

SLICE TO PROTECT*

Peter S. Eppinger[§]
University of Tuebingen

Bohdan Kukharskyy**
City University of New York

Alireza Naghavi^{§§}
University of Bologna

Gianmarco I. P. Ottaviano***
Bocconi University

May 10, 2024

Preliminary, comments welcome

Abstract

In global supply chains, firms may need to share their technological know-how with suppliers, exposing themselves to the risk of imitation in countries with weak protection of intellectual property rights (IPR). We argue that firms may slice up production as a means to protect their know-how: By sourcing fewer components from each supplier, they avoid sharing too much information about the production process with any individual supplier. We study this phenomenon using global micro data on firm-to-firm trade in automotive components. The data reveal a U-shaped relationship between the number of components sourced from the same supplier and IPR protection: Firms tend to concentrate on few suppliers in very weak IPR environments, slice up production across more suppliers for intermediate levels of IPR protection, and increasingly concentrate component production where IPR enforcement is strong. We offer a simple theoretical model that formalizes the slice-to-protect strategy and predicts that this strategy is most effective at intermediate levels of IPR protection, rationalizing the U-shaped pattern.

JEL classifications: F12, F14, F21, F23, L23, L24, L25, O32, O34.

Keywords: Intellectual property rights, Global value chains, Production, Imitation, Automotive industry, Fragmentation, Multinational firms.

*Ottaviano is also affiliated with Baffi Carefin, IGIER, CEP, and CEPR. Eppinger and Kukharskyy are also affiliated with CE-Sifo. Naghavi gratefully acknowledges funding from the PRIN Project 2017 – *New Protectionist Policies: Political Determinants and Economic Consequences* – Prot. 2017E37YRL. Jonas Adolph, Brian Cambiuzzi, and Larissa Zimmermann provided excellent research assistance. All remaining errors are our own.

[§]School of Economics and Business, University of Tuebingen, Mohlstr. 36, 72074 Tuebingen, Germany. Email: peter.eppinger@uni-tuebingen.de.

**Department of Economics and Finance, Baruch College, City University of New York, One Bernard Baruch Way, New York, NY 10010, USA. Email: bohdan.kukharskyy@baruch.cuny.edu.

^{§§}Department of Economics, Piazza Scaravilli 2, Bologna 40126, Italy. Email: alireza.naghavi@unibo.it.

***Department of Economics, Via Roentgen 1, 20136, Milan, Italy. Email: gianmarco.ottaviano@unibocconi.it.