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<b>Paper/Poster Title</b>	<b>Positioning and bargaining power in agri-food global value chains</b>
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**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.**

<b>Abstract</b>	<b>200 words max</b>
<p>Value creation forms the basis for the construction of global value chains (GVCs) and has received significant scholarly attention, yet the issue of value capture or power distribution along supply chains, "within" industries, is still unresolved. A recent framework of property rights (Antràs and Chor, 2013; Alfaro et al., 2019) highlights how final firms exert power over their suppliers to optimally organize their sequential production process. In such an environment, how can suppliers act strategically to counterbalance the power of the final firm? We contribute, theoretically and empirically, to a better understanding of the extent to which the division of surplus in the agri-food sector is affected by suppliers' positioning in GVCs. Using the matched French Customs-AMADEUS 2002-2017 data, we build on the bilateral stochastic frontier model to measure the two-sided division of surplus of upstream/midstream suppliers and their export destination markets. We link this dataset to the upstreamness indicators for each industry and firms' exports and imports, following recent approaches in the literature. We show that further upstream specialization along agri-food GVCs increase the surplus of suppliers; and the mechanism is that the effects observed on surplus are mainly due to the upgrading of the product mix.</p>	
<b>Keywords</b>	Bargaining power, Division of surplus, Global value chains, Upstreamness, Firm boundaries, Agri-food industry.
<b>JEL Code</b>	D20, D22, D23, D46, F10, L23, Q17 see: <a href="http://www.aeaweb.org/jel/guide/jel.php?class=Q">www.aeaweb.org/jel/guide/jel.php?class=Q</a>
<b>Introduction</b>	<b>100 – 250 words</b>
<p>The prevalence of global production networks has led to the identification of uncertainty and incomplete contracts as the most important bottlenecks in international relations (Antràs, 2015). Accordingly, organizational choices along the value chain become a key decision faced by firms worldwide (Antràs and Chor, 2013; Alfaro et al., 2019). Furthermore, strong lock-in effects and high fixed costs due to search and matching frictions in global value chains (GVCs) lead to bilateral negotiation of transaction prices between exporters and importers (Antràs, 2020). Therefore, international prices are not fully disciplined by market-clearing conditions, so that the division of surplus along the chain is governed by bargaining and two-sided market power. Assuming a sequential production process, a recent framework of property rights (Antràs and Chor, 2013; Alfaro et al., 2019) highlights how final firms exert power over their suppliers to optimally organize their production processes. In such an environment, how can suppliers act strategically to counterbalance the power of the final firms?</p>	

This paper attempts to answer this question by assessing how the position of suppliers (food processing firms) affect power distribution or surplus along GVCs. Specifically we theoretically and empirically study the effects of the position of production process and the specialization (or expansion) along the chains on the division of surplus of agri-food exporters in their cross-border supplier-buyer relationships. Then, we explore the mechanisms through which position in GVCs affects the division of surplus among suppliers.

**Methodology**

*100 – 250 words*

We build on a general Nash bargaining game to provide a baseline conceptual framework that can characterize firm interactions and price-setting under incomplete contracts in GVCs, where the supplier-buyer relationship is governed by bargaining. We focus on the problem of an exporter (supplier) producing and exporting a variety of differentiated products. Then, we discuss theoretically a firm’s decision on where to operate along GVCs and which production stages to perform in order to maximize its surplus, in an environment with contractual frictions.

Using the matched French Customs-AMADEUS 2002-2017 data, we build on the bilateral stochastic frontier model (Polachek and Yoon, 1987, 1996) to measure the two-sided division of surplus of suppliers and their export destination markets. We link this dataset to the U.S. input-output table converted to the NACE Rev.2 level, which identifies agri-food industries at a very detailed level, and compute upstreamness indicators for each industry and firms' exports and imports, following recent approaches in the literature. Our final database includes firms that jointly import and export. We distinguish a sample excluding re-exports from the sample including all transactions, in order to capture the actual processing activities of suppliers in GVCs.

We test empirically the relationship between the surplus and the position of suppliers in GVCs, as well as the underlying mechanism, using OLS estimates and sub-sample regressions. We check robustness by performing a placebo test; using the French IO tables from GTAP to compute the upstreamness; and testing the heterogeneity linked to the upstreamness of suppliers' exports.

**Results**

*100 – 250 words*

First, using the whole sample of Re-export excluded, we show that more upstream position of suppliers’ exports and more downstream position of their imports, and consequently specialization along GVCs are associated with a higher division of surplus in agri-food GVCs, and that these results are more pronounced in the upstream sectors. Furthermore, additional heterogeneity results show that using a sub-sample regression of the most downstream and most upstream activities of the firms’ core industry in the All transaction sample, we uncover a significant positive effect on value capture in the sub-sample of the most downstream firms, when exporting more downstream and importing more upstream, thus performing a higher number of production stages in GVCs. The predictions for more upstream position of the suppliers’ production process in GVCs continues to hold in both samples (Re-exports excluded and All transaction samples), and with additional robustness tests, whereas the results for most downstream position of the suppliers’ production process in GVCs are not robust in the data.



The mechanisms is that suppliers specializing further upstream lead to structural upgrading (product and process) and control of key stages in upstream supply chains. Therefore, quality upgrading of the product mix is the main driver of the observed effects on surplus.

**Discussion and Conclusion**

**100 – 250 words**

We contribute to the existing debate on the power distribution, value creation and value capture along supply chains. As shown by Cox et al. (2001) and Burch and Lawrence (2005), a critical supply chain assets in agri-food industry are related to the final demand (sales space, information on consumer consumption patterns, brand). Therefore, further downstream firms, close to final demand, increase their bargaining power, unlike more upstream firms. Our results show that suppliers that position and specialize further upstream can act strategically by integrating narrow production stages upstream, while at the same time undertaking high value-added activities, leading to a structural upgrading and a strengthening of their bargaining power. Ju and Yu (2015) and Mahy et al. (2021) find similar results.

The succession of international crises unveiled the high fragility of the supply chain. Some recent works state that participation in GVCs through re-shoring could increase the resilience of GVCs by reducing exposure to foreign shocks, but at the cost of increased exposure to domestic shocks. Our results show that this strategy could also prevents firms from structural upgrading by reducing their bargaining power, and thus their value capture, if the suppliers is specialized in the supply of less processed goods.

Our findings also contribute to the discussions of the industrial policy in the EU countries, which segment European industries into “headquarters” and “factory” economies. Our analysis highlights that the “within” industry heterogeneity, and especially the positioning of firms and the tasks performed in a supply chain, also matters.