

## Summary of papers and abstracts.

### Published Articles:

1. “Delegation and International Oligopoly”, *Revista Española de Economía*, vol 14, n°2, 1997, pages 269-286.

*Abstract:* Our goal is to study strategic trade policy in the context of delegated firms. We analyse the effects of import tariffs and export subsidies in distorting managers' incentives away from strict profit maximisation for the homogeneous good case with home consumption. Protection induces the domestic manager to intensify home sales whereas the rival's sales intensity lessens. Export subsidies work in the opposite direction. Furthermore, strategic trade policy under delegation results in lower levels of the trade policy instruments and greater welfare than under non-delegation. If policy makers fix their trade policies in a non-cooperative way, bilateral non-intervention cannot arise as a Nash equilibrium.

Keywords: strategic trade policy, delegation.

2. “Market Structure and R&D Joint Ventures: The Case of Product Innovations” joint with Francisco Caballero Sanz and José Jorge Sempere Monerri. *European Journal of Law and Economics*, 1998, pages 51-66.

*Abstract:* Departing from the received fact that the research joint venture agreements are allowed on the grounds of a permissive ruling, we study what conditions are necessary for joint venture partners to carry on R&D cooperation to the marketing stage. We treat the case of product innovations exploitable with different usages in unconnected markets. Two main results appear: firms always have incentives for a distribution of varieties, but not always agree on the distribution of products. The condition for the last result to happen gives a useful rule for antitrust authorities relating the degree of substitutability across varieties and the relative profitability of the markets.

Keywords: joint ventures, multi-product firms, marketing cooperation.

3. “Cost Uncertainty and Trade Liberalization in International Oligopoly”, *Journal of International Economics*, 1998, 45, pages 369-376.

*Abstract:* Trade liberalization has been shown unfavourable for firms of at least one country for the homogeneous goods case in an environment of certainty. We show that, in the presence of private cost information and for ex ante identical firms, oligopolistic firms will prefer to operate under free trade rather than under autarky in homogeneous goods industries provided there exists a certain degree of firms' heterogeneity and a sufficiently large amount of uncertainty. For the particular case of symmetry both in demand and industry sizes, the firms of at least one county prefer to operate under autarky rather than under free trade.

Keywords: International oligopoly, private cost information.

4. "Cooperation in R&D with Spillovers and Delegation of Sales", joint with José Jorge Sempere, *Economics of Innovation and New Technology*, 2000, 9, 401-420.

*Abstract:* Cooperation in several phases of the innovation process is looked at by antitrust authorities with suspicion. They face the dilemma between providing the right incentives for the appropriability of returns to R&D and the risks of diminishing product market competition. The current legislation in the European Union and the United States gives special treatment to cooperation in R&D and the joint exploitation of results (extended cooperation).

We study several collusive regimes for a class of examples in which vertical relations are explicitly introduced. Regarding antitrust policy implications we find that: a) there is an analytical justification to a 'rule of reason' treatment for extended cooperation in research joint ventures and, b) individual exemptions, though restrictive of competition, might be welfare improving.

Keywords: R&D joint ventures, vertical relations, antitrust.

5. "Optimal Licensing in a Spatial Model", coauthored with Francisco Caballero Sanz and José Jorge Sempere Monerris, *Annales d'Économie et de Statistique*, 2002, vol. 66, 257-279.

*Abstract:* We analyze a multi-stage non-cooperative game involving an outside patent-holder, who seeks to licence a process innovation, and two price-setting firms located on a circumference. Three licensing policies are studied: the auction, the fixed fee and the per unit output royalty. The main finding is that, contrary to standard results, royalties yield higher payoffs to the patent-holder than do an auction policy or a fixed fee policy regardless of the size of the innovation. Besides, a conflict between private and social interests arises since consumers are better off when the technology is licensed via fees.

Keywords: Licensing, Spatial Economics.

6. "Competition Enhancing Measures and Scope Economies: A Welfare Appraisal", coauthored with Pedro Cantos and José J. Sempere, *Investigaciones Económicas, (special issue on Regulation)*, 2003, XXVII, 97-123.

*Abstract:* This paper examines welfare changes before the introduction of more competition in technologically related markets. We develop a simple two-market duopoly with product differentiation where a multi-product firm competes with a different single-product firm in each market. Two competition enhancing measures are considered, divestiture of the multi-product firm and entry of single-product firms in one of the markets. The results obtained indicate that more competition may lead to a welfare reduction. Our analysis points out the relevance of the type and size of economies of scope, the particular way of introducing more competition and the degree of product differentiation.

Keywords: Cost complementarity/substitutability, fixed cost subadditivity, welfare.

7. “The Manufacturers’ Choice of Distribution Policy under Successive Duopoly”, co-authored with José J. Sempere and Amparo Urbano, *Southern Economic Journal*, 2004, vol 70 (3), 532-548.

*Abstract:* We examine an asymmetric non-cooperative game between two manufacturers selecting the number of retailers who can distribute their products. In deciding whether to distribute through one or both retailers, there are two conflicting effects. The output expansion effect, given that the product is sold in more outlets. On the other hand, the competitive effect associated with the introduction of intra-brand competition. Product differentiation and demand asymmetric between the two products determine which of these two effects dominates the other. When product differentiation is strong and brand asymmetry is moderate, both manufacturers distribute through both retailers in equilibrium. However, when both product differentiation and brand asymmetry are weak, exclusive dealing through a single retailer is the equilibrium. Perhaps the most interesting finding is that there also exist asymmetric equilibria in which one manufacturer distributes through both retailers but the other manufacturer distributes through one retailer. These equilibria can arise when both product differentiation and brand asymmetry are strong.

*Keywords:* Demand Asymmetry, Distribution Policy, Inter and Intra-brand Competition.

8. “Strategic Delegation with Multiproduct Firms”, co-authored with José J. Sempere and Amparo Urbano, *Journal of Economics and Management Strategy*, 2004, 13 (3), 405-427.

*Abstract:* This paper shows that a multi-product firm may find it optimal not to delegate the sales of all products and therefore employ different distribution channels for different products. It faces the following tradeoff: there is a strategic effect associated with delegation but if both products' sales are delegated, intra-firm competition is not internalized. By delegating the sales of just one of the products while selling the other product directly, partial delegation, the multi-product manufacturer strikes just the right compromise: the externalities between its own products are partially internalized while a strategic advantage is achieved against its rival single-product manufacturer. Partial delegation also holds if both products are sold by a common retailer; it dominates full delegation when both manufacturers are multi-product firms

*Keywords:* multi-production, partial delegation.

**9.** “Licensing Policies for a New Product”, co-authored with José J. Sempere and Francisco Caballero-Sanz, *Economics of Innovation and New Technology*, 2005, 14 (8), 697-713.

*Abstract:* This paper studies licensing policies for the owner of a new product and addresses their welfare impact in the assessment of market failures. We show that the best licensing policy for the patent holder is fixed fee licensing with an exclusive territory clause. Consumers are also better off with fixed fees but do not prefer the exclusive territory clause. Social welfare is higher under exclusive territories when fixed costs are not too large. As for efficiency, the number of licences in the private market equilibrium falls short of the socially optimal solution.

Our analysis discloses that: i) any policy measures aimed at enhancing the diffusion of technology, in terms of the number of licences, would be welcomed and, ii) the permissive treatment received by licensing agreements with exclusive territories is justified.

Keywords: Licensing, Exclusive Territories, Market Failure.

**10.** “Mixed Oligopoly, Product Differentiation and Competition for Public Transport Services”, co-authored with Pedro Cantos, *The Manchester School*, 2006, 74 (3), 294-313.

*Abstract:* This paper explores frequency and pricing decisions in a horizontally and vertically differentiated duopoly when there is competition between means of transport and where one of the firms need not necessarily maximize profits. The private and the mixed duopoly are compared and distortions from the social optimum are identified, both analytically and numerically. A mixed duopoly does not recover the socially optimal solution. However, the presence of a (public) non-profit maximizing operator is a useful measure to get closer to the social optimum. When both operators are (private) profit maximizers, some control measures, such as price caps and minimum service availability would reduce the distortions from the social optimum.

Keywords: Mixed Duopoly, Intermodal Competition, Competition Regimes.

**11.** “The Tradeoffs between Retail Service and Exclusivity in Distribution: Welfare and Policy Implications”, *International Review of Law and Economics*, 2006, 26, 241-261.

*Abstract:* This paper examines the welfare tradeoffs between retail service and exclusivity in distribution in a successive duopoly with differentiated retailers. A simple two-stage game is developed to model quantity and retail service competition under two situations, one where retailers operate under exclusivity and one where retailers can sell both products. It is shown that welfare is higher under exclusivity in distribution when the transfer price without exclusivity exceeds that under exclusivity and intra-product and in-store competition are intense. Our findings call for a detailed analysis of the antitrust treatment of exclusive dealing when interrelated with the provision of retail service and illustrate, for a class of examples, that more competition may be detrimental to welfare.

Keywords: exclusive dealing, retail service competition, multiproduct retailing.

**12.** "Asymmetric Demand Information and Foreign Direct Investment", co-authored with José J. Sempere and V. Orts, *Scandinavian Journal of Economics*, 2007, 109 (1), 93-106.

*Abstract:* We examine the FDI versus exports decision of firms competing in an oligopolistic (quantity setting) market under demand uncertainty and asymmetric information. Compared to a firm that chooses to export, a firm that chooses to set up a plant in the host market has superior information about local market demand. In addition to the well-known tension between the fixed set-up costs of investment, the additional variable costs of exports and oligopoly sizes, the incentive to invest abroad is explained by the strategic learning effect. FDI may be observed even if trade costs are zero. The analysis is robust to price competition and to the possibility that a foreign firm can engage in both FDI and exports.

Keywords: Asymmetric information; FDI; international oligopoly

**13.** "Strategic Formation of Airline Alliances", co-authored with Ricardo Flores-Fillol, *Journal of Transport Economics and Policy*, 2007, 41(3), 427-449.

*Abstract:* This paper looks at the endogenous formation of airline alliances by means of a two-stage game where first airlines decide whether to form an alliance and then fares are determined. We analyze the effects and the strategic formation of airline alliances when two complementary alliances, following different paths, may be formed to serve a certain city-pair market. Alliances hurt rivals and decrease interline fares. Most interestingly and contrary to what might be expected, the formation of alliances may be unprofitable in a competitive context. This is likely to happen when competition is significant and economies of traffic density are low.

**14.** "Entry in Foreign Markets under Asymmetric Information and Demand Uncertainty", co-authored with José J. Sempere and V. Orts, *Southern Economic Journal*, 2008, 74(4), 1105-1122.

*Abstract:* This paper examines the mode of entry of a multinational that has less information about the host market stochastic demand than the local firm. The foreign firm can enter the market either through direct investment or exports. Each entry mode entails different costs and has different informational implications. Entry through foreign direct investment (FDI) is favoured by greater variability in demand. Interestingly enough, strategic behaviour by the incumbent firm, who deviates from its first period monopoly output, might be aimed at increasing the probability of foreign entry through FDI despite this meaning competing against an equally informed and efficient entrant; this never happens in a symmetric information environment. Such host firm's behaviour is aimed at reducing the strategic uncertainty derived from foreign firm's beliefs. Compared with the symmetric information setting, entry via direct investment may occur in more cases.

**15.** “Alternative Pricing Regimes in Interurban Passenger Transport with Externalities and Modal Competition”, co-authored with Pedro Cantos, Jose J. Sempere-Monerris and Oscar Alvarez, *Regional Science and Urban Economics*, 2009, 39(2), 128-137.

*Abstract:* We develop an interurban passenger transport model characterised by modal competition, where modes are perceived as differentiated products, and capture all major externalities. Our objective is to establish whether alternative regulatory regimes, which may involve road tolls, may lead to a traffic allocation, user welfare, and total welfare that may be closer to the social optimum. An empirical application to total interurban Spanish travel -and to a number of routes- is undertaken. We find that the private regime yields the lowest total welfare level: 12.6% below the social optimum level. Optimum pricing requires a toll on car transport of 5.1 cents of €per passenger-km, and a price decrease of all other modes, relative to the current regime. Finally, the social optimum without toll regime, where all modes are priced except the car transport, attains the welfare level closest to the social optimum, but at the expense of a reallocation of welfare from firms to users and higher environmental costs.

Keywords: Interurban Transport, Optimal Pricing; Competition; Externalities

**16.** “Product Line Choice in Retail Duopoly”, co-authored with Jose J. Sempere-Monerris and Amparo Urbano), 2010, *Journal of Economics and Management Strategy*.

*Abstract:* This paper develops a successive duopoly model to identify conditions under which differentiated retailers that compete in quantities, when deciding on the range of brands to offer, will carry overlapping product lines. They will do so when retail margins on each brand are not too asymmetric. Otherwise, the less profitable brand is foreclosed from the market. It is shown that welfare increases if the upstream industry is perfectly competitive, even though fewer brands may be sold. With price competition though, exclusive dealing arises when retailers are not too differentiated and in-store competition is sufficiently intense.

Keywords: Distribution systems, product line.

**17.** “Vertical Integration, Collusion, and Tariffs”, co-authored with Pedro Mendi and Jose J. Sempere-Monerris, 2010, *Investigaciones Económicas, SERIEs*.

*Abstract:* This article presents a link between tariff rates and industry structure in a dynamic setting. We examine the role of tariffs on final-goods in a firm's decision to integrate and collude in the presence of competitive imports. It is shown that, under some conditions, the upstream firm has an incentive to engage in vertical integration to introduce profitably a wholesale price above the world input price while not inducing any intermediate or final good imports. Higher tariffs downstream, even with no tariff protection upstream, make this strategy more profitable, and provide a rationale for a positive relationship between tariff protection and vertical integration, which is observed in some industries.

Keywords: Vertical integration; Monopoly; Tariffs.

**18.** “Endogenous Mergers of Complements with Mixed Bundling”, co-authored with Ricardo Flores-Fillol, 2011, *Review of Industrial Organization*.

*Abstract:* This paper studies endogenous mergers of complements with mixed bundling, by allowing both for joint and separate consumption. After merger, partner firms decrease the price of the bundled system. Besides, when markets for individual components are sufficiently important, partner firms find it strategically advantageous to raise prices of stand-alone products, thus making substitute “mix-and-match” composite products less attractive to consumers. Even though these effects favor the profitability of mergers, merging is not always an equilibrium outcome. The reason is that outsiders respond by cutting their prices to retain their market share, and mergers can be unprofitable when competition is intense. From a welfare analysis, we observe that the number of mergers observed in equilibrium may be either excessive (when markets for individual components are important) or suboptimal (when markets for individual components are less important).  
**Keywords:** complements; merger; mixed bundling; separate consumption.