

Extended Abstract

Please do not add your name or affiliation

Paper/Poster Title	EU Food price inflation amid global market turbulences
---------------------------	---

Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

Abstract	200 words max
<p>Global food markets are in turmoil with agricultural input and energy prices doubling between 2020 and 2022, and driving food price inflation with immediate consequences on food accessibility. We examine the causes of the recent EU food inflation patterns, focusing on domestic vis-à-vis international components, and on the role of transaction costs. Using cross country and cross sectoral panel regressions, we show that the EU food price inflation has been mainly driven by changes in the costs of agricultural production and, to a lesser extent, by global food price dynamics. Furthermore, trade openness has not exacerbated the inflating dynamics.</p>	
Keywords	Europe, food price dynamic, international food crisis, trade policy uncertainty
JEL Code	E31, Q11, Q18 see: www.aeaweb.org/jel/guide/jel.php?class=Q)
Introduction	100 – 250 words
<p>Global food markets are currently in turmoil with agricultural input and energy prices doubling between 2020 and 2022. Global food market uncertainties caused by shortages in global grain and oilseed markets, as a direct result of the Ukraine-war, international trade restrictions during the post-Covid period (Ahn and Steinbach, 2022; Brander et al., 2023; Consoli et al. 2023), and the sanctions imposed on Russia and Belarus in several sectors have amplified global food system disruptions (Glauber and Laborde, 2022).</p> <p>The market disruptions have unfolded the vulnerability of the European Union (EU) agro-food system (Wieck et al., 2021) and led to unprecedented phenomena of food price inflation in Europe and in the rest of the world, with wide economic implications (Rose et al. 2023) and increasing food insecurity risks (Menyhert, 2022; Rabbi et al. 2023).</p> <p>Besides providing insights on the role of the geopolitical and trade uncertainties on food inflation dynamics, our contribution is at least threefold: first, this research stands out as one of the first studies examining post-2020 food inflation patterns in Europe, with a focus on the effects of risk and uncertainties related to international trade on food price patterns; second, we quantify the contribution of international and external drivers of the current food price spike; third, we link the findings to specific EU policies that could limit food price inflation.</p>	

Methodology	100 – 250 words
<p>We analyse European food inflation dynamics using a quarterly food sector and country panel from 2007-2022. As identification strategy, we use variation across time, space, and seven individual food sectors – namely, cereals and bread, fruits, vegetable, sugar, dairy, meat, oils, and fats – regarding the level of markets interconnectedness as well as the country-level policy stimuli responses. We use a dynamic panel estimator and the Arellano-Bond estimator for short panels, with GMM-type instrumentation, to account for dynamics, and endogeneity bias. We operationalize our identification strategy by interacting the variables representing the external risk and uncertainty factors with the country and sector specific level of integration.</p> <p>The main variables of interest are those capturing the distortions, market risks, and transaction costs due to the Ukraine war. Firstly, a simple dummy variable for the war period starting in Q2 of 2022. Secondly, the geopolitical risks index (GPR) by Caldara and Iacoviello (2020) constructs the global and country-level geopolitical risk based on a tally of newspaper articles. Thirdly, we construct the country and sector specific number of export trade restrictions imposed by trading partners on each EU country using the data by the Global Trade Alert (2023). Lastly, we construct a variable that captures the share of sector-specific exports from countries under multi-lateral sanctions using trade share from FAOSTAT and the global sanctions database provided by Kirilakha et al. (2021), Felbermayr et al. (2020), and Syropoulos et al. (2022).</p>	
Results	100 – 250 words
<p>The model estimates suggest that both internal and external factors have contributed to real food price inflation dynamics among EU countries since 2007, which is in line with Peersman (2023) for the Euro area and Adjemian et al (2023) for the US. We find a strong correlation between recent food inflation patterns with economic sanctions and geopolitical risk. We do not find stronger impacts on countries and sectors that are more integrated into global food markets. A plausible rationale is that, while increasing trade openness is generally associated with higher real food price inflation, the effect is not reinforced by recent global market turbulences.</p> <p>Food price inflation has been mainly driven by changes in the input price index, but marked differences are observed across sectors. More precisely, for fruits and vegetable products, the international price has driven the most the food price inflation. Another important driver has been the energy price inflation, which had a stronger effect on non-food inflation, and a net negative impact on real food price inflation in the EU. Lastly, we found that trade openness has been an important driver of price changes for cereals, oilseeds, and sugar, whereas the agricultural stress index explains only little the changes in real food price inflation in the EU.</p>	



Discussion and Conclusion**100 – 250 words**

Our empirical results suggest that trade openness, i.e., a larger integration into global food markets, was not associated with larger real food price inflation among the EU countries. Instead, trade integration seems to absorb parts of the global market shocks on EU food prices. While this may seem counterintuitive, it can be explained by the structure of international food trade. For instance, higher trade integration does not necessarily create additional vulnerability to global market shocks because higher trade integration is also associated with lower transaction costs of trade, due to economies of scale and the importance of a diversified supply network. In addition to that, international trade creates efficiencies in production by creating a comparative advantage for countries with lower production costs. In consequence of the strong increase in EU agricultural input prices adversely impacted on real food price inflation in EU countries and sectors with lower trade integration much stronger. Instead, countries and sectors that are more integrated were able to source imports from countries that experienced lower agricultural input price inflation.

These findings have implications for EU policy makers. First, reducing global market risks and uncertainties will reduce EU food price inflation pressure significantly. Second, measures to reduce agricultural input price inflation are a leverage to reduce the pressure on EU food price inflation. Third, EU countries should take account of the necessity to diversify trade relations to reduce the vulnerability to global market shocks and to fully exploit the efficiency gains from trade.