The Division of Labor and The Impact of Intra-Industry Trade on Firm Productivity

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Abstract

Constructing a monopolistic competition model of intra-industry trade with division of labor within a firm, this paper shows that opening trade improves firm productivity. The findings indicate that if there are fixed trade costs in trading equilibrium, opening trade improves firm productivity through the division of labor and raises real wage rate and hence, makes some firms exit. In contrast to Melitz (2003), firms are homogeneous ex-ante and productivity of surviving firm rise. Social welfare doesn't necessarily rise. Whether welfare rises up or not is determined by whether the effect of rising firm productivity dominates the effect of decreasing the number of varieties or not. In particular, in a certain parameter set, opening trade improves social welfare for each country while it reduces the number of varieties consumed in the world. This condition tend to hold as number of markets is high. Trade liberalization (for trade costs and number of countries) makes almost the same direction changes in welfare as Melitz (2003) but a different direction changes in productivity. Changes in productivity and welfare by opening trade and trade liberalization is amplified by improvement of organization parameters.

Keywords: the division of labor within a firm; endogenous firm productivity; monopolistic competition; intra-industry trade

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