

Homework 3

due on Thursday Dec 18 at noon (12 uur !)

Problem 1: Consider the heterogeneous firm trade model as pioneered by Melitz (Econometrica 2003):

- a) Formally derive the entry and export market cutoffs φ^* and φ_x^* as well as the equilibrium number of firms, and show how these variables respond to changes in the trade cost.
- b) Now assume that productivity is drawn from a Pareto distribution, that is the density function takes the form kx_m^k/x^{k+t} where x_m is the lower bound of the support, and repeat your calculations from part a).
- c) Find empirical evidence (eg studies that show) that the size of firms does approximately follow a Pareto distribution. How does firm size relate to productivity in the Melitz model?

Problem 2: Globalization of Production.

- a) Find time series data for global GDP, trade, and FDI. What are the top destination countries for outward Belgian (or your home country's) FDI?
- b) Find and discuss (at least) one study that analyzes the impact of inward FDI on the receiving country's economy.
- c) In the Grossman/Rossi-Hansberg 'Trading Tasks' paper, formally derive the decomposition of the unskilled wage change into productivity, relative price, and labor supply effects, and briefly explain the intuition behind each effect.

Problem 3: Summarize and discuss the paper 'Globalization and Endogenous Firm Scope' by Nocke and Yeaple ([NBER Working Paper No. W12322](#)). You may email your synopsis of approximately 1–2 pages by January 9. Please note that Volker will give a seminar in the department next semester.