No. 276 November 17, 2023

KIEP

Opinions

Adapting to the European Energy Crisis: Insights and Policy Initiatives

Yoonjung KIM
Ph.D., Associate Research Fellow, Europe Team
Korea Institute for International Economic Policy

The Russian invasion of Ukraine has been a wake-up call in many ways for the whole world, but especially for Europe. Economic security has become a key motivation for governments around the world to reaffirm their ties with like-minded countries and ponder the dependencies on others that may not share values, such as democracy and the rule of law. The invasion has exacerbated the economic fragmentation of the global market, and the dust from the COVID-19 pandemic has barely begun to settle. Many European countries relied on cheap natural gas imported from Russia, and most of them were not ready to face the consequences of the broken relationship. Energy prices in Europe began to spike in the fall of 2021 and peaked in 2022, after Russia's invasion of Ukraine began. Russian natural gas supplies plummeted after the economic sanctions were imposed on Russia, and energy inflation reached 27% in the Eurozone, the highest level since 1997 (Eurostat, 2022). Both the high level and volatility of energy prices led to hardship for households and industry. Various

www.kiep.go.kr

studies estimated that the energy crisis due to the Russian invasion of Ukraine could be associated with a reduction in GDP of 1% to more than 5% and that the impact on inflation would be lasting in various European countries (Di Bella et al., 2022; Kammer, 2022).

European countries pulled themselves together and fought the brutal battle against the energy crisis. On the EU level, policies such as “REPowerEU” aimed to soften the blow of the energy crisis by accelerating the transition to greater reliance on clean energy supply sources, diversifying the energy supply source, increasing energy efficiency, and reducing energy consumption (European Commission, 2023). Still, given that these objectives are relatively long-term to strengthen the economy to be less vulnerable to the fluctuations of a particular energy source, to name one goal, Member States initiated policy responses to alleviate the burden of high energy prices in the short term out of necessity, as the disruptions across various sectors of the economy required an immediate response. The policy response differed across countries, as each Member State faced a different situation in terms of energy dependence on Russia, energy mix, and administrative capacity.

Focusing on Europe’s three largest economies, France, Germany, and the United Kingdom were all affected by the energy crisis, but their policy responses reflected the heterogeneity of their economic and administrative situations. Germany’s reliance on Russian natural gas was greater than that of the other two countries, leading to higher inflationary pressure, at least through the first quarter of 2023. France’s reliance on Russian energy was relatively lower, and its attitude toward nuclear power as an energy source has become more favorable since the energy crisis. The United Kingdom has a high dependence on natural gas, but Russia was not its main trading partner for natural gas imports. However, France’s nuclear power plant malfunction caused a supply shortage of electricity supply, and the United Kingdom was affected by the global LNG prices due to the reduction of Russian gas supply to the global market. All three countries implemented a variety of policy measures, including energy tax cuts for energy, price regulations such as price caps or caps on price growth rates, and cash transfers for households to compensate for the high energy bills (Kim and Lim, 2023). Some of these measures created price distortion by directly affecting the energy price, while others were provided selectively, targeting low-income households or firms in energy-intensive industries.

Household support policies can be categorized along two dimensions by considering 1) whether or not there is price distortionary effect, and 2) whether the policy is targeted at a specific population or provides benefits universally. For example, Germany spent most of its resources on universal and non-price distortionary policies, which can include heating subsi-

dies, and temporary tax allowance increases (German Federal Government, 2022). The famous 9-euro monthly public transport ticket was not energy price distortionary, but it was a universal policy as it was not limited to low-income or vulnerable populations. France spent almost 75 percent of the government spending on household support which was universal and price distortionary, such as electricity and petroleum price cuts and growth rate caps on gas and electricity prices. The United Kingdom spent about 40% of its total spending on household support on targeted and non-price distortionary policies by implementing measures such as providing energy subsidies for low-income households (Arregui et al., 2022). In general, Europe's heavy reliance on price distorting and universal policies has been criticized for its inefficiency in reports such as Arregui et al. (2022), and Amaglobeli et al. (2022).

Not surprisingly, low-income households tend to be burdened more in times of energy crisis (Celasun, Ikova, and Perry, 2022; Guan et al., 2023; UK Office for National Statistics, 2022). Energy is a necessity good with a relatively low-price elasticity of demand as there is a limit to how much people can reduce their energy consumption. Economic agents are affected by the energy price increase both directly and indirectly, as households need energy sources for heating and electricity use, and their consumption basket prices would be affected by the energy price increase, as the price of their final consumption goods would have required energy as an input. Even with policy efforts to increase energy efficiency or reduce energy consumption, the ability of lower-income households to invest in energy-efficient appliances is also low, leading to their continued vulnerability.

Supporting vulnerable households should be one of the main focuses of energy crisis management, but price distortionary policies are inefficient and it is also crucial to let the price signal do the work of reducing energy consumption automatically. Providing targeted subsidies to vulnerable households is a more efficient option, but it involves several aspects that require administrative capacity, which is why many countries have used universal price distorting measures. For example, identifying the households hit hardest by the energy crisis, increasing the take-up of assistance among eligible households, and finding a way to deliver assistance with low administrative costs should be manageable tasks. One of the reasons why the United Kingdom was able to rely relatively more on targeted policy measures suggests its capability of identifying and delivering assistance. At the same time, Germany appears to have needed better administrative capacity to provide selective assistance, as it extended the deadline for the payment of energy bill subsidies because many recipients did not show up to receive the subsidies (Kim and Lim, 2023). Governments should also implement universal policies against

the energy crisis as there will always be people who fall through the cracks, but targeted policies should be one of the main tools to increase the efficiency of government spending. And these subsidies will reach the needy at different speed depending on the administrative capacity of the governments.

The political motivation to build a better system to protect vulnerable populations when the crisis seems to be avoided or passed can be minimal. Still, building a system for delivering assistance and improving the administrative capacity for discerning vulnerable or low-income households should be an essential goal in times with many potential risk factors, such as today. The winter of 2022 was warmer than expected, which was a blessing in disguise for many European countries, but it also highlighted the shortcomings of the current system. In addition to public assistance, Europe must find ways to reduce energy demand, stabilize the supply, and called-for reform of the electricity market (Zettelmeyer et al., 2022; Zachmann and Heussaff, 2023). Tracking how they make improvements and learn from the past mistakes would be a helpful lesson for countries like Korea, which relies on imports for nearly 95 percent of its energy source and thus faces inherent risk (Energy GHG Toral Information Platform Service, 2023). Korea has an energy voucher program that targets vulnerable households, but it relies primarily on the categorical eligibility of other assistance programs and demographic characteristics to determine eligibility. Reviewing the coverage and benefit level of the program seems like a good start before the upcoming winter. KIEP

References

Amaglobeli, David, Emine Hanedar, Gee Hee Hong, and Céline Thévenot. 2022. “Fiscal policy for mitigating the social impact of high energy and food prices.” IMF Note, no. 2022/001. International Monetary Fund.

Arregui, Nicolas, Oya Celasun, Dora M. Iakova, Aiko Mineshima, Victor Mylonas, Frederik G. Toscani, Yu Ching Wong, Li Zeng, and Jing Zhou. 2022. "Targeted, Implementable, and Practical Energy Relief Measures for Households in Europe." IMF Working Papers, no. 2022/262. International Monetary Fund.

Celasun, Oya, Dora Ikova, and Ian Perry. 2022. “How Europe Can Protect the Poor from Surging Energy Prices.” IMF Blog, August, 3. https://www.imf.org/en/Blogs/Articles/2022/08/03/how-europe-can-protect-the-poor-from-surging-energy-prices (Accessed October 31, 2023)

Di Bella, Gabriel, Mark J. Flanagan, Karim Foda, Svitlana Maslova, Alex Pienkowski, Martin Stuermer, and Frederik G. Toscani. 2022. “Natural gas in Europe: the potential impact of disruptions to supply.” IMF Working Papers, no. 2022/145. International Monetary Fund.

Energy GHG Total Information Platform Service. 2023. "[Energy dependence on import (yearly series)]." https://tips.energy.or.kr/statistics/statistics_view0210.do (Accessed October 31, 2023. In Korean)

Eurostat. 2022. "Energy inflation rate continues upward hike, hits 27%." February 25. https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220225-2 (Accessed October 30, 2023)

European Commission. 2023. "REPowerEU Affordable, secure and sustainable energy for Europe." https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en (Accessed October 31, 2023)

Guan, Yuru, Jin Yan, Yuli Shan, Yannan Zhou, Ye Hang, Ruoqi Li, Yu Liu, Binyuan Liu, Qingyun Nie, Benedikt Bruckner, Kuishuang Feng and Klaus Hubacek. 2023. "Burden of the global energy price crisis on households." *Nature Energy*, 8(3), pp. 304-316.

Kammer, Alfred. 2022. "Europe Must Address to Toxic Mix of High Inflation and Flagging Growth." IMF Blog. October 23. https://www.imf.org/en/Blogs/Articles/2022/10/23/europe-must-address-a-toxic-mix-of-high-inflation-and-flagging-growth (Accessed October 31, 2023)

Kim, Yoonjung and You Jin Lim. 2022. "Europe's Energy Crisis, National Policies and Industrial Production: Insights for South Korea." KIEP Policy Reference, no. 22-18. Korea Institute for International Economic Policy.

German Federal Government. 2022. "What will the relief packages deliver in practice?" July 25. https://www.bundesregierung.de/breg-en/news/relief-faq-2065498 (Accessed October 31, 2023)

UK Office for National Statistics. (2022) "Energy prices and their effect on households." February 1. https://www.ons.gov.uk/economy/inflationandpriceindices/articles/energypricesandtheireffectonhouseholds/2022-02-01 (Accessed October 31, 2023)

Zachmann, G. and C. Heussaff. 2023. "Phased European Union electricity market reform." Bruegel.org, March 16. Policy Brief. https://www.bruegel.org/policy-brief/phased-european-union-electricity-market-reform (Accessed October 31, 2023)

Zettelmeyer, Jeromin, Simone Tagliapietra, Georg Zachmann, and Conall Heussaff. 2022. "Beating the European Energy Crisis." IMF.org, December. IMF Finance & Development. https://www.imf.org/en/Publications/fandd/issues/2022/12/beating-the-european-energy-crisis-Zettelmeyer (Accessed October 31, 2023)