



Multilateral ECM (Energy Cost Monitoring)

Nomura Lab at Keio Economic Observatory (KEO), Keio University, Tokyo

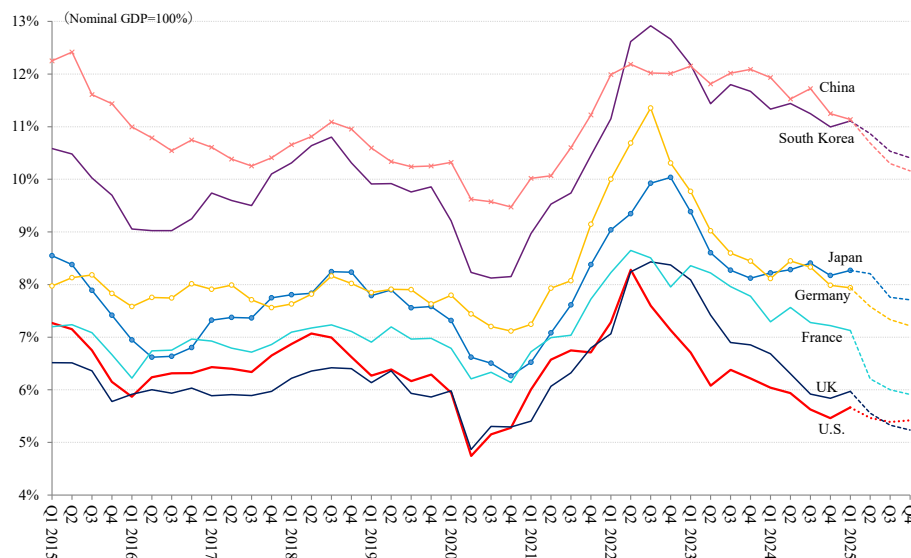
ECM_202506

July 5, 2025

Koji Nomura, Sho Inaba, and Mansaku Yoshida.

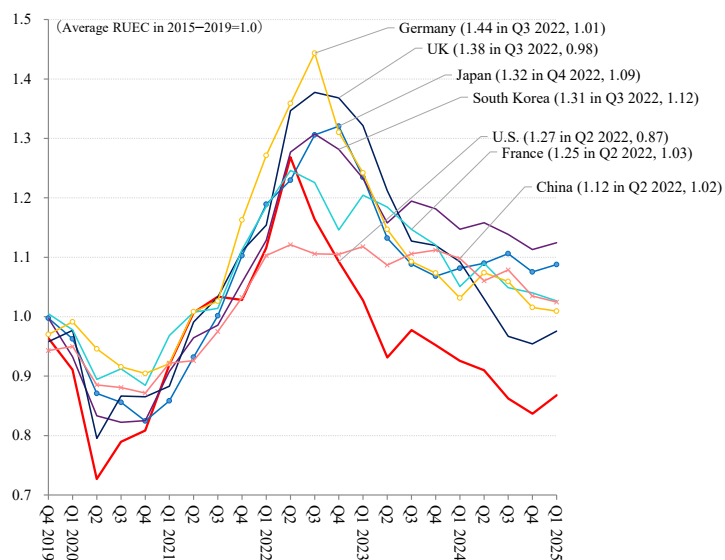
1 RUEC (Real Unit Energy Cost)

1.1 RUEC Levels



Unit: Share (GDP at current market prices in each period=100% in each country). Period: Q1 2015–Q1 2025. Notes: The dotted line represents forecasts for Q2 2025–Q4 2025. The prices are seasonally adjusted and include taxes and subsidies. The volumes are seasonally adjusted.

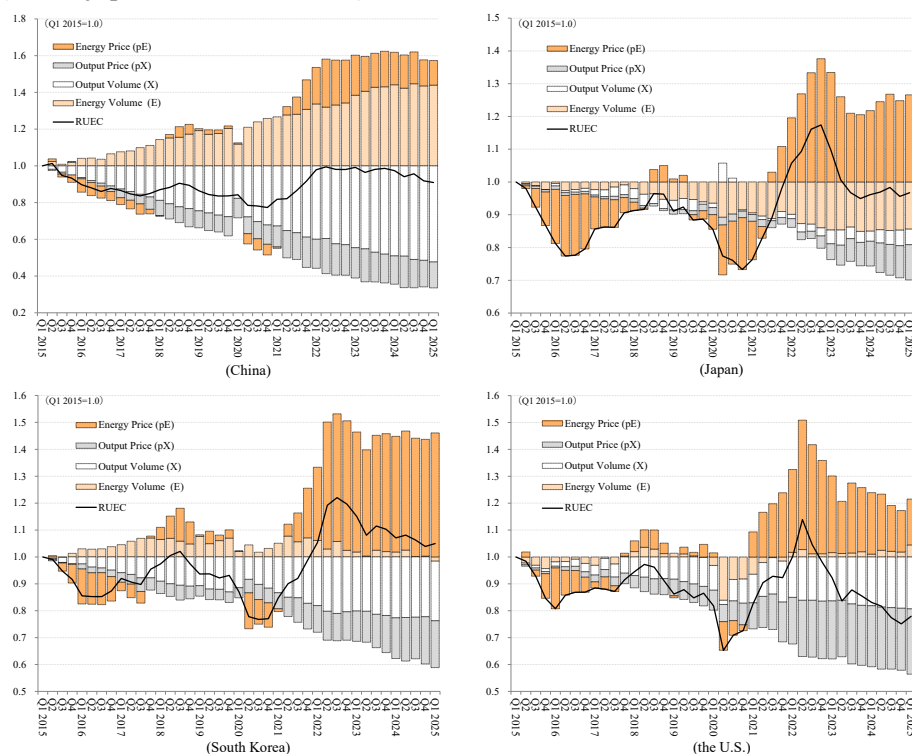
1.2 Post-Pandemic RUEC Indices



Unit: Index (average RUEC in 2015–2019=1.0 in each country). Period: Q4 2019–Q1 2025. Notes: The counts after the country name indicate the peaks in RUEC surges and the recovered level as of Q1 2025 relative to the pre-pandemic level. The prices are seasonally adjusted and include taxes and subsidies. The volumes are seasonally adjusted.

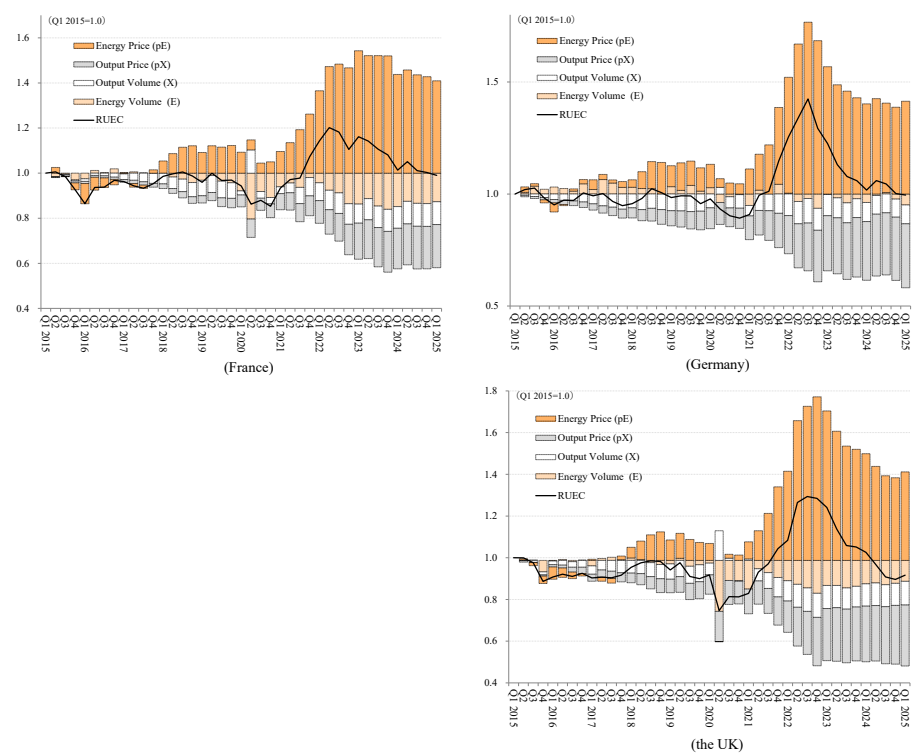
1.3 RUEC Decomposition

• Asia (China, Japan, and South Korea) and the U.S.



Unit: Index (RUEC in Q1 2015=1.0). Period: Q1 2015–Q1 2025. Notes: The prices are seasonally adjusted and include taxes and subsidies. The volumes are seasonally adjusted.

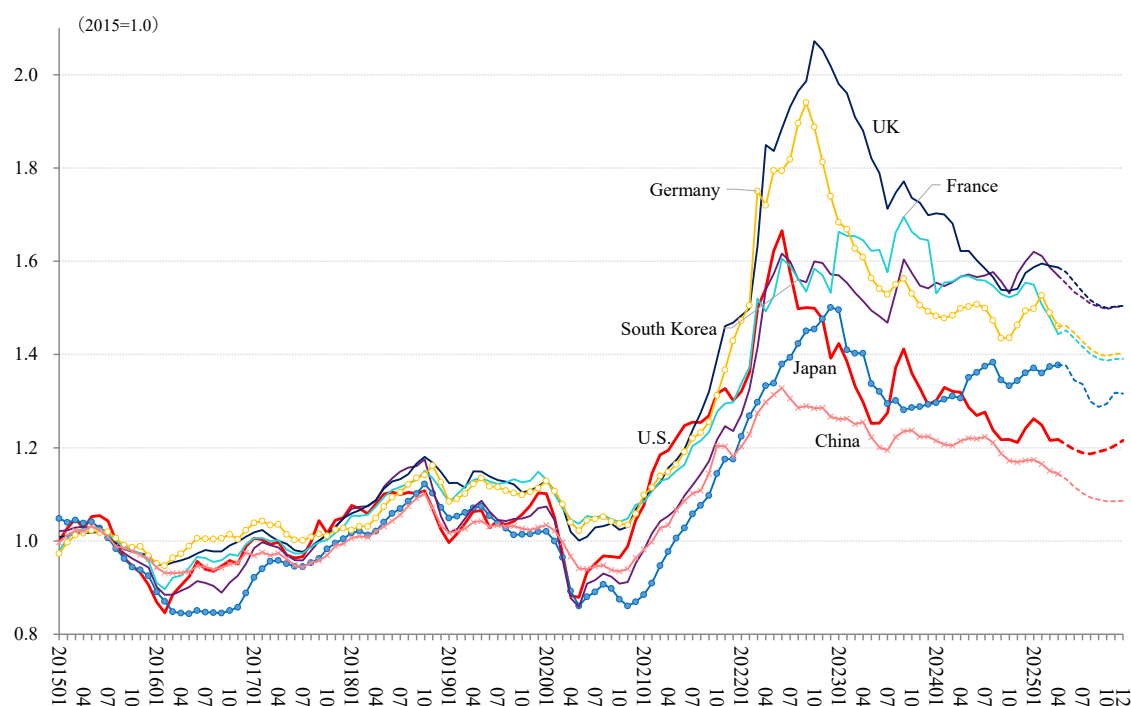
• EU (Germany, France) and the UK



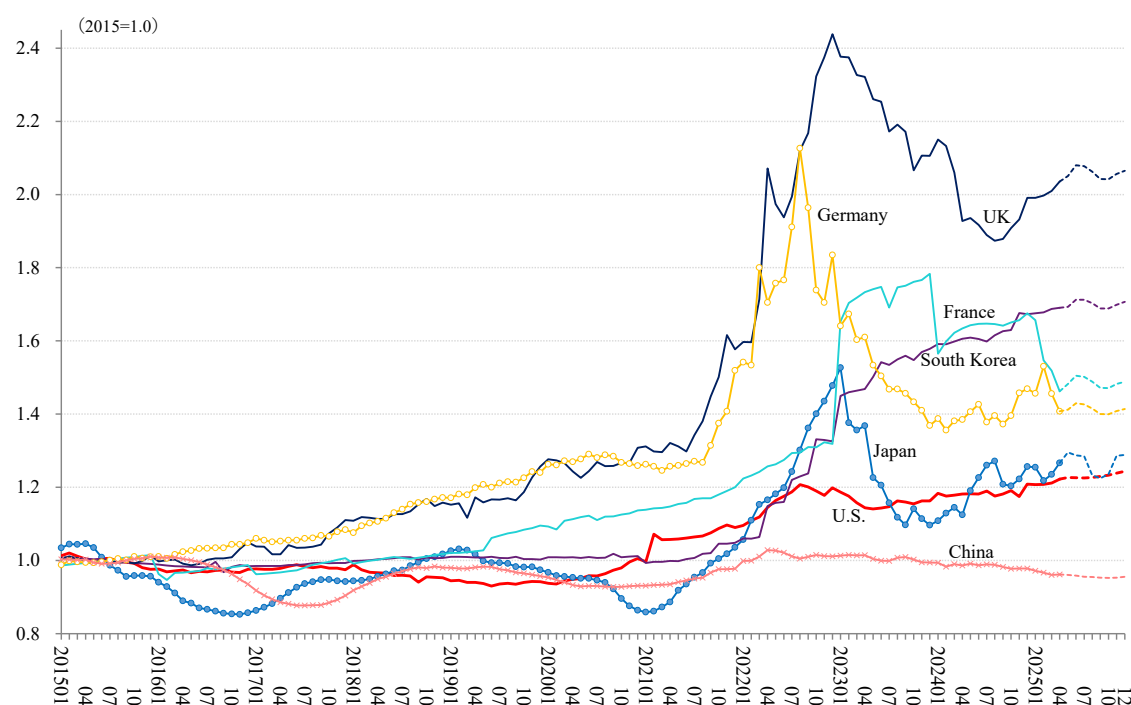
Unit: Index (RUEC in Q1 2015=1.0). Period: Q1 2015– Q1 2025. Notes: The prices are seasonally adjusted and include taxes and subsidies. The volumes are seasonally adjusted.

2 Energy Prices

2.1 Quality-adjusted Energy Prices for Final Use



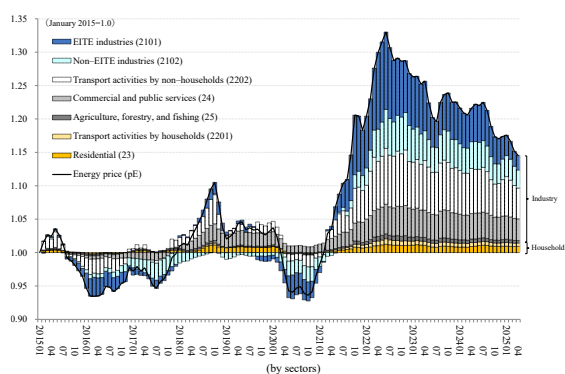
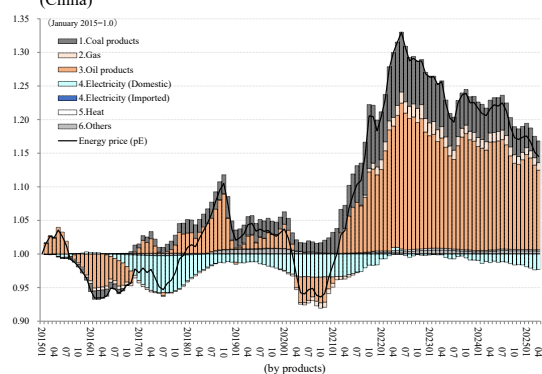
2.2 Electricity price



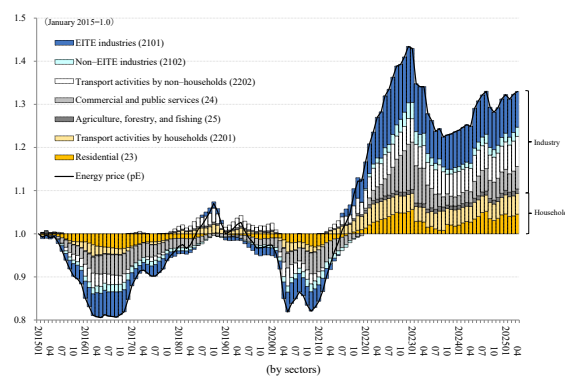
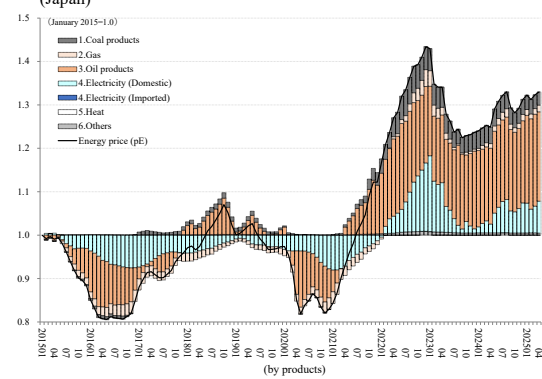
2.3 Sources of Energy Price Changes

• Asia (China, Japan, and South Korea) and the U.S.

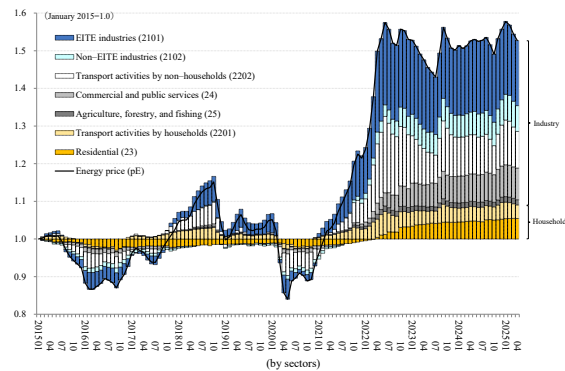
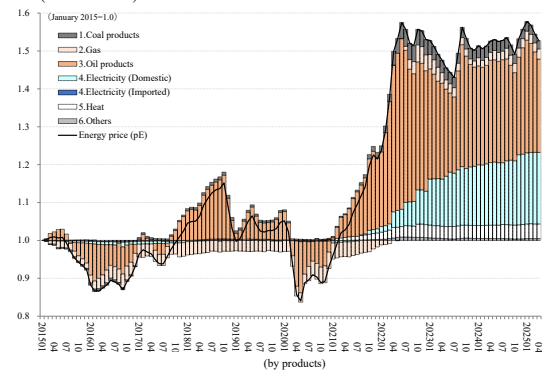
(China)



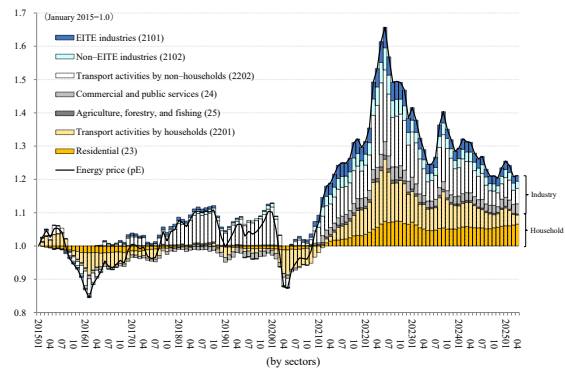
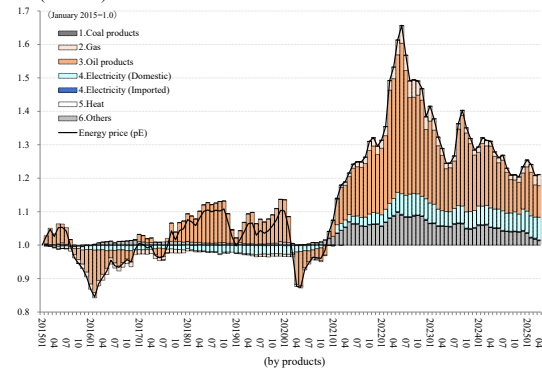
(Japan)



(South Korea)



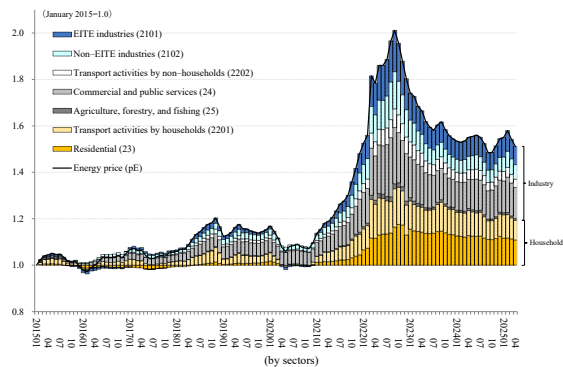
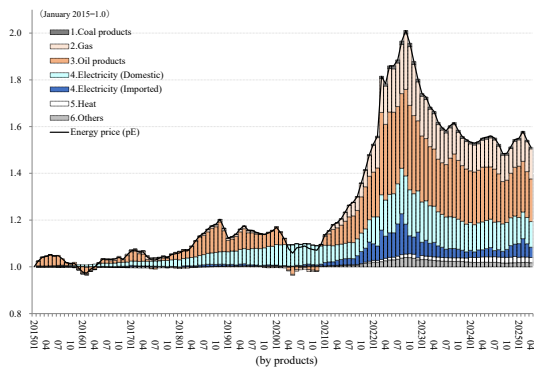
(the U.S.)



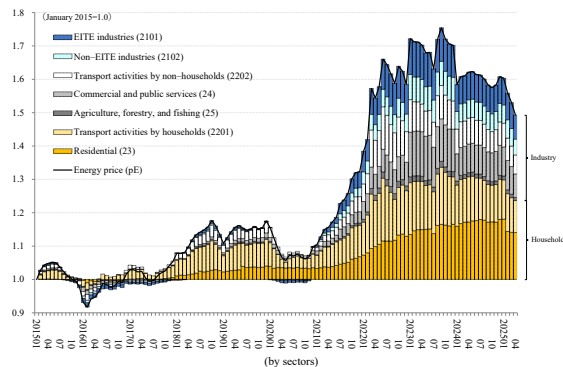
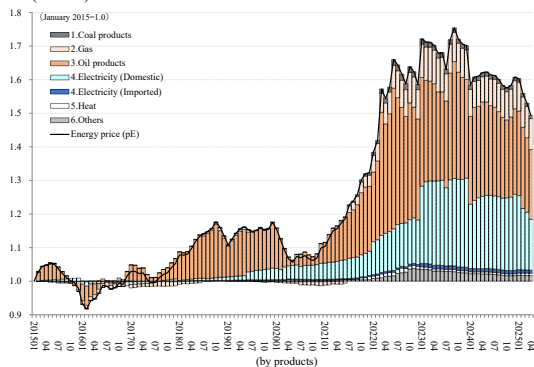
Unit: Index (price at local currency unit in January 2015=1.0 in each country). Period: January 2015– April 2025. Note: The prices are seasonally adjusted and include taxes and subsidies.

• EU (Germany, France) and the UK

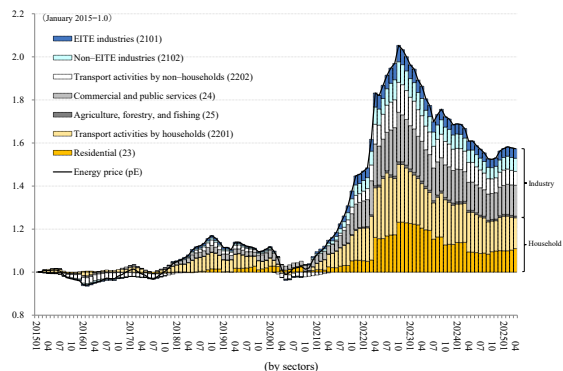
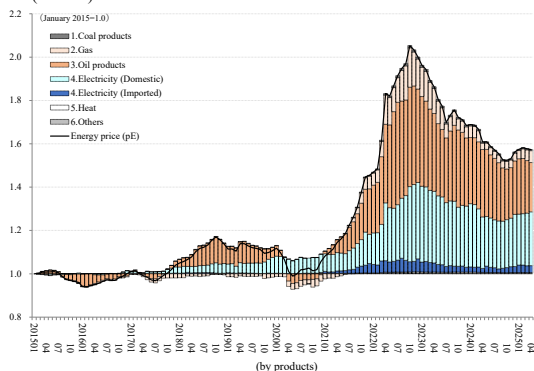
(Germany)



(France)

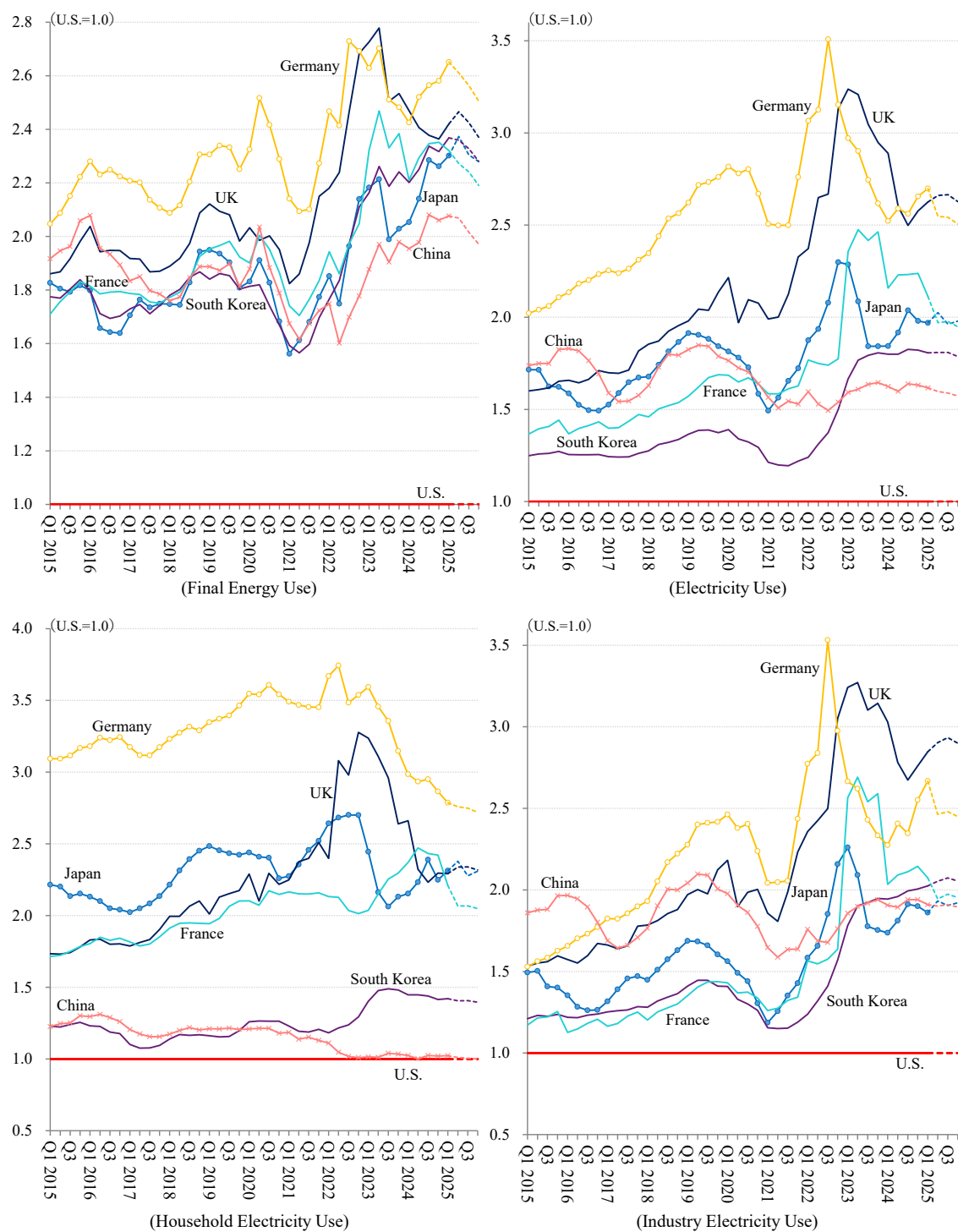


(the UK)



Unit: Index (price at local currency unit in January 2015=1.0 in each country). Period: January 2015– April 2025. Note: The prices are seasonally adjusted and include taxes and subsidies.

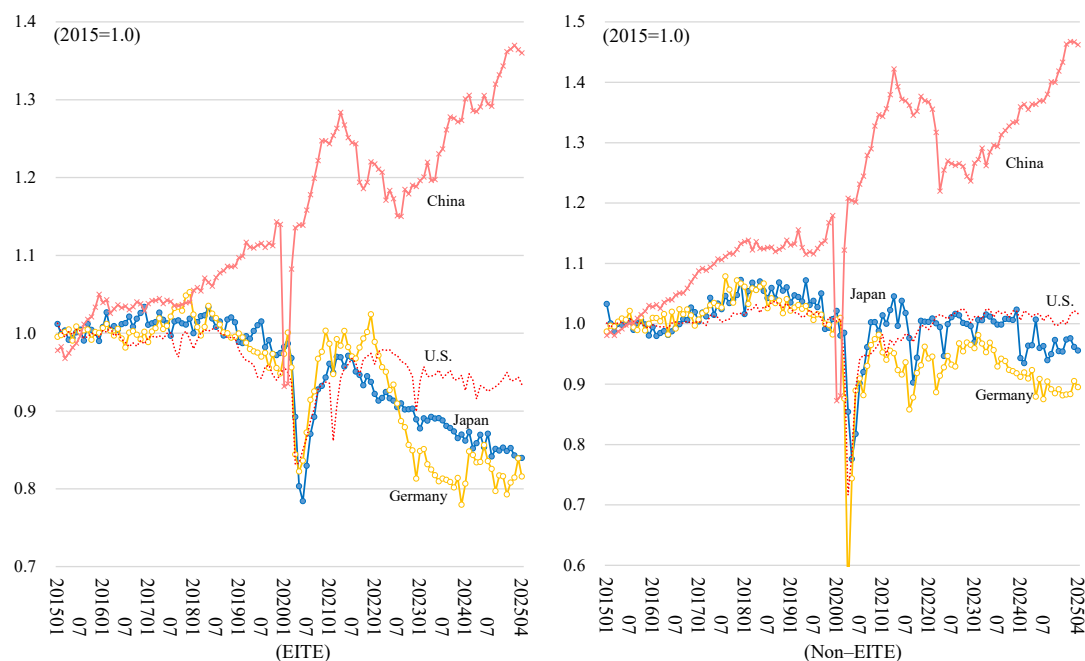
3 Real PLI



Unit: Index (the U.S. REP in each period=1.0). Period: Q1 2015–Q1 2025. Notes: The dotted line represents forecasts for Q2 2025–Q4 2025. The prices are seasonally adjusted and include taxes and subsidies.

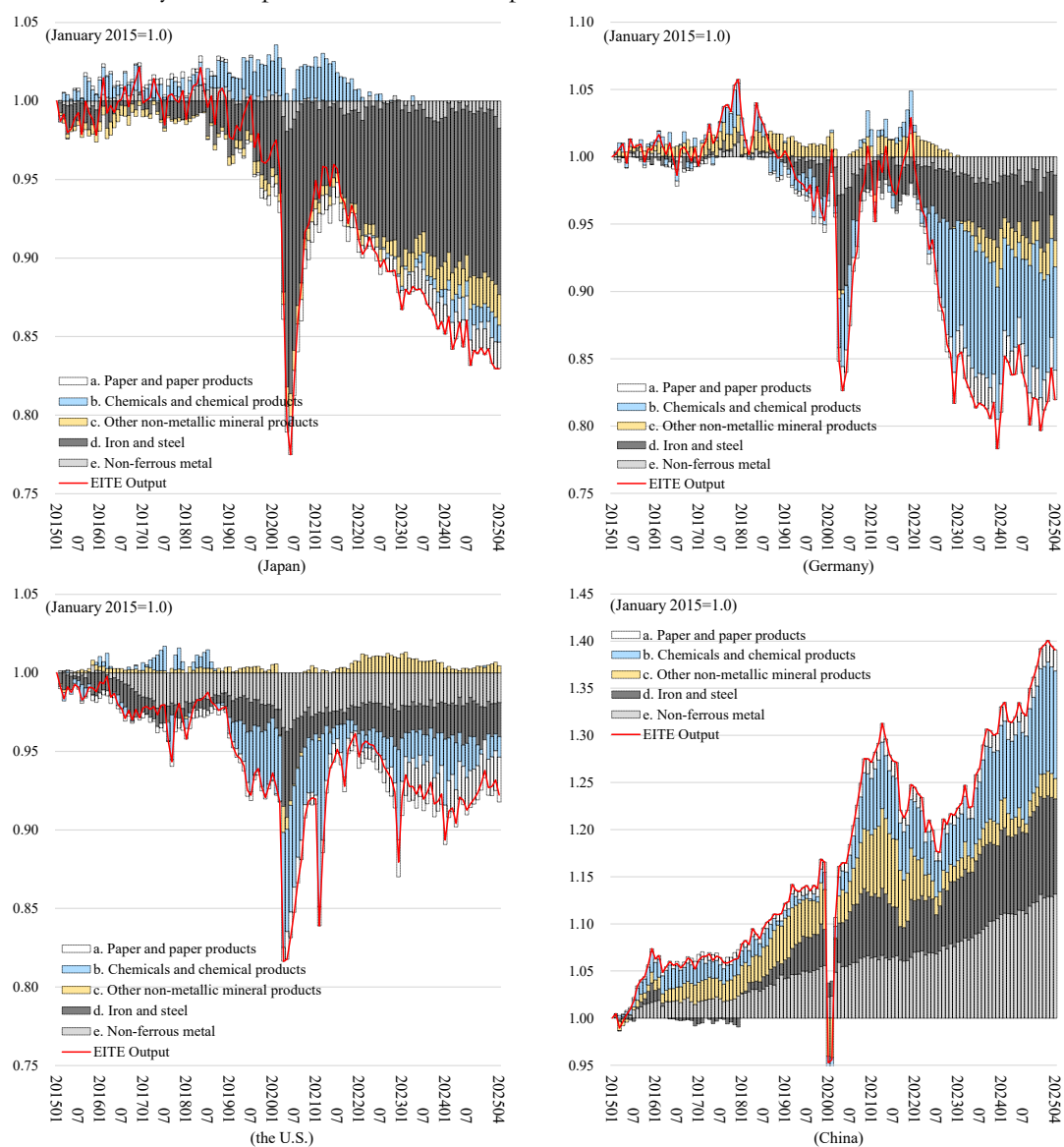
4 EITE Output Index

4.1 EITE and Non-EITE Outputs



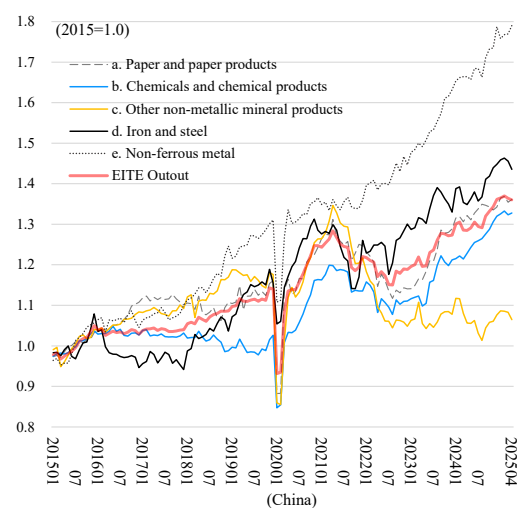
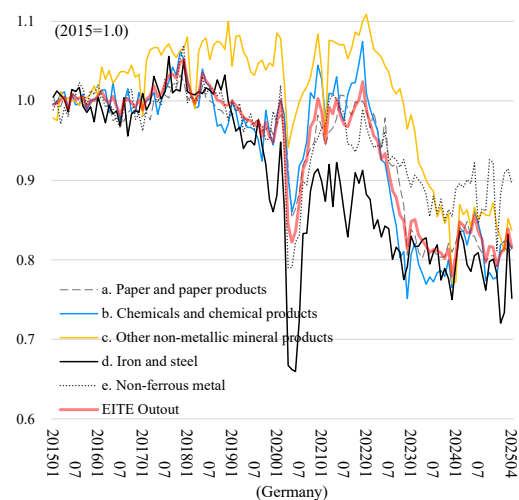
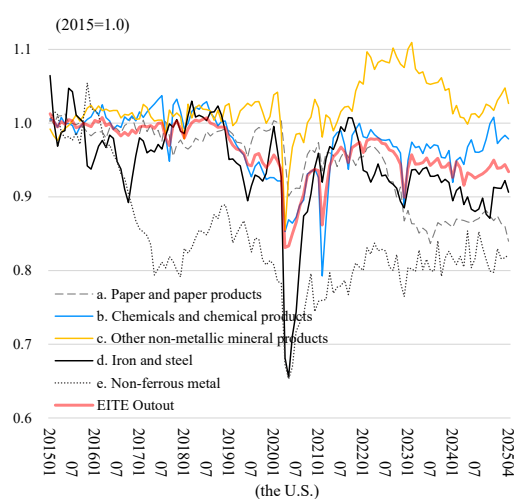
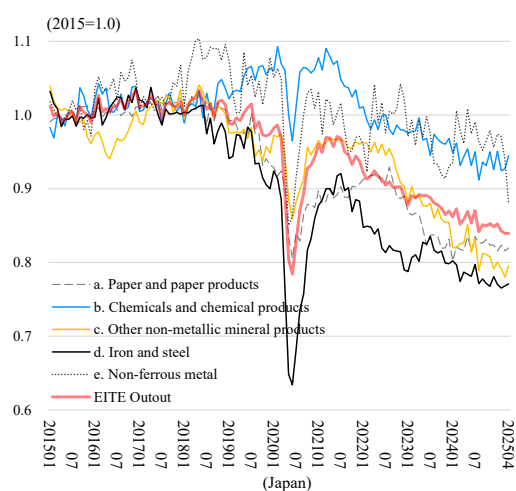
Unit: Index (output in January 2015=1.0). Period: January 2015– April 2025. Sources: our computation is based on (Japan) Cabinet Office, Economic and Social Research Institute (ESRI) *Japanese National Accounts (JSNA)*, Ministry of Economy, Trade and Industry (METI) *Indices of Industrial Production, Current Production Statistics*, Bank of Japan (BoJ) *Corporate Goods Price Index (CGPI)*, and National Federation of Ready-Mixed Concrete Industry Associations *National ready-mixed concrete shipments*. (Germany) Statistisches Bundesamt (Destatis) *German National Accounts, Cost Structure Survey in Manufacturing, Mining and Quarrying, Indices of Production in Manufacturing, Index of Import Prices, and Foreign Trade*. (The U.S.) Bureau of Economic Analysis (BEA) *The National Income and Product Accounts (NIPAs)*, Federal Reserve Board (FRB) *Industrial Production and Capacity Utilization*, and Bureau of Labor Statistics (BLS) *Producer Price Indexes*. (China) National Bureau of Statistics of China (NSB) *China's System of National Accounts (CSNA)*, *Producer Price Index*, *Value-added Industrial Output*, and *Main Indicators of Industrial Enterprises*. Notes: EITE manufacturing are defined as Paper and paper products, Chemicals and chemical products (excluding pharmaceuticals), Other non-metallic mineral products, Iron and steel, and Non-ferrous metal. Non-EITE manufacturing are all other manufacturing industries. Indices.

4.2 Industry Decomposition of EITE Output Index



Unit: Index (output in January 2015=1.0). Period: January 2015– April 2025. Source: see section 4.1. Note: The industry contribution is based on the Translog index using the previous year's output value share.

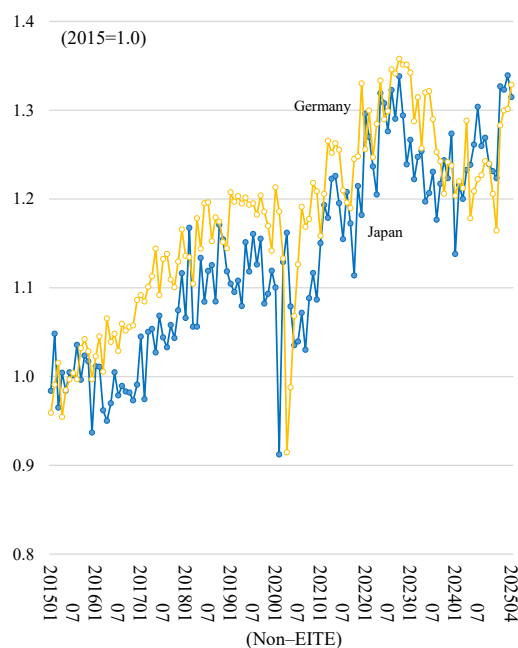
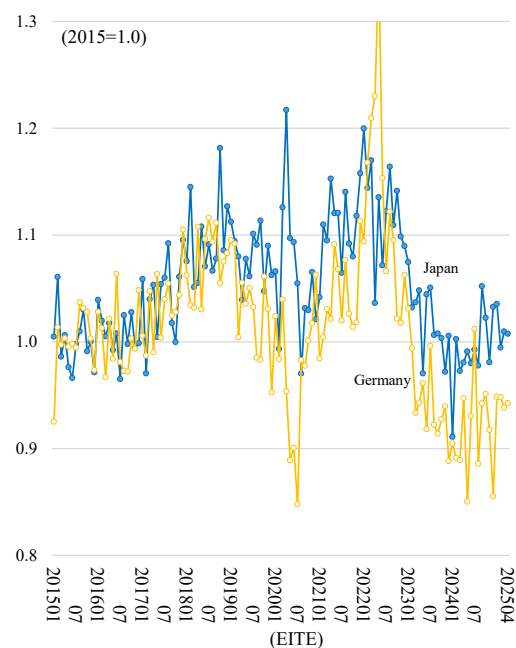
4.3 EITE Output Indices by Industry



Unit: Index (output in 2015=1.0). Period: January 2015– April 2025. Source: see section 4.1.

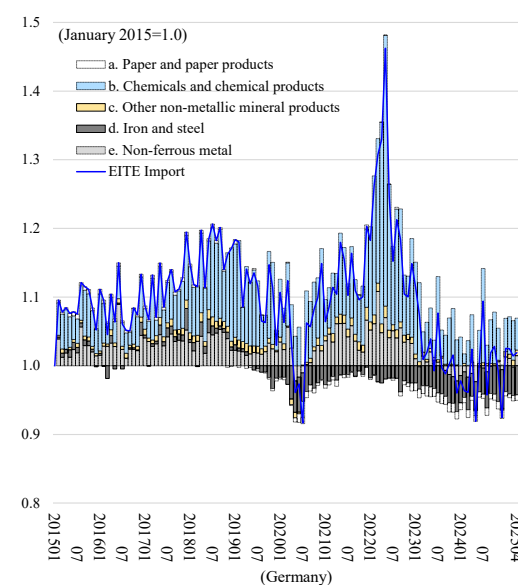
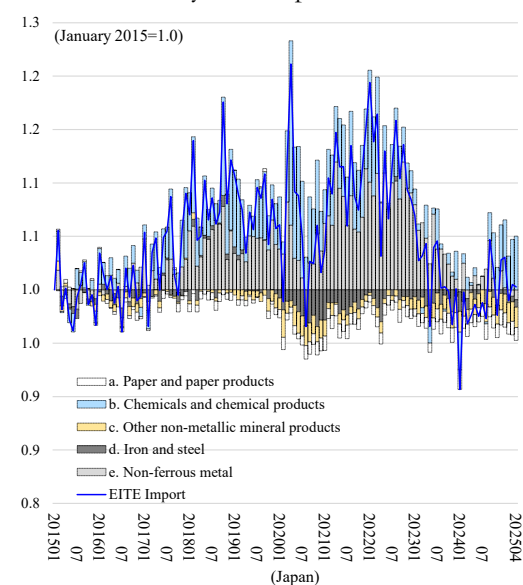
5 EITE Import Index

5.1 EITE Import



Unit: Index (import in January 2015=1.0). Period: January 2015– April 2025. Note: Import Indices is based on the Translog index using the previous year's import value share.

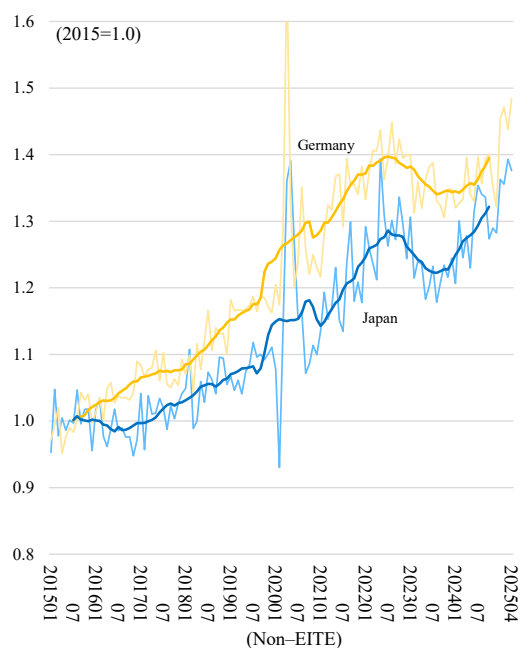
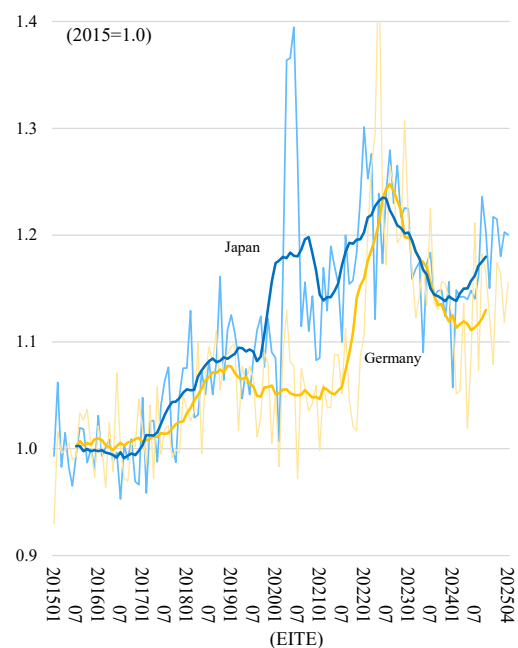
5.2 Industry Decomposition of EITE Import Index



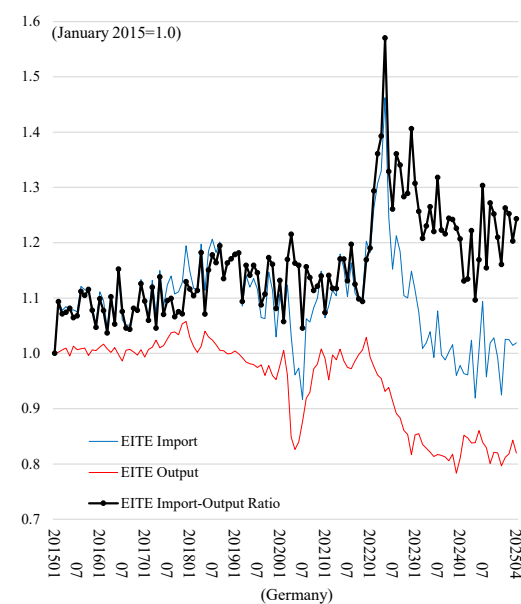
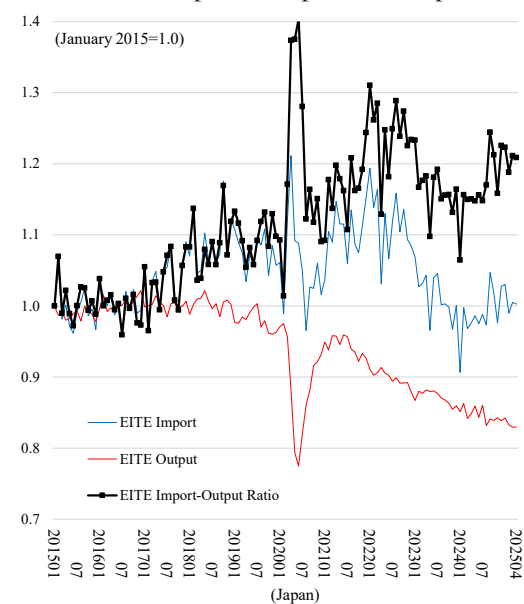
Unit: Index (import in January 2015=1.0). Period: January 2015– April 2025. Note: Import Indices is based on the Translog index using the previous year's import value share.

6 EITE Import–Output Ratio

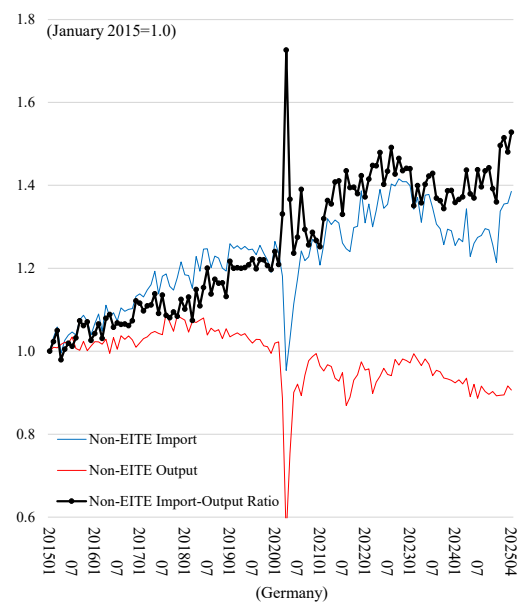
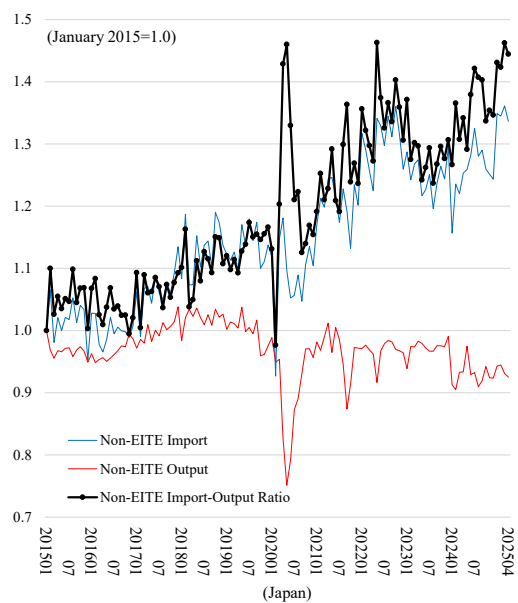
6.1 EITE Import-Output Ratio



6.2 EITE Import, Output, and Import-Output Ratio



6.3 Non-EITE Import, Output, and Import-Output Ratio



Unit: Index (import and output in January 2015=1.0). Period: January 2015– April 2025.