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## Energy Price Surge and Widening Real Price Differentials in the Post-Pandemic Era: A Comparative Analysis of Seven Major Countries

Koji Nomura and Sho Inaba

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### Abstract

This paper aims to measure and analyze the changes in international price differentials in comprehensive final energy consumption accompanying the recent energy price surges across seven major countries (Japan, China, South Korea, the U.S., the UK, Germany, and France). For measuring international price differentials, we employ not only the Price Level Index (PLI) for energy but also the Real Price Level Index (Real PLI), which accounts for the price differentials of outputs produced using energy inputs. Real PLI is an indicator independent of exchange rate fluctuations. Our preliminary estimates from January 2015 to December 2024 reveal the following observations. First, the US has maintained an overwhelming advantage in real energy price differentials even before the pandemic, with the other six countries bearing energy price burdens 1.8 to 2.2 times higher than the U.S. Second, while energy prices surged similarly across major countries during the global economic recovery from the pandemic beginning in early 2021, the real price differentials relative to the U.S. also expanded in five countries (excluding China) during the same period. These differentials widened to 2.3–2.8 times at their peak and continue to persist at 2.3–2.6 times the U.S. level. Third, China has significantly suppressed energy price increases during this period, particularly for coal and electricity, maintaining its price differential with the U.S. at nearly the pre-pandemic level. As the second Trump administration pursues energy dominance by expanding the use of inexpensive fossil fuels, further widening of energy price differentials and loss of international competitiveness are inevitable if Japan and European countries continue their current decarbonization policies. The Japanese economy should consider shifting toward policies aimed at reducing these international price differentials.

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