power of state-owned enterprises

78. State-owned enterprises (SOEs) play a significant role in Thailand's economy, representing around 8.6 percent of GDP. They are major employers in critical sectors like utilities, transportation, and telecommunications, with a history dating back to different periods of economic development. However, the corporate governance of Thai SOEs needs improvement. Issues include concerns about the independence and effectiveness of SOE boards, lack of transparency, and weak financial performance leading to fiscal risks.

79. The prominence of SOEs in certain sectors creates market distortions and hampers private capital mobilization.

Efforts have been made to align competition law with international standards, but further clarification is needed to ensure a level playing field, especially in services. While some sectors allow fair competition between private firms and SOEs, others, like utilities, remain dominated by SOEs despite attempts to introduce private investment. Addressing preferential treatment and promoting fair competition is essential for a balanced economy.



03.

**POTENTIAL
SOLUTIONS**

Potential solutions

3.1 HLO 1 Strong human capital

Priority 1.1 Ensure equal and lifetime access to good quality education for all

80. Population aging underscores the need for better quality human resources. Equal access to high quality education reduces the tendency that human capital accumulation is determined by the socio-economic status of students and their parents, providing opportunities for upward social mobility. Lifelong learning, reskilling, and upskilling programs adapted to older people are essential to ensure equality of opportunity and enhance human capital accumulation in the aging society.

81. To improve education access and quality for all, spending efficiency should be enhanced, and additional public spending is needed for early childhood and secondary education. About 0.5 percent of GDP is needed to bring pre-primary and secondary education up to international standards.²⁶ Re-organizing the school network by consolidating small schools could free up resources for improvements in both access to, and quality of, education. Regular assessments of school inputs through instruments like the Fundamental School Quality Level Standards can help identify areas for improvement and resources needed to ensure schools meet minimum quality standards. Establishing an accountability mechanism, including the regular publication of school and student assessments, can drive continuous quality improvement (World Bank 2018).

82. Addressing skills gaps requires focusing on foundational skills, including transversal literacy and digital and socio-emotional skills, in addition to technical and vocational skills. Better curricula, teacher training, and incentives for youth and adults to invest in foundational skills are needed. Supporting vulnerable youth, working-age adults, and older adults requires targeted skills development interventions and economic incentives. Evidence-based programs should be tailored to the needs of specific groups, and provincial and local governments can play a role in delivering customized education and skills programs.

Priority 1.2 Enhance social inclusion and safeguards for vulnerable populations

83. Addressing social exclusion requires specialized and localized interventions as well as policy making processes that include the voices of groups at risk of exclusion. Interventions tailored to the needs of populations that face exclusion based on different factors (for example, location, disability, gender, and conflict) are critical to improve and ensure equal access to opportunities for all. Groups at risk of exclusion should be included in the planning, implementation, and monitoring and evaluation of interventions to help the government better respond to their needs. This requires strengthening coordination between communities and government agencies and implementing social accountability mechanisms to enhance community participation and transparency. Innovative solutions and digital technologies can support these efforts (Annex 4).

²⁶ Early childhood education is composed of early childhood educational development (typically aged 0–3 years) and pre-primary education (typically aged 3 years until the starting age for primary education).

Priority 1.3 Strengthen the social protection, labor market, and health systems to address the impacts of the aging population and intensified shocks

84. Comprehensive reforms are needed to enhance the efficiency, responsiveness, and sustainability of the social protection system. This could include reducing fragmentation by harmonizing outreach, means testing, intake, and benefit payments for social assistance programs and laying the foundations for the creation of a social registry that would allow for more effective monitoring, targeting, delivery, and shock response. Improving the targeting accuracy of the State Welfare Card (SWC) cash transfer program via a new targeting instrument, along with increasing its benefit level, would help lift more people out of poverty. Raising the OAA close to the poverty line (to B 2,000 per month), while tapering the allowance for higher income recipients, could be a cost-effective reform option. Under such a reform, OAA spending would rise to 1.5 percent of GDP by 2040, reducing poverty and inequality by 2.1 points and 1.2 points, respectively. Pension system reforms are needed, including gradually raising the retirement age and contribution rate, transitioning to lifetime earnings for calculating pensions, and implementing automatic price indexation. The reforms should be accompanied by expanding social insurance coverage for the informal sector and migrants. Matching contributions and targeted approaches can increase coverage, helping offset future spending on the OAA.

85. Thailand should leverage existing social protection programs and systems to improve its capacity to respond to shocks. Thailand is exposed to a wide range of shocks including natural hazards such as floods, storms, and droughts—as well as economic shocks resulting from international economic trends. Recently, the government developed an ad hoc response to provide economic relief to thousands of households affected by COVID-19. Thailand has the essential building blocks to create a pre-established adaptive social protection policy (i.e., social protection programs, payment systems, unique ID, and data exchange platform). Moving from ad hoc responses to a pre-determined policy framework to make use of these building blocks in the event of a shock would allow the government to rapidly mobilize relief to households affected by shocks, increasing household resilience and limiting the impact of these events in human capital formation.

86. A well-designed migration policy and measures to increase female and elderly labor force participation are necessary to address labor shortages arising from population aging. Streamlining the formal labor migration and registration processes can enhance regularization among low-skilled workers. Additionally, incentives can be provided to attract high-skilled migrant workers. Inter-agency coordination is essential for designing a holistic and inclusive migration policy that allows the country to tap the potential of migrant workers while providing them with sufficient access to services and protection. Measures to increase active aging and female labor force participation include extending working lives, promoting flexible workplaces, investing in lifelong learning, and implementing supportive policies for caregivers (World Bank 2021a).

87. A coordinated and integrated service delivery system, including long-term care, is needed to address the chronic care needs of an aging population. Innovative payment models that incentivize care coordination, along with a nationwide interoperable health information system, are crucial for effective and people-centered care. The differences in health care-seeking behavior and health needs between urban and rural areas should be considered and addressed in the design of such a delivery system.

²⁷ Currently, those with incomes below B 30,000/year receive B 300/month and those with incomes between B 30,000-100,000/year receive B 200/month.

3.2 HLO 2 A competitive and innovative economy

Priority 2.1 Promote competition, innovation, and technology adoption

88. A thriving innovation and knowledge ecosystem relies on five key pillars: skills, ICT, innovation, finance, and institutions. These pillars are essential for progress in today's fast-changing world. Earlier this report outlined key obstacles in each of these pillars. Policy reforms that mobilize private investment (Private-Capital Enablers or PCEs) offer an opportunity to remove these obstacles. This approach, alongside enhancing skill capital (a priority under HLO 1), strengthening digital infrastructure (a priority under HLO 3), and institutional reform (a priority under HLO 5) will assist Thailand in creating a competitive and innovative economy.

89. Thailand should address the weak competition environment. Competition policy is vital for encouraging creative destruction and green innovation. Thailand should eliminate exceptions in the Competition Act, strengthen the enforcement and advocacy roles of the Office of Trade Competition Commission (OTCC), improve the governance functions of the OTCC by allowing independent appointments and budgeting allocation, and prioritize competition policy (World Bank 2022c).

90. Improving the FDI policy framework will incentivize innovation. The government should relax FDI limits and services restrictions, particularly for skilled professionals, and reduce the number of service sectors requiring a Foreign Business License. These measures will assist the government to mobilize additional investments to advance strong, inclusive, and sustainable growth, and meet SDGs and net-zero commitments.

91. Thailand should enhance competitiveness in tech sectors and diversify the service sector by reshaping the innovation ecosystem. Thailand can increase its market share in global innovator services and become a regional leader in electronics and automotive manufacturing, including electric vehicles, through investing in private innovation. In order to do this, the Thai government could strengthen the effectiveness of existing innovation programs targeted at transformational entrepreneurs and innovative firms through eliminating redundancies, improving market orientation of public supported research and development, and focusing on advancing non-R&D-based innovation programs.

Priority 2.2 Mobilize sustainable finance

92. An innovative capital market and risk-sharing instruments could help stimulate private capital for investments in green and sustainable projects. Introducing blended-finance and performance-related instruments, such as strategic investment funds and sustainability-linked bonds, respectively, could help leverage limited public spending with private capital. Risk-sharing facilities, such as credit guarantee schemes with a focus on green and ESG investments, could help promote access to sustainable finance and adoption of environmental practices, particularly by SMEs, while crowding in private commercial bank financing. In addition, providing clarity on the legal definition of carbon credits and developing an oversight and financial regulatory framework could help develop voluntary carbon credit markets.

93. Addressing large household debt is critical to ensuring sustainable financial well-being for individuals and alleviating poverty. This requires a comprehensive approach, including promoting financial literacy, strengthening consumer protection, introducing debt restructuring programs, addressing housing costs, encouraging savings and investment, supporting income and job opportunities, providing targeted assistance, promoting credit counseling services, and monitoring systemic risks (see Annex 8).

94. Addressing the gaps in climate-related information is important for managing climate-related financial risks and incentivizing green and sustainable financial flows. The key reforms include development of sustainable finance taxonomy and adoption of disclosure and reporting arrangements. The taxonomy issued by the Bank of Thailand and financial sector regulators, which focuses on two sectors (energy and transport), needs to be expanded to other sectors. There is also a need to ensure interoperability between Thailand, ASEAN, and other international taxonomies to provide a common language and attract investments from investors seeking sustainable opportunities and impact. Encouraging climate-related financial disclosure and reporting for both financial institutions and corporates will improve transparency and encourage investment in Thai companies and green and sustainable assets in the country.

3.3 HLO 3 Low carbon urban development and connectivity

Priority 3.1 Apply an area-based approach to development to unlock investment and growth potential

95. Thai cities are at a critical juncture where prioritizing climate resilience and low-carbon strategies in long-term planning is imperative. However, many cities in Thailand grapple with the challenges posed by limited resources and a centralized approach to urban development. Digitization and support for digital governance and spatial planning will be essential for their future competitiveness, livability, and resilience. Secondary cities need assistance in pursuing sustainable area-based development to balance urban growth. Focus areas should include Transit-Oriented Development, well-conceived urban mobility projects, and the promotion of local socio-economic development, especially in targeted borderland regions—with an expanded knowledge base on resilient and low carbon development. While financial constraints are a real concern, innovative financing mechanisms, such as public-private partnerships (PPPs) and carbon finance, can supplement central government budgets for city infrastructure projects and decarbonization initiatives. Such a policy framework will not only make these financing models attractive but also serve as a blueprint for replicable approaches in emission reduction initiatives, setting a robust foundation for the sustainable development of all Thai cities.

Priority 3.2 Close infrastructure gaps to improve domestic and international connectivity

96. Efficient investment in national and subnational transport infrastructure is vital, requiring capacity building, private financing, and project delivery units for important projects like motorway and railway modernization. Ensuring access to quality infrastructure, especially last mile connectivity, is crucial for shared prosperity and inclusion. Collaboration among stakeholders and data analysis can help strike the right balance between last mile and larger-scale transport investments.

97. Thailand's infrastructure development plans are focused on enhancing domestic and regional connectivity, particularly with East Asia, through projects like the Kunming-Vientiane-Bangkok railway. To boost connectivity with South Asia, Thailand should address gaps in land-based and sea transport infrastructure. This should be done by establishing cross-border transport agreements, utilizing the Trilateral Highway, and constructing a seaport in Ranong province. Negotiations and cooperation with regional partners are essential for successful transshipment activities and improved efficiency within the regional trade corridor, offering significant economic advantages to Thailand.

Priority 3.3 Unlock the potential of digital data infrastructure

98. To facilitate digital transformation in Thailand, policies should be implemented to unlock the potential of digital data infrastructure for inclusive and sustainable development. The government needs to strengthen the country's digital architecture and promote digital literacy and technology adoption. Collaborative efforts with the private sector and civil society, along with the collection of better survey data, are crucial to understanding actual digital usage and developing a shared vision.

99. Effective data governance and regulations are essential components of policies aiming to harness the value of data and build trust. Clear policies on data privacy and security, coupled with investments in robust data infrastructure, transparency in data governance, and data interoperability between government agencies, should be prioritized. Furthermore, policies should support the implementation of a proof of concept for verifiable credentials, enabling decentralized identity and data sharing.

100. In addition, the government needs to prioritize policies that promote digital inclusion. Policies should include the development of a roadmap for improving digital data infrastructure, with specific attention to social protection and cross-border data flows. It is important for policies to address the urban-rural gap in digital adoption and prioritize end-users, especially vulnerable communities. Policies should also encourage investment in digital infrastructure to enable private capital participation. The implementation of these policies will help Thailand to accelerate digital transformation, with a specific focus on data and digital public infrastructure. Additionally, policies should align with global standards and initiatives, fostering regional interoperability for economic integration and cross-border services. Ultimately, these policies should provide a comprehensive framework for leveraging data and digital technologies to enhance service delivery, social protection, and economic competitiveness in Thailand.

3.4 HLO 4 Sustainable development and protection against natural disasters and climate change

Priority 4.1 Promote environmental sustainability

101. Sustainable management of natural resources is imperative for Thailand as it directly aligns with the pursuit of green growth, ensuring the country's economic prosperity while preserving its environmental integrity. Thailand's rich biodiversity, extensive forests, and diverse ecosystems contribute significantly to its economic sectors, including agriculture and tourism. By adopting sustainable practices, such as agroforestry and responsible tourism, Thailand can safeguard these resources, fostering long-term resilience and minimizing environmental degradation. Moreover, sustainable resource management supports the transition to a green economy, promoting eco-friendly industries and renewable energy sources. As envisaged in the bio-circular-green strategy, this approach not only mitigates the environmental impact but also enhances Thailand's competitiveness in the global market by attracting environmentally conscious investments and consumers. As the nation faces challenges like climate change and resource depletion, embracing sustainable natural resource management becomes not only an environmental imperative but a strategic pathway towards enduring economic growth and improved quality of life for its citizens.

102. Thailand's climate change mitigation efforts can also be significantly advanced by limiting deforestation.

The latest inventory shows that the country's LULUCF (land use, land-use change, and forestry) sink accounts for around 20 percent of its emissions. Deforestation must be reduced while substantial reforestation efforts are undertaken to cover about 40 percent of Thailand's landmass with trees. Mitigation efforts often involve protecting and restoring natural ecosystems, like forests and wetlands, which act as buffers against climate impacts. Preserving these ecosystems not only sequesters carbon dioxide but also provides valuable adaptation co-benefits by enhancing biodiversity and ensuring the availability of essential ecosystem services, such as clean water and natural flood control. However, the current annual public funding of US\$54 million falls short of what is needed for extensive reforestation (Thailand PER 2023). An additional US\$1.5 billion per year over a decade is required, and this funding could come from higher park fees, commercial forestry expansion, government revenues, private sector investment, international support through REDD+, or carbon pricing schemes.

103. Solutions for Thailand's air pollution problems require multi-sectoral collaboration, political will, and the best available international knowledge and innovation.

An effective, evidence-based roadmap should be prepared and implemented, with clear rules and accountability mechanisms, direct reporting to higher offices, and adequate levels of funding. The following building blocks should be considered: (1) Designing policies: Various Air Quality Bills or Clean Air Acts are being considered for approval. To ensure success, a comprehensive document is needed that promotes collaboration between sectors, implements effective control mechanisms, and integrates policies. Conducting cost-effectiveness analysis can aid in prioritizing and sequencing policy actions; (2) Improving knowledge: Thailand should enhance its knowledge base for air quality management by expanding the ambient air quality network, analyzing PM2.5 exposure and impacts, creating emission inventories for air quality and greenhouse gas emissions, and conducting source-apportionment studies in critical areas; (3) Mainstreaming air quality management: The roadmap for air quality management must have strong political backing and be integrated into the economic planning process. A wide range of potential interventions should be considered, with comprehensive cost-effectiveness analysis informing public spending decisions; (4) Monitoring and evaluation systems: Establishing robust monitoring and evaluation systems is essential to understand the effectiveness of policies and actions implemented—allowing for necessary adjustments during the action plan implementation.

104. Given the transboundary nature of the problem, it is essential to foster dialogue and technical cooperation aimed at effective air quality management.

This could involve strengthening existing regional platforms for generating and sharing knowledge on air pollution initiatives, policies, and technologies. The goal is to enhance institutional capacity in air quality management and support air quality assessments to identify solutions for achieving clean air.

Priority 4.2 Increase resilience to natural shocks and the effects of climate change

105. Adapting to the risks of climate change—including extreme events and slow-onset problems—is critical for Thailand.

It cannot wholly eliminate the costs of climate change, but it can greatly reduce them. At the highest level, an agenda for building resilience includes sustaining economic growth and ensuring shared prosperity. Development is indeed the best adaptation strategy, since it is associated with improved infrastructure, market-oriented reforms, enhanced human capabilities, and a stronger institutional capacity to respond to the increasing threats of climate change. The public sector can help build resilience through actions that support adaptation, such as helping develop climate resilient crops, providing weather forecasts, and by undertaking climate risk assessments for all infrastructure investments. In addition, the public sector can establish a policy framework for adaptation that creates incentives for private action.

106. To safeguard its long-term development, Thailand must urgently address flood and drought prevention and mitigation—as well as make changes to the tourism sector. Ongoing initiatives need acceleration, including hydraulic asset rehabilitation, improved drainage and reservoir capacity, and investments in upstream water reservoirs and community watershed management. It is crucial to advance the partial implementation of existing plans, refine current strategies, and enhance engineering designs. Moreover, climate-proofing and strengthening existing infrastructure are vital for reducing flood damage and increasing climate resilience. Addressing dam release issues and expanding water storage capacity are essential components, with potential for substantial economic benefits. Adapting the tourism sector to minimize climate change effects is vital, emphasizing flood control measures and revising land-use regulations. Transitioning away from climate-impacted coastal-based tourism locations should be a priority and should include fostering discussions about the type of tourism Thailand aims to attract and its environmental impact. Incorporating nature preservation efforts, such as the protection and replanting of mangroves, is essential—not only for mitigating climate change, building resilience, and enhancing adaptation—but also for their significant role in attracting tourism and promoting the concept of nature-positive supply chains.

107. The challenges of coastal erosion and sea-level rise in Thailand underscore the critical importance of addressing environmental threats to safeguard the nation’s blue economy. With a significant portion of the population residing along the coast, coastal erosion poses a direct threat to communities, infrastructure, and valuable ecosystems. Rising sea levels exacerbate this issue, amplifying the risks of flooding and saltwater intrusion, which can adversely affect agriculture and freshwater resources. To mitigate these challenges, Thailand should implement a comprehensive coastal management strategy, including the restoration of mangroves and coral reefs, which act as natural buffers against erosion. Additionally, the development of resilient infrastructure is essential to protect coastal areas from the impacts of rising sea levels. Embracing sustainable practices under the framework of the blue economy—promoting responsible fisheries, marine conservation, and eco-friendly tourism—can further enhance resilience, ensuring a harmonious balance between economic development and environmental preservation along Thailand’s coastlines.

108. Water resource management requires institutional reforms, building on the 2018 Water Resources Management Act. This HLO 4 priority ties in with HLO 5 (enabling institutions) and involves streamlining the roles and responsibilities of water sector agencies, especially regarding flood and drought management. Additionally, enhancing agricultural resilience and productivity is paramount through measures that strengthen water security, climate resilience, and data utilization, including climate-smart agriculture (see Annex 7). Income support for low-income households affected by rising commodity prices may be needed. Furthermore, increasing resilience in marine and coastal areas along the Gulf of Thailand is essential, considering their heightened vulnerability.

Agriculture in Thailand

Agriculture, a major pillar of the Thai economy, employs one-third of the labor force and contributes around 8 percent of GDP. Thailand is the world’s largest exporter of tapioca products, rubber, frozen shrimp, canned tuna, and canned pineapple. It also exports rice. In 2021, the total value of food exports was US\$34.6 billion.

Over 70 percent of rural households holding farmland are smallholders who are stuck in subsistence farming and intergenerational poverty, especially in the North and Northeast regions. Fifty-eight percent of farmers cannot access water resources and only 26 percent have access to irrigation systems. These farmers are highly vulnerable to the impacts of climate change and severe weather events such as floods and droughts.

After the energy and industrial sectors, the agriculture sector is a major source of GHG emissions, with rice cultivation being the primary source of national methane emissions. Thailand has successfully managed to reduce GHG emissions by 30 percent, and aims to reach 40 percent by 2030.

In order to create a prosperous and sustainable future for agriculture in Thailand, the following priorities should be considered by the government:

- **Digital technology** could help to increase farm yields and efficiency, and give farmers more access to information and agricultural markets. Further streamlining of existing geographically concentrated crop production and promoting a conducive environment for a sharing economy would also enhance agricultural efficiency and effectiveness.
 - **Training** in precision agriculture, digital technologies, e-extension, optimal fertilizer application, integrated pest and disease control, and information services could help to promote the adoption of modern technologies and could increase both yield, as well as farm income.
 - **Policy and institutional reforms** should include: strengthening of tenure security; formulation of optimal water pricing schemes; cost benefit analysis of the policies and incentives that provide unconditional farm assistance; provision of targeted subsidies and incentives to smallholders and subsistence farmers; and the promotion of low carbon agriculture.
 - **Investments in agricultural R&D** need to be strengthened to adapt to climate change, increase productivity, and raise competitiveness in export markets. This could be coupled with expanded private-sector participation which can help develop crop varieties and agricultural technologies tailored to conditions in Thailand.
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Priority 4.3 Support a sustainable energy transition

109. Thailand's energy transition is critical and necessary to meet the country's climate commitments. Establishing an Energy Transition Master Plan will help facilitate coordination among ministries, agencies, and SOEs, ensuring optimal planning processes and mitigating potential impacts. It will also assist in a clear vision for the private sector and its critical role to this agenda. To increase renewable energy generation and e-Mobility, careful planning for transmission and distribution grid development is critical—and adequate investments are needed. Utilizing all available financing sources, including climate change financing, is essential for realizing the energy transition. Carbon credit and green/sustainability financing can open new markets for Thailand.

110. Opening up the energy market, establishing a policy environment that supports innovation in energy transition, and enforcing regulatory authority can attract private capital and increase private sector participation in renewable energy investments. Regional power trade, especially importing clean energy from Lao PDR which has significant excess hydropower capacity, offers a cost-effective solution to increase the share of clean energy in Thailand's energy mix. Thailand and Lao PDR have already agreed to explore an increase in power trade from the current upper limit of 9,000 MW to 10,500 MW by 2037. Policies that disincentivize fossil fuel consumption, and those that support innovation in the energy transition should be put in place. For example, strengthening the VC market would enable critical innovation financing into clean energy solutions. Carbon pricing and a vibrant carbon market would help achieve GHG reduction targets and generate government revenues. Complementary measures, such as promoting electric vehicle uptake, are also necessary to reduce emissions effectively and support the energy transition.

111. Thailand has strongly committed to a clean energy transition, actively exploring market and fiscal instruments for climate change mitigation since the early 2010s. The World Bank's Partnership for Market Readiness (PMR) Program, a key contributor to these efforts, concluded in 2020 with significant achievements. Notably, the program introduced the Energy Performance Certificate system, strategically designed to enhance market-based instruments for reducing greenhouse gas emissions in designated buildings and factories. The PMR also facilitated the formulation of local GHG emission reporting and abatement plans for 25 municipalities under the Low Carbon City Program, supporting emissions trading through the Thailand Voluntary Emission Reduction Program. Addressing the climate change crisis, Thailand has established the Department of Climate Change and Environment within the Ministry of Natural Resources and Environment, which is actively considering an emission trading system to support the clean energy transition. Looking forward, the Ministry of Finance is exploring an innovative carbon tax approach, including a new vehicle excise tax based on engine size and carbon emission rate. These initiatives underscore Thailand's commitment to achieving carbon neutrality by 2050 and net zero greenhouse gas emissions by 2065, with medium-term goals to increase the GHG reduction target from 20–25 percent to 30–40 percent by 2030. These initiatives need to be pursued to their conclusion through a strong regulatory and institutional framework.

3.5 HLO 5 Enabling institutions (cross-cutting solution)

Priority 5.1 Reform fiscal institutions and public finance

112. Thailand's current revenue performance may not be adequately supporting its reform objectives. Meeting spending needs to deal with the aging population, protect the vulnerable, boost human capital, bridge the infrastructure gap, and foster a climate-resilient economy may require improved revenue performance. To increase tax revenue while minimizing negative impacts on vulnerable households, Thailand should implement measures such as reverting to a 10 percent VAT rate while providing compensation via targeted social protection measures. It should also broaden the personal income tax base by removing generous personal income tax deductions and allowances which are heavily concentrated among high-income taxpayers, reverse the excise tax cut on diesel and gasoline, improve tax compliance in the e-commerce sector, and expand wealth tax collection.

113. Addressing public investment bottlenecks is crucial for boosting economic growth (World Bank 2022d). This includes strengthening investment planning, improving project appraisals, establishing an independent appraisal review body, modernizing procurement rules, and developing real-time monitoring systems. To implement the National Strategy effectively, economic and fiscal institutions should be reformed, such as integrating key agencies into a single entity with a strong public investment management function and establishing an independent Economic and Fiscal Council or strengthening the Fiscal Policy Committee. Strategic technology implementation can enhance communication and project management capacity.

114. Promoting institutional reforms is crucial for enhancing transparency and achieving desirable fiscal outcomes. This can be achieved by bolstering the credibility of the MTF, reducing fragmentation in fiscal institutions, and streamlining fiscal rules. The MTF should encompass a medium-term budget plan, potential tax reforms, and spending requirements to address the impacts of an aging population and other medium-term needs. Enhancing the flexibility and operational relevance of fiscal rules can be achieved by providing more detailed forward-looking guidance during economic shocks through escape clauses. Additionally, monitoring and enforcement of the rules can be strengthened by involving fiscal councils outside the government.

Priority 5.2 Move towards decentralization and more equitable distribution of resources

115. Access to public services should be made more uniform. As Thailand continues to develop, the key policy challenge will be making access to public services more uniform across the country—both in terms of quantity and quality (World Bank 2022e). The government could consider: (1) refocusing expenditure policy towards regions that are deficient in terms of service delivery, with the aim of bringing them up to the Bangkok standard; and (2) reviewing the intergovernmental fiscal arrangements and the transfer formula, and possibly increasing the equalization element of total transfers.

116. The vision of achieving a decentralized unitary government has not yet been realized and a number of steps are needed to address this. The government should consider: (1) scaling back the deconcentrated arms of the central government at the provincial level and linking LAOs directly with line and sector agencies; (2) clarifying and demarcating functional roles between the central government and local authorities; (3) preparing a model of decentralized service delivery, especially related to health and education services; (4) administratively consolidating LAOs into larger, more financially viable entities through fiscal grants and other incentives, and (5) introducing mechanisms for performance-based budgeting and financing with the view to strengthen service delivery and investments.

Priority 5.3 Engage in open and participatory processes to build trust and accountability

117. Using social contract filters to evaluate whether government projects and programs strike the right balance between strengthening the government's abilities and empowering its citizens could address the problem of reform obstacles caused by political dynamics. Activities related to transparency, accountability, information sharing, and participation will assist in building trust and alleviating corruption. This could contribute to a better understanding and alignment of incentives between policymakers, investors, and citizens. Inclusive stakeholder engagement in local planning processes is needed to ensure voices of diverse populations are included. This can lead to better resource allocation decisions and creating a sense of common ownership of benefits, which can strengthen the reform process.

Priority 5.4 Improve the governance of state-owned enterprises

118. To improve governance of SOEs, measures should enhance board independence, reduce political interference, promote transparency, and strengthen financial sustainability. Robust corporate governance mechanisms, qualified leadership, and training are essential for efficient management and designing reforms. Bridging the data gap and conducting a thorough assessment of SOEs is crucial for enhancing their efficiency and sustainability (Dall'Olio et al. 2022).



04.

**PRIORITIZATION
AND
KNOWLEDGE
GAPS**

Prioritization and knowledge gaps

119. The SCD Update identifies five interconnected transitions crucial for revitalizing growth and achieving inclusive, sustainable development in Thailand: (1) A human capital development transition that shifts focus and incentives from consumption to investment; (2) An economic transition that enhances innovation, competitiveness, cost-effectiveness, exports, and local business dynamism; (3) A spatial transition that crowds in private investment in infrastructure, technology, and capital goods, through a low carbon approach to development and connectivity; (4) An environmental transition that fosters a more sustainable relationship with nature through policies, technology, and behavior change; and (5) An institutional transition that increases transparency, facilitates inclusion, and supports the above mentioned transitions through fiscal and investment policies, state-owned enterprise governance, and regulatory reforms.

120. In response to evolving global and domestic challenges and opportunities, the Update includes several key distinctions compared to the 2016 SCD: (1) Introducing a new top priority related to area-based approaches to development; (2) Upgrading the assessment of the expected impact of environment and climate change priorities from High and Medium to Very High; (3) Encompassing essential elements related to agricultural sector productivity within the framework of HLO 4; and (4) Refining institutional reforms and designating fiscal reforms as a new top priority. The Update also highlights the role of policies and private capital enablers (PCEs) to attract private investment, in the context of developing an innovative economy (HLO 2) and low carbon urban development and connectivity (HLO 3).

121. Four criteria were used to update priorities, with preference given to: (1) Areas with a direct and significant impact on growth, poverty, inequality, environment, and climate change; (2) Areas that create strong complementarities across dimensions or are a precondition for the achievement of other priority areas; (3) Solutions having impacts that can be expected more immediately; (4) Institutional and political feasibility. Prioritization results are summarized in Table 2.

122. The selected areas play a pivotal role in driving Thailand's inclusive and sustainable growth and development across key dimensions, with a primary emphasis on reinforcing inclusivity and showcasing their interrelated synergy. The SCD Update team has carefully chosen these priorities from an extensive roster of proposed reform measures. The overarching goal is to capture the intricate connections and cooperative potential among various priority areas. The SCD Update has adopted a concentrated approach to prioritization, shifting away from broad areas of focus to curate a more concise and action-driven list of top priorities.

123. Selection of priority areas was informed by a thorough literature review and stakeholder consultations (see Annex 9). This report has been informed by two rounds of consultations, in January 2023 (scoping) and May 2023 (following Concept Note review). Consultations with key government agencies took place to validate findings and inform the discussion on areas of progress. In addition, as advised by SCD guidance, consultations were held as well with private sector representatives, civil society organizations, think tanks, and development partners. These were structured around three different round tables, and served to validate the findings of the report, and get an understanding of the top constraints according to each set of stakeholders.

124. While undertaking the update, the team identified several analytical gaps that would need to be addressed in forthcoming research, including: (1) a detailed understanding of the scale and nature of the risks from future climate impacts and potential to offset these risks through hard and soft climate adaptation measures; (2) in-depth analysis and interlinkage of spatial disparities in poverty, climate vulnerability, and related development outcomes at the community level; (3) analysis of the pattern of migration and its linkage with the spatial pattern of labor market demand and supply; (4) qualitative and quantitative data on 'businesses of the State', and a diagnostic of financial performance and corporate governance of SOEs based on the qualitative and quantitative data; (5) a country diagnostics on Thailand's digital transformation, and (6) a detailed analysis of Thailand's productivity, scrutinizing both sectoral and firm-level dynamics to identify key drivers and obstacles. The upcoming Country Partnership Framework will provide an opportunity to address the identified knowledge gaps.



Table 2. Prioritization

HLO	Priority areas	Impact	Complementarity	Time horizon	Feasibility	Priority
1. Strong human capital	1.1 Ensure equal and lifetime access to good quality education for all	Very High	Very High	Medium to long term	Medium	Very High
	1.2 Enhance social inclusion and safeguards for vulnerable populations	Very High	Medium	Medium term	High	High
	1.3 Strengthen the social protection, labor market, and health systems to address the impacts of the aging population and intensified shocks	High	Medium	Medium to long term	Medium	Medium
2. A competitive and innovative economy	2.1 Promote competition, innovation, and technology adoption	High	High	Medium to long term	Medium	Very High
	2.2 Mobilize sustainable finance	Medium	High	Medium to long term	High	High
3. Low carbon urban development and connectivity	3.1 Apply an area-based approach to development to unlock investment and growth potential	High	High	Medium to long term	High	Very High
	3.2 Close infrastructure gaps to improve domestic and international connectivity	Very High	Very High	Medium to long term	High	High
	3.3 Unlock the potential of digital data infrastructure	High	High	Medium to long term	Medium	Medium
4. Sustainable development and protection against natural disasters and climate change	4.1 Promote environmental sustainability	Very High	High	Long term	High	High
	4.2 Increase resilience to natural shocks and the effects of climate change	Very High	Very High	Long term	High	Very High
	4.3 Support a sustainable energy transition	High	High	Long term	Medium	Medium
5. Enabling institutions (cross-cutting solution)	5.1 Reform fiscal institutions and public finance	Very High	Very High	Medium to long term	High	Very High
	5.2 Move towards decentralization and more equitable distribution of resources	Very High	High	Long term	Medium	High
	5.3 Engage in open and participatory processes to build trust and accountability	Very High	Medium	Medium to long term	Medium	Medium
	5.4 Improve the governance of state-owned enterprises	Medium	Medium	Long term	Medium	Medium

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