

General Equilibrium Theories of Imperfect Competition

A Bibliography of Works Published 1997–2007

- [1] Claude d'Aspremont, Rodolphe Dos Santos Ferreira, and Louis-Andre Gerard-Varet. General Equilibrium Concepts under Imperfect Competition: A Cournotian Approach. *Journal of Economic Theory*, 73(1):199–230, March 1997. Reprinted in Walker (2000), pp. 559-90.

Abstract: In a pure exchange economy, the authors propose a general equilibrium concept under imperfect competition, the ‘Cournotian monopolistic competition equilibrium,’ and compare it to the Cournot-Walras and the monopolistic competition concepts. The advantage of the proposed concept is to require less computational ability from the agents. The comparison is made first through a simple example, then through a more abstract concept, the P-equilibrium, based on a general notion of price coordination, the pricing-scheme.

- [2] Egbert Dierker and Hildegard Dierker. General Equilibrium with Imperfect Competition. *Journal of the European Economic Association*, 4(2-3):436–445, April-May 2006.

Abstract: The objective of a firm is not well-defined if firms have market power. We present an example of Cournot-Walras competition in order to shed light on this problem and to motivate the concept of real wealth maximization that B. Grodal and E. Dierker have proposed as the firm's objective.

- [3] Paolo Epifani and Gino Gancia. Increasing Returns, Imperfect Competition, and Factor Prices. *Review of Economics and Statistics*, 88(4):583–98, November 2006.

Abstract: We show how, in general equilibrium models featuring increasing returns, imperfect competition, and endogenous markups, changes in the scale of economic activity affect the income distribution across factors. Whenever final goods are gross substitutes (gross complements), a scale expansion raises (lowers) the relative reward of the scarce factor or the factor used intensively in the sector characterized by a higher degree of product differentiation and higher fixed costs. Under very reasonable hypotheses, our theory suggests that scale is skill-biased. This result provides a micro foundation for the secular increase in the relative demand for skilled labor. Moreover, it constitutes an important link among major explanations for the rise in wage inequality: skill-biased technical change, capital-skill complementarities, and international trade. We provide new evidence on the mechanism underlying the skill bias of scale.

- [4] Jean J. Gabszewicz. *Strategic multilateral exchange: General equilibrium with imperfect competition*. Elgar, Northampton, Mass., 2002.

Abstract: Studies strategic multilateral exchange, considering models in which agents exchange goods among themselves and try to influence trade to their own advantage. Examines allocations in pure exchange economies in which some agents are “significant,” as can happen if their initial ownership of some goods is large compared to other traders or if some agents combine to bias the result of exchange. Investigates the relationship between the core and the set of competitive allocations by taking an asymptotic approach in which the basic economy is enlarged by replicating it an arbitrarily large number of times, thereby increasing the number of traders without limit. Explores the same question in the context of an atomless economy in which the set of agents is represented by a continuum and in the context of a mixed economy containing both an atomless sector and atoms. Develops a concept of oligopoly equilibrium that applies to any exchange context with strategic agents. Explores the problem of the existence of an oligopoly equilibrium. Analyzes the principle of comparative advantage when the agents operating in the world market behave strategically. Considers strategic behavior when agents operate in an intertemporal context in which they can influence future trading through investment. Investigates the effectiveness and welfare implications of fiscal policies in a context of multilateral exchange when traders behave strategically. Studies oligopoly equilibrium with a productive sector. Gabszewicz is Professor of Economics at the Catholic University of Louvain. Bibliography; index.

- [5] Jean J. Gabszewicz and Jacques-Francois Thisse. Microeconomic Theories of Imperfect Competition. *Cahiers d'Economie Politique*, 37:47–99, 2000.

Abstract: This paper aims at providing an overview of what has been accomplished in the economics of imperfect competition. Our starting point is that imperfect competition arises when at least one of the four traditional assumptions of perfect competition is violated. In our review, we neglect the monopoly case and offer only a brief survey of general equilibrium with imperfect competition

- [6] Anders N. Hoffmann. Imperfect Competition in Computable General Equilibrium Models—A Primer. *Economic Modelling*, 20(1):119–39, January 2003.

Abstract: Economists normally view the field of imperfect competition in general equilibrium as an open Pandora’s box of theoretical and practical problems. For example, how should the oligopoly markup be calculated in models where producers sell some fraction of their output to multiple purchasers, which often is the case in applied models based on an input/output structure? How do we calculate the general equilibrium elasticities of demand? Is the choice of numeraire important for the results? Many economists introduce imperfect competition in their applied models with a simple markup based on a Marshallian approximation of demand ignoring these problems. This may result in mis-specified models and possible wrong results. We seek to provide practical solutions to the three problems.

- [7] Derek Laing, Theodore Palivos, and Ping Wang. Product Diffusion and Pricing with Market Frictions. *Economic Theory*, 19(4):707–36, June 2002.
Abstract: We study pricing and product diffusion in a dynamic general equilibrium framework with product market frictions. Ongoing R&D activity leads, with an endogenously determined probability, to continual improvements in product quality. We characterize the steady-state equilibrium with endogenous product diffusion in which a number of different goods co-exist on the quality ladder. We show that the severity of the economy’s market frictions is a crucial determinant of the pricing structure, the product diffusion pattern, the level of R&D investment, the rate of endogenous growth, the length of Schumpeterian product cycles and the possibility of multiple growth paths. Eliminating market frictions leads to a degenerate product ladder of precisely one step, containing only the most recent product, as in the monopolistic competition literature.
- [8] J. Peter Neary. The Road Less Traveled: Oligopoly and Competition Policy in General Equilibrium. In Richard Arnott et al., editor, *Economics for an imperfect world: Essays in honor of Joseph E. Stiglitz.*, pages 485–500. MIT Press, Cambridge, Massachusetts, 2003.
- [9] Michihiro Ohyama. Market, Trade and Welfare in General Equilibrium. *Japanese Economic Review*, 50(1):1–24, March 1999.
Abstract: This paper develops a tractable general equilibrium model of an economy with an arbitrary number of industries under increasing returns to scale and imperfect competition. The market structure of the model economy is expressed by two basic sets of parameters: the degree of competition, and the markup ratio prevailing in each industry. The government is supposed to control the degree of competition through antitrust policy and the markup ratio through entry policy. Using this model, I re-examine the results of traditional competitive equilibrium analysis and explore the effects of competition policies on economic welfare and international trade.
- [10] Klaus Ritzberger. Price Normalization under Imperfect Competition. *Economic Theory*, 33(2):365–68, November 2007.
Abstract: In general equilibrium models of imperfect competition the equilibria depend on how prices are normalized. This note shows that a price normalization preserves convexity properties if and only if prices are measured in terms of a fixed commodity bundle.
- [11] Roberto Roson, Francesco Bosello, and Enrica De Cian. Climate Change, Energy Demand and Market Power in a General Equilibrium Model of the World Economy. working paper 2007.71, Fondazione Eni Enrico Mattei, <http://www.feem.it/NR/rdonlyres/8D984661-F282-4E8C-9949-FE89D208A1B2/23%80/7107.pdf>, 2007.
Abstract: Future energy demand will be affected by changes in prices and income, but also by other factors, like temperature levels. This paper draws upon an econometric study, disentangling the contribution of

temperature in the determination of the annual regional demand for energy goods. Combining estimates of temperature elasticities with scenarios of future climate change, it is possible to assess variations in energy demand induced (directly) by the global warming. We use this information to simulate a change in the demand structure of households in a CGE model of the world economy, in a set of assessment exercises. The changing demand structure triggers a structural adjustment process, influencing trade flows, regional competitiveness of industries and regions, and welfare. We also consider the possible existence of imperfect competition in the energy markets, analyzing the impact of changes in energy demand with an alternative model version, in which energy industries are modeled as Cournot oligopolies.

- [12] Cees Withagen. International Trade and Environmental Policy under Imperfect Competition. *International Review of Environmental and Resource Economics*, 1(2):151–83, 2007.

Abstract: The objective of the present paper is to review the literature on the link between environmental policy and international trade, with a focus on imperfect competition on the world output markets. Special attention will be paid to the literature on oligopoly and strategic government policy and its potential consequences for the ecological dumping debate. We address partial equilibrium as well as general equilibrium approaches, and emphasize the fact that opposing conclusions can be reached.

- [13] Haiwen Zhou. Factor Endowment, the Choice of Technology, and the Volume of Trade. *International Economic Journal*, 21(4):593–611, December 2007.

Abstract: This paper studies impacts of factor endowment on international trade in a general equilibrium model in which firms choose their technologies endogenously. Although countries only differ in factor endowment ex ante, countries may also differ in their chosen technologies. If industries choose different capital-labor intensities in equilibrium, the Heckscher-Ohlin theorem, factor price equalization theorem, the Rybczynski theorem, and the Stolper-Samuelson theorem hold. If industries choose the same capital-labor intensity in equilibrium, the volume of trade is zero. None of the four theorems applies.