Burden of the global energy price crisis on households

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Energy markets have tightened since the COVID-19 pandemic, and the situation was exacerbated considerably following the Russiaâ€“Ukraine conflict in late February 2022, contributing to a global energy crisis. This crisis has pushed a number of economies into recession, caused higher inflation, and put painful cost-of-living pressures on households around the world. High energy prices impose cost burdens on households in two ways. On the one hand, fuel price rises directly increase household fuel bills (for example, for heating and cooling, cooking, and mobility). On the other hand, energy and fossil feedstock inputs needed for the production of goods and services for final household consumption will lead to higher prices of household-expenditure items. Due to the unequal distribution of income, reflected in different household consumption patterns, surging energy prices could affect households in very different ways. Unaffordable costs of energy and other necessities would push vulnerable populations into energy poverty and even extreme poverty. Understanding how global energy prices are transmitted to households through global supply chains and how they are affected is crucial for effective and equitable policy design.

This paper provides a detailed assessment of the energy price shock on households and highlights the disparities of direct and indirect energy burden across different expenditure groups. We bridge a global multi-regional inputâ€“output database with detailed household-expenditure data to model the direct and indirect impacts of increased energy prices on households with different consumption patterns. We distinguish between 201 expenditure groups in 116 different countries, covering 87.4% of the global population, with a focus on developing countries.

On the basis of a set of energy price scenarios, we show that total energy costs of households would increase by 62.6â€“112.9%, contributing to a 2.7â€“4.8% increase in household expenditures. Direct energy costs contributed 15.0â€–29.6% of additional costs, while indirect costs contributed 44.8â€–83.4%. Householdsâ€™ indirect energy costs increased considerably more than their direct energy costs. The energy cost burdens across household groups vary due to differences in supply chain structure, consumption patterns and energy needs. Comparing across countries, households in central Asian countries are most affected in terms of total energy cost, and sub-Saharan African countries are most affected in terms of total energy cost burden rate. Wealthier households tend to have heavier burden rates of energy costs in low-income countries, whereas poorer households tend to have higher rates in high-income countries. Wealthier groups tend to have higher energy costs on goods and services with high value added, while poorer households tend to spend more on meeting daily needs such as food and direct energy. Under the cost-of-living pressures, an additional 78 millionâ€“141 million people will potentially be pushed into extreme poverty.

At this juncture, protecting vulnerable households should be a clear priority. Targeted energy assistance can help vulnerable households during this crisis. We emphasize support for increased costs of necessities, especially for food. It is worth noting that short-term policies addressing the cost-of-living crisis must be in line with climate-mitigation goals and other long-term sustainable development commitments. This unprecedented global energy crisis should come as a reminder that an energy system highly reliant on fossil fuels perpetuates energy-security risks and accelerates climate change. These emphasize the urgency to realize diversified energy sources and develop a more secure, diverse, reliable, and independent energy system by accelerating the clean energy transition for all countries. We call for more attention to countries that have been severely affected

by this crisis. Multilateral action is critical to address potential energy transition bottlenecks and alleviate inequalities in access to affordable energy for households worldwide.