



# Building Thailand's Future Today: **Advanced Green Manufacturing**

*Thailand Economic Monitor  
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# In October 2026, Thailand will host the IMF-World Bank Group Annual Meetings, for the first time since 1991

These events aim to reflect on Thailand's development journey while charting pathways for the future, anchored by the flagship report, **"Building Thailand's Future Today"**



 **Vision**

**An inclusive and sustainable high-income society**

 **Disruption**

**Successfully navigating global mega trends**

-  Disruptive technology
-  Shifting trade policy
-  Energy and climate landscape

 **Industry pathways**

**Building Thailand's industries of the future**

-  Advanced manufacturing
-  Agribusiness
-  Sustainable and health tourism
-  Digital services
-  Creative economy

 **Key enablers**

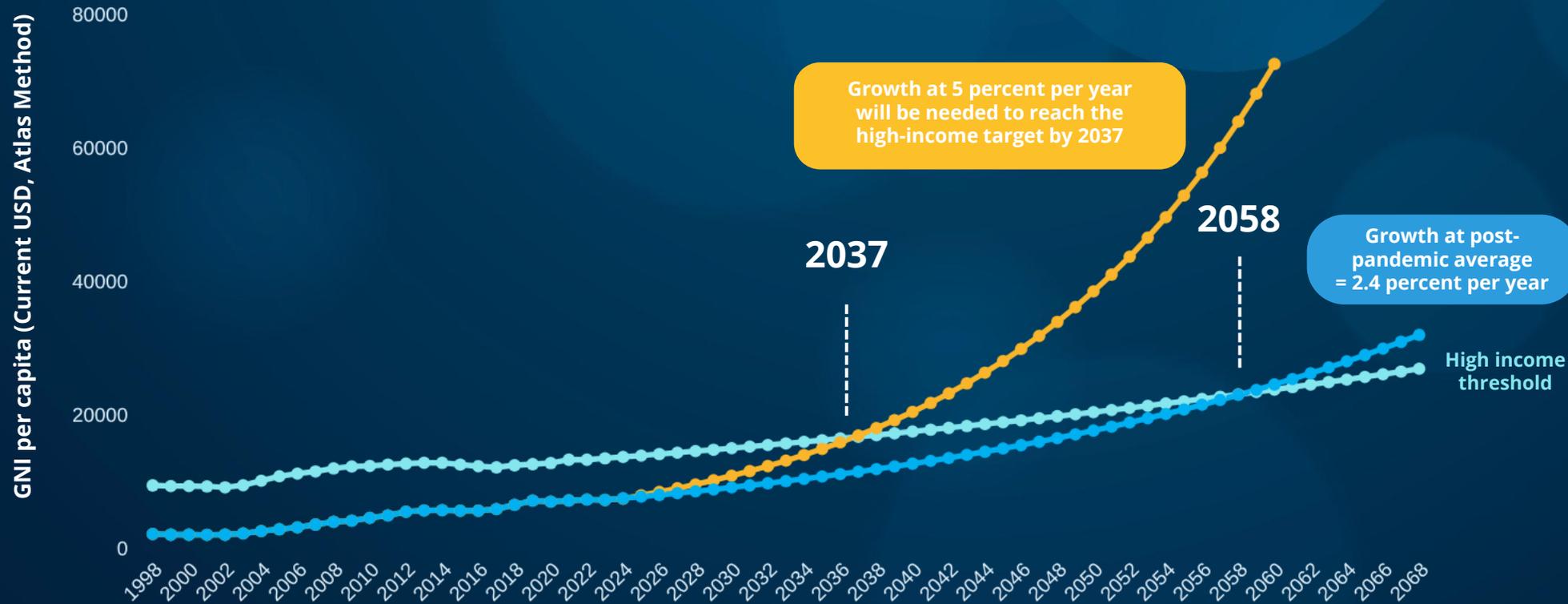
- Spurring investment, innovation, and trade**
- Investing in Thailand's future workforce**
- Building Thailand's cities of the future**





# Thailand - Growth Pathways

Thailand will need to sustain growth of 5% to reach HIC (High Income Country) by 2037  
*GNI per capita US\$ thousands*

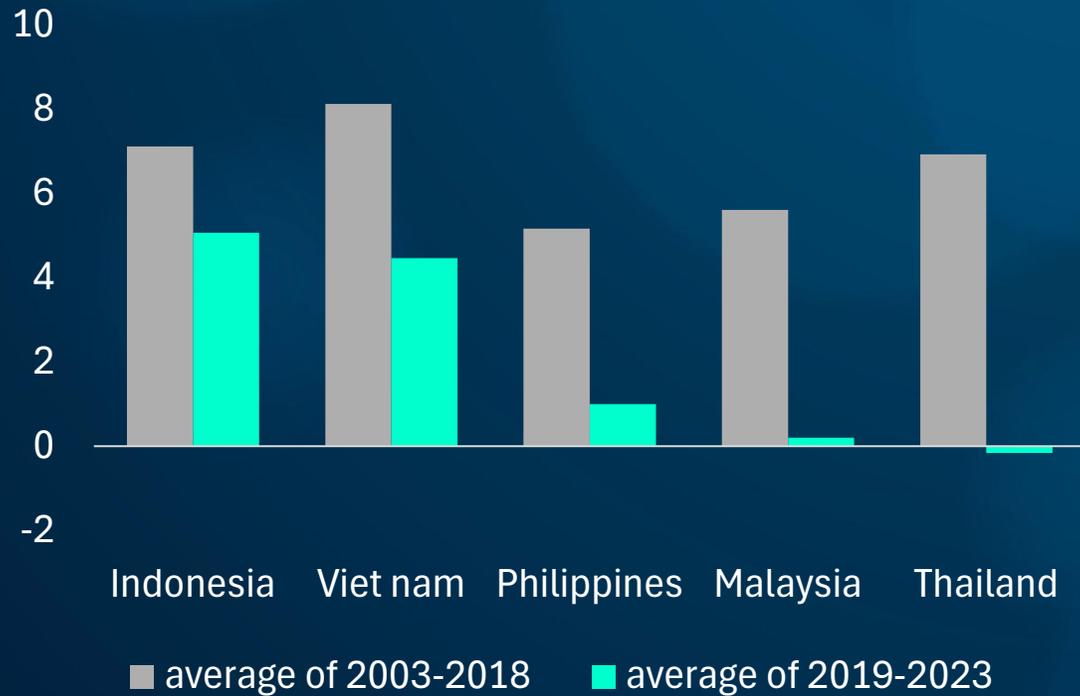


**A 3 percentage point gap in Thailand's growth.**

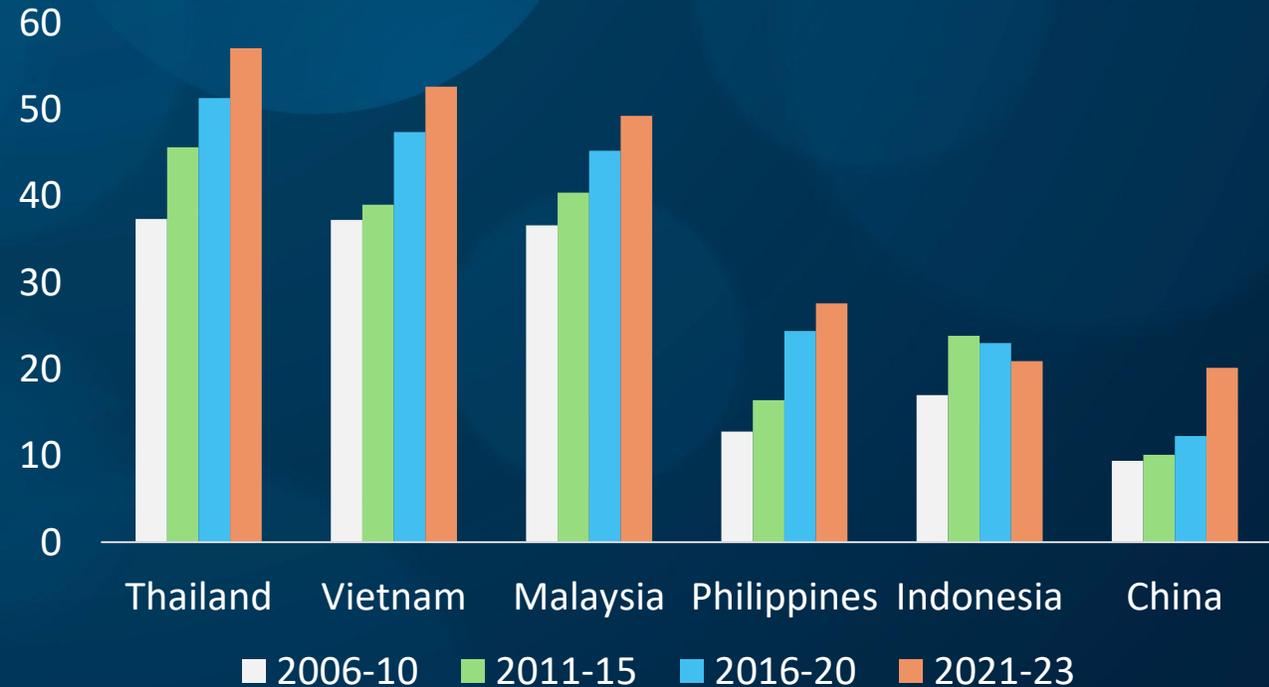


# Despite a shift to higher-productivity sectors and strong FDI, productivity gains have lagged, highlighting scope to deepen domestic value added.

**Thailand has achieved impressive manufacturing labor productivity growth, but is now experiencing a slowdown**  
*(Manufacturing sector productivity growth, %)*



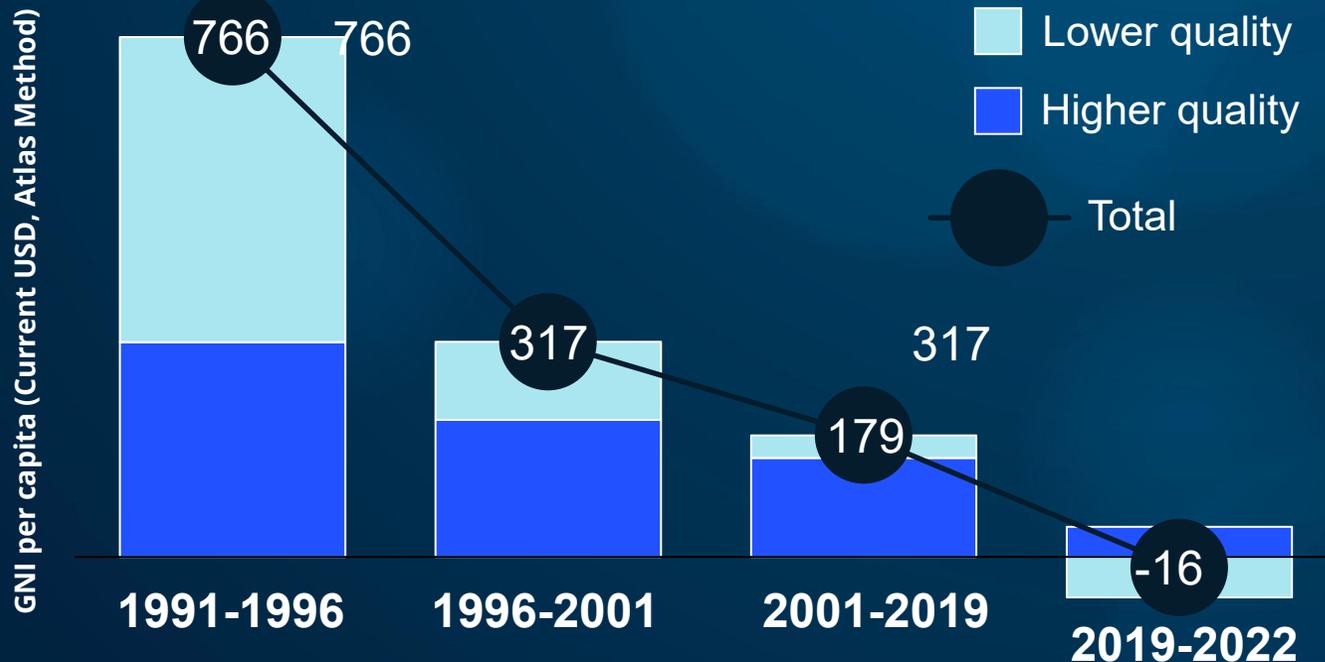
**FDI stock was the highest among ASEAN peers**  
*(Stock of inward FDI, % of nominal GDP)*



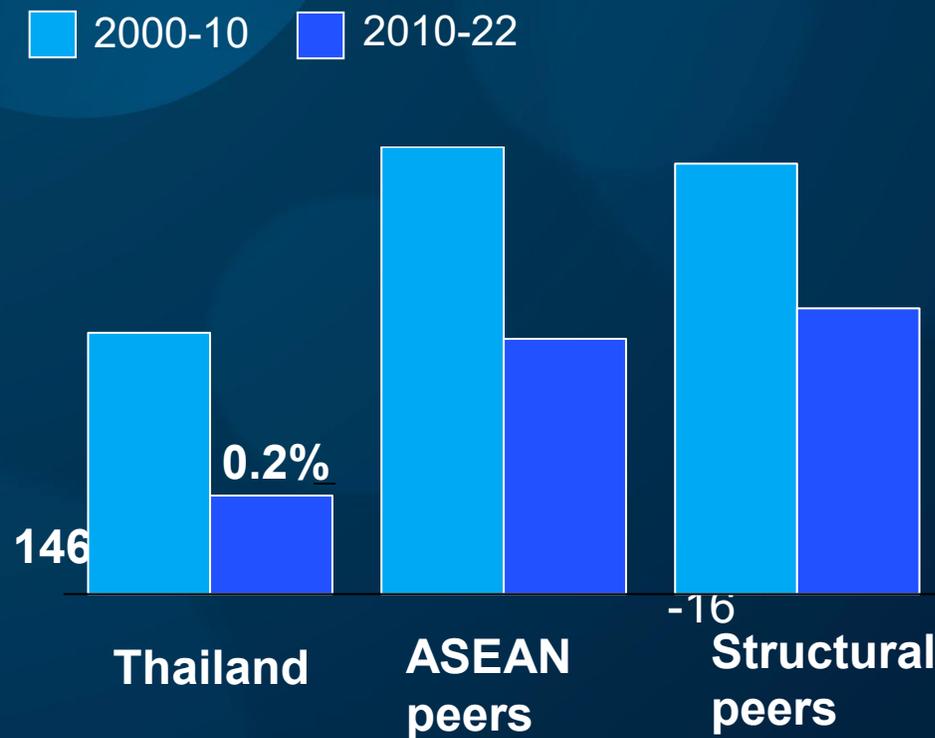


# Thailand is in urgent need of reviving job creation

**New jobs created per year by quality level**  
(Contribution to period annual average change, levels '000)



**Growth elasticity of employment** (% change in employment for every 1% of GDP growth)



Source: World Bank CGJR Diagnostic Toolkit

Lower quality = Agriculture, Domestic Services, and Other Industry.  
Higher quality = Manufacturing and Innovation Services.



# A vision for Thailand: Successfully navigating global megatrends



## AI & disruptive technology

- Focus on growing and attracting AI application startups
- Attract and retain AI talent
- Target high-skilled segments of the AI hardware value chain
- Invest early in AI safety and avoid harmful impacts



## New energy and climate landscape

- Scale up flood mitigation and coastal protection measures.
- Expedite market reforms and policy support for renewable energy
- Accelerate the adoption of EV 2 and 3 wheelers.
- Prepare for rising energy demand from data center investments.



## Shifting trade policy

- Lower effective trade costs (ASEAN integration and extra-regional interoperability)
- Enhance enabling infrastructure for upgrading (standards, testing, certification)
- Manage upstream dependencies strategically while building incremental domestic capability where feasible.



# Building Thailand's industries of the future



Digital services



Advanced manufacturing



Agribusiness



Sustainable and Health  
tourism



Creative economy





# Advanced Green Manufacturing: Turning Climate Challenges into Opportunities

## Global demand for green goods:



• **x5 EVs** by 2030



• **x3 solar PV capacity** by 2030



## Thailand is already:



The world's leading exporter of **eco-friendly air conditioners**.



Accounts for **4.2 percent** of **global solar photovoltaic exports**.



Emerging as a production hub for **EVs & components**.

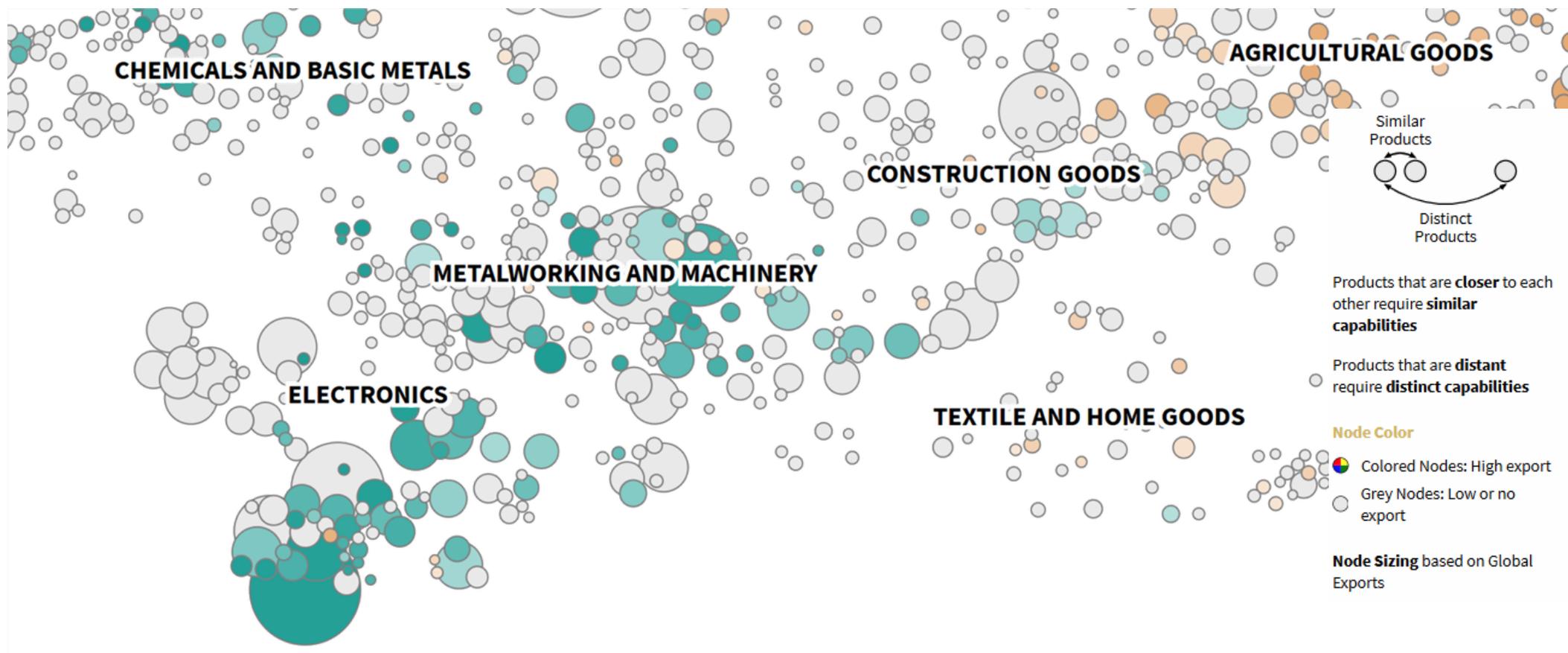
Green product exports as a share of total exports was high and increasing  
(% of country's total exports, 2023)





# The production base is complex and diversified across major sectors, including **electronics, electrical appliances, motor vehicles, and machinery.**

Product complexity of Thailand's product space, 2023

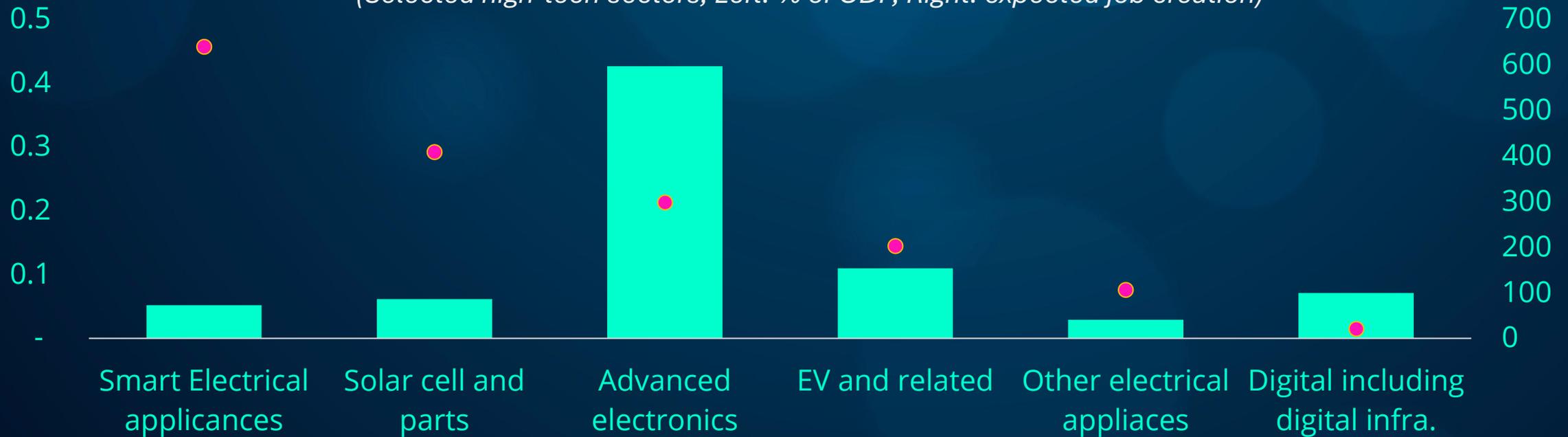




# Major global shifts toward advanced manufacturing and de-carbonization will shape Thailand's next phase of development

## BOI certificate issuance for investment promotion in green industries has risen

(Selected high-tech sectors, Left: % of GDP, Right: expected job creation)



■ BOI certificate issuance, % of GDP, average of 2018-24

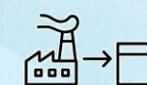
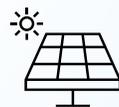
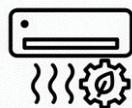
● Employment of Thais per project, persons (RHS)

**Note:** Employment refers to the expected numbers of job creation indicated in the investment promotion applications

**Source:** Board of Investment; World Bank staff calculations.



# High-opportunity champions are EVs, Solar PVs, and energy efficient air conditioners, based on competitiveness, global demand, and product sophistication



## Potential sectors selection:



### 1. Global market share:

Is the product more productive in a sector relative to other countries?



### 2. International market growth:

Is this international market growing fast enough to make policy attention worthwhile?



### 3. Product sophistication:

Which sectors requires similar technology to high tech exporting countries?

Indicators:	Energy efficiency	Renewable energy	Waste water management	Air pollution control	Carbon capture and storage	cleaner technologies
RCA	4.40	1.09	1.02	0.82	0.70	0.37
Global market share	1.71	1.35	1.51	1.00	1.25	0.68
Global import growth	2.09	3.37	2.03	6.47	1.05	9.19
Product complexity	0.37	0.43	0.47	0.79	0.68	0.57
<b>Product potential</b>	High RCA in <b>energy efficient air conditioner</b>	Emerging <b>Solar PV industry</b> with rising global market share	High RCA but low complexity	High product complexity; Rising global demand	investment and regulatory frameworks are insufficient to scale up CCUS	Rising global <b>demand for EV</b> with potential to transform fuel vehicle supply chain

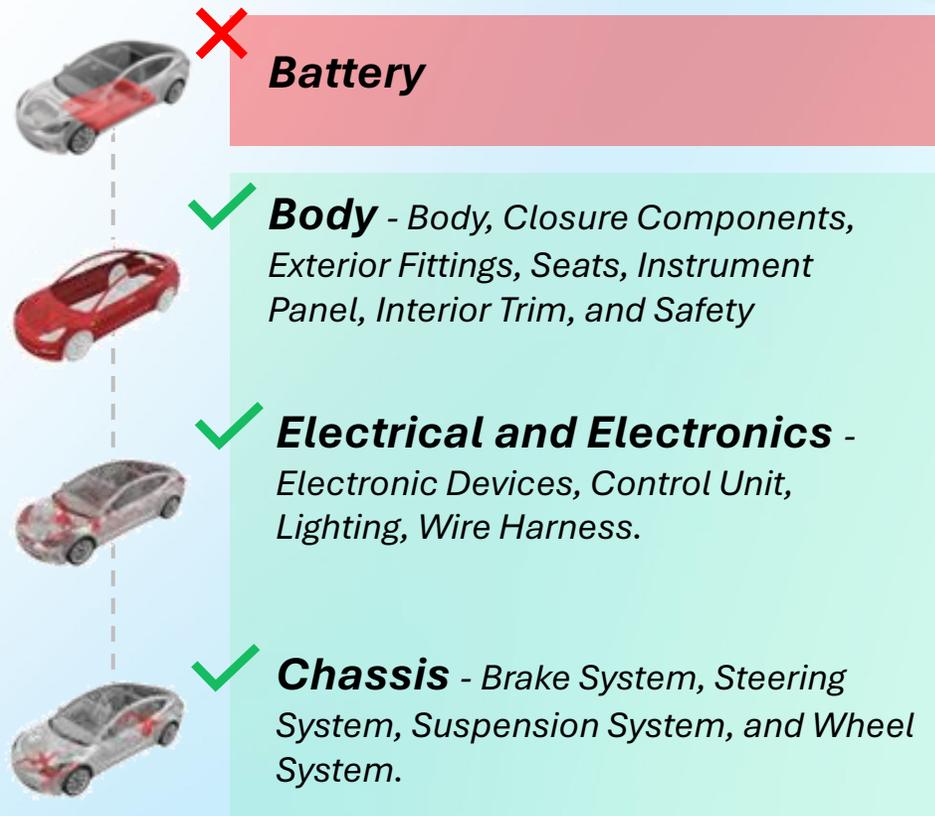
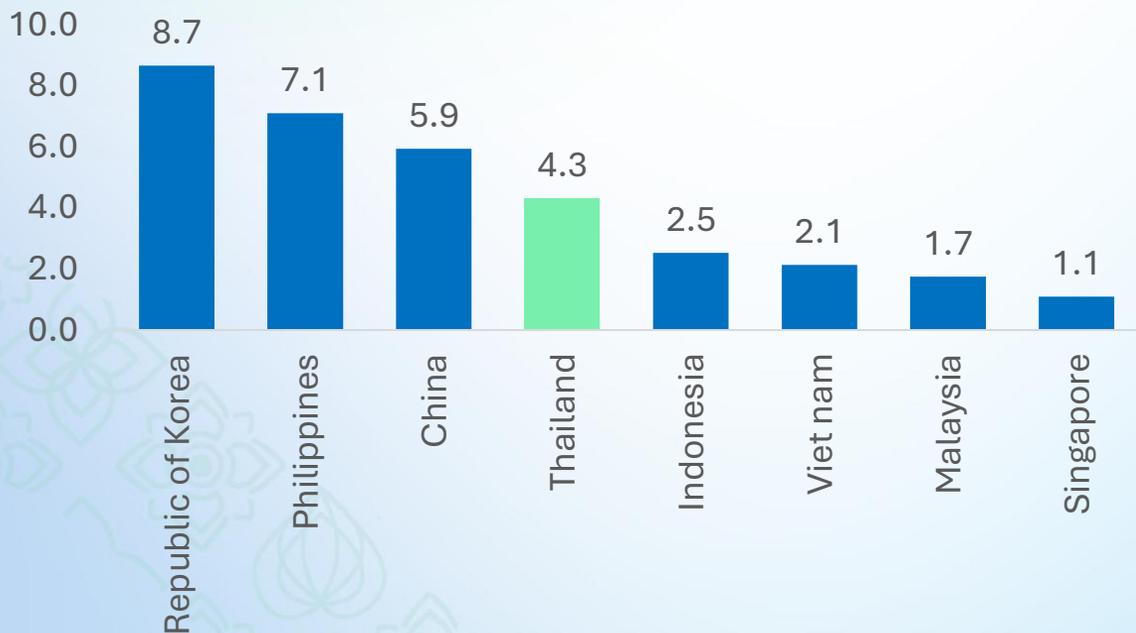


# EV: Despite limited battery production, strong automotive supply chain and EV policy drive Thailand's advantage for EV

Thailand has potential to expand EV production and increase exports, leveraging its well-established base in electronics, body, and chassis manufacturing, with current automotive industry accounting for 3.1% of GDP and 9.1% of employment

## Broad EV value chain exports which include wider vehicle manufacturing value chain used in either ICE vehicles or EVs

(%, share of total country's exports)

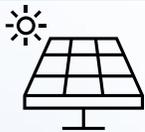


around **80%** of auto parts sales could be used in EVs, with **58%** of sales being unaffected and **19%** requiring only limited modification

Source: TEM February 2026

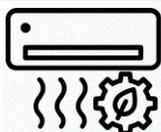
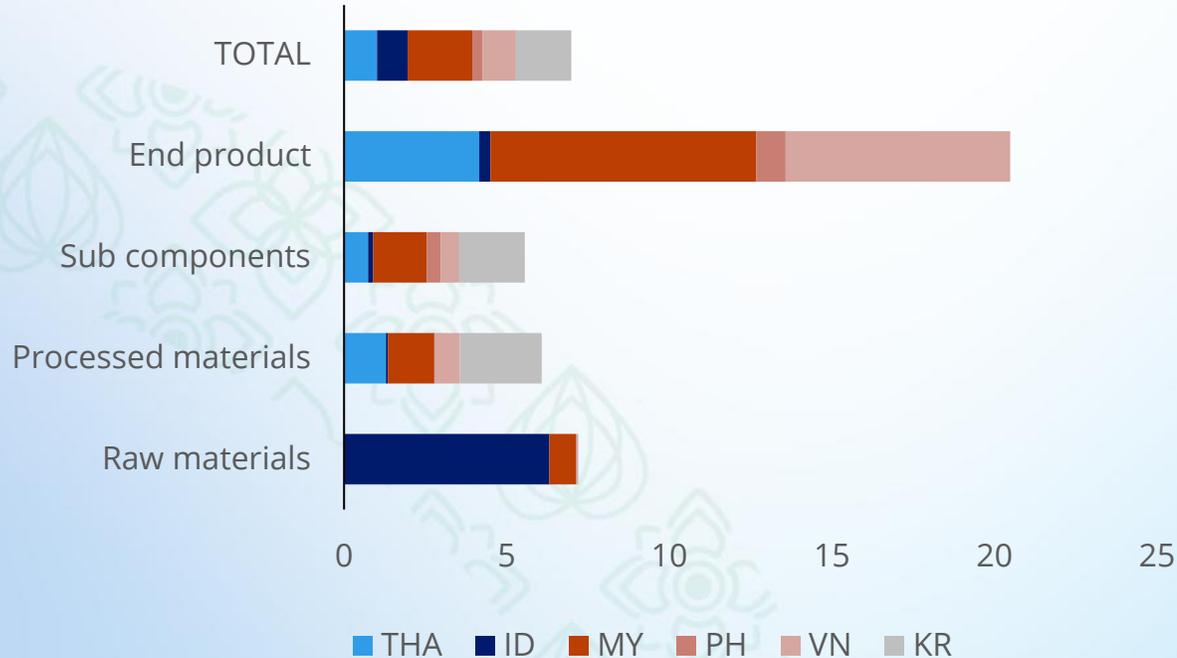
Note: Green Complexity Potential measures how much potential a country has to diversify into green, complex products in the future based on its existing competitive strengths.

# Thailand can capture higher value-added solar PV and air-conditioner, by focusing on technology upgrading



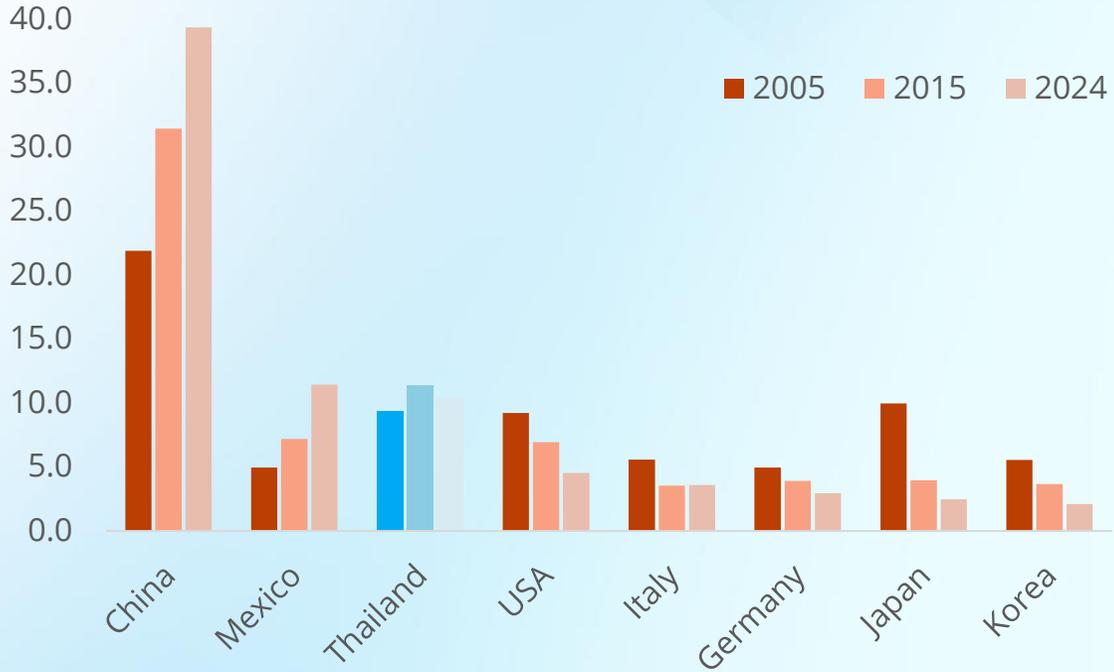
**Thailand’s comparative strength in Solar PV is reflected in global market shares in processed materials and intermediate components**

*(% of world exports, only product with Exports>Imports)*



**Thailand is the world’s 3rd largest exporter of air conditioners, driven by energy efficient technology transferred from Japanese firms**

*(%, global market share)*



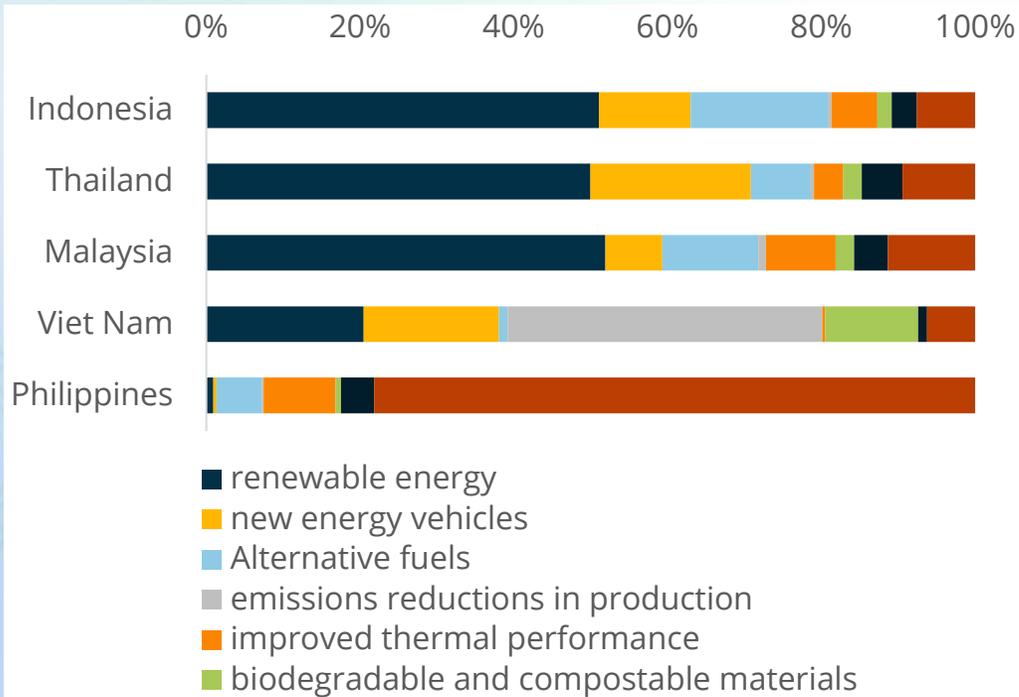
**Source:** UN Comtrade; CEPII's BACI database; World Bank staff calculations. See [Rosenow and Mealy, 2024](#)



# By prioritizing high-skilled investment and innovation, the expansion of green manufacturing exports can deliver sustained gains in GDP and jobs.

## LCT Job creations in Thailand focus on renewable energy and new energy vehicles

Share of all online job postings related to LCTs, 2022, % of LCT job openings



Capturing opportunity from rising global demand for **EV, Solar PV, and energy efficient cooling system** ...can lead to important economic gains:

### Impact on exports:

**+5.7% of GDP** higher than baseline in 2035

### Impact on GDP growth:

**+0.3 ppts of GDP** higher than baseline in 2035

### Impact on Jobs:

**+200,000 jobs** higher than baseline in 2035

Source: Mealy and Stapleton “Mapping the emergence of cleantech industries in Southeast Asia” (2025) Note: LCTs are measured using the classification in Bastos et al. (2024) of climate change mitigation technologies. This includes three technologies of wind, solar and EVs



## Unlocking low-carbon technology gains depends on three pillars



### Pricing signals

**Goal:** Raises demand for low-carbon technologies and processes

- Create clear market signals by **pricing carbon**, gradually reducing **fuel subsidies**
- Developing **competitive power markets** to support clean energy, including direct renewable Power Purchase Agreements (PPAs)



### Domestic supply chains and skills

**Goal:** Enhances local supplier capacity, increases domestic value added, and supports quality job creation in higher-skill segments

- Strengthen **basic education** for critical thinking & lifelong learning
- Expand **training, certification & scholarships** for EV mechanics, solar installers, and sustainable engineers
- Introduce **talent-attraction & upskilling programs**



### Industrial policy for local upgrading

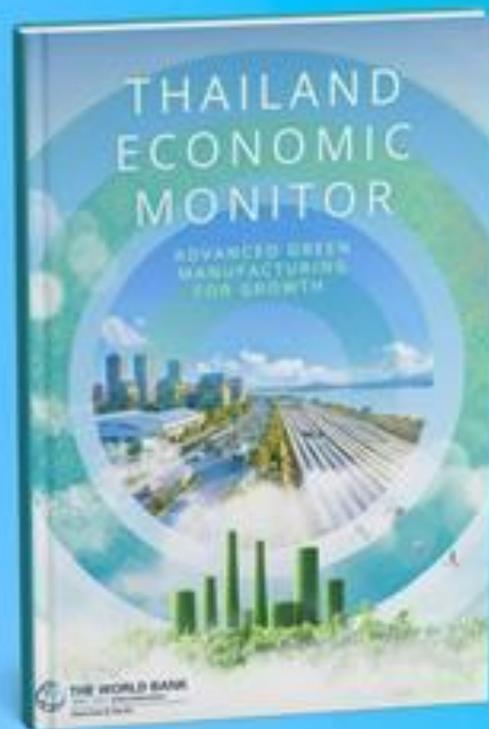
**Goal:** Ensures FDI drives productivity, IP creation, R&D capability, and skill upgrading

- Align **incentives (e.g., EV 3.5)** with local supply-chain integration
- Require **technology transfer & SME participation** in FDI projects
- Use Competitiveness Enhancement Fund to co-invest in firms that meet **technology transfer and local workforce training criteria**

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# Full Report

THAILAND  
ECONOMIC  
MONITOR  
ADVANCED GREEN  
MANUFACTURING  
FOR GROWTH



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for Growth

