

科技部人文社會科學研究中心
學術研究群成果報告

貿易、產業與公共經濟理論學術研究群

學術研究群編號：MOST104-2420-H-002-016-MY3-SG10503

學術研究群執行期間：105 年 3 月 1 日至 106 年 2 月 28 日

學術研究群召集人：楊雅博

執行機構及系所：國立高雄大學經營管理研究所

中 華 民 國 106 年 3 月 28 日

補助學術研究群暨經典研讀班成果自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現（簡要敘述成果是否具有政策應用參考價值及具影響公共利益之重大發現）或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明）

說明：

本計畫執行期間，共報告 40 篇文章，並有 6 篇(3 年內共 18 篇)文章刊登或接受刊登於經濟學專業期刊，其中 SSCI 期刊有 5 篇，包括一篇刊登於 *Canadian Journal of Economics*，經濟學門列為 A 的期刊，以及經濟學門列為國內第一級期刊 1 篇。在微薄的經費補下，可謂研究成果豐碩，也達到初步達到提升南部學術水準的目標。

2. 研究成果在學術期刊發表或申請專利等情形(請於其他欄註明專利及技轉之證號、合約、申請及洽談等詳細資訊)

論文：已發表未發表之文稿 撰寫中 無

專書：已出版尚未出版撰寫中無

其他：

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（敘述成果所代表之意義、價值、影響或進一步發展之可能性）。

本研究群地處南部，雖然經費有限，但仍發揮經費運用上的最大效益，在學術成就上，不論在經濟學門的國際 A 級及 B+ 級期刊皆有斬獲，凸顯南部的學術研究成果不輸北部。在技術創新上，本研究群關注企業社會責任及產品認證等產業經濟新的議題，在研究面向上與時俱進。此外，在社會影響方面，本研究群也邀請碩士班學生參與討論，並撰寫論文，對於培養產業分析人才有正面積極的貢獻。

補助學術研究群暨經典研讀班成果彙整表

計畫主持人：楊雅博		計畫編號：MOST104-2420-H-002-016-MY3-SG10503			
計畫名稱：貿易、產業與公共經濟理論學術研究群					
成果項目		量化	單位	質化 (說明:各成果項目請附佐證資料或細項說明,如期刊名稱、年份、卷期、起訖頁數、證號...等)	
國內	學術性論文	期刊論文	1	篇	請附期刊資訊。
		研討會論文	2		
		專書		本	請附專書資訊。
		專書論文	3	章	請附專書論文資訊。
		其他		篇	
國外	學術性論文	期刊論文	5	篇	請附期刊資訊。
		研討會論文	2		
		專書		本	請附專書資訊。
		專書論文		章	請附專書論文資訊。
		其他		篇	
參與計畫人力	本國籍	教授	3	人次	
		副教授	3		
		助理教授	2		
		博士後研究員			
		專任助理			
	非本國籍	教授			
		副教授			
		助理教授			
		博士後研究員			
		專任助理			
其他成果					
(無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)					

國內學術性期刊論文

1. 蔡明芳、楊雅博，(2016)。“技術授權與最適貿易政策”，*經濟論文叢刊*，44(4),641-658。
(TSSCI)。

國外學術性期刊論文

1. Hwang, Horn, Mai, Cho-Cheng, and Wu, Shih-Jye (2017), “Tariff escalation and vertical market structure”, *The World Economy*, forthcoming.(SSCI B+)
2. Angela C. Chao, Jen-yao Lee and Leonard F.S. Wang (2017). Stackelberg Competition, Innovation and Social Efficiency of Entry . *The Manchester School*. 85(1),1-12. (SSCI, B).
3. Tsung-Hsiu Tsai, Chia-Chi Wang and Jiunn-Rong Chiou, 2016, “Can Privatization Be a Catalyst for Environmental R&D and Result a Cleaner Environment?” *Resource and Energy Economics* 43, 1-13. (SSCI B+)
4. Shih-Jye Wu ,Yang-Ming Chang and Hung-Yi Chen (2016). Imported Inputs and Privatization in downstream mixed oligopoly with Foreign Ownership. *Canadian Journal of Economics* 49(3),1179-1207.(SSCI A)
5. Lo, C. P. and Hsu, S. Y. (2016). International Outsourcing, FDI, and Middleman Strategy. *Transylvanian Review* , Vol 14 (5), 421-431.

國內學術性研討會論文

1. 吳世傑、楊雅博與佘志民(2016)，啞鈴模型與風險趨避廠商的區位選擇，台灣經濟學會2016年年會暨當代經濟議題學術研討會。
2. 佘志民與楊雅博(2016)，Endogenous Location and Spatial Discrimination in Input Market with Fixed Cost，台灣經濟學會2016年年會暨當代經濟議題學術研討會。許竹筌、李仁耀與蔡建樹(2016)，Production Externality, Bargaining Wage, Pollution Tax and Compensation Schemes，台灣經濟學會2016年年會暨當代經濟議題學術研討會。

國內學術性研討會論文

1. Chih-Min She (2016, Jul). Endogenous Location and Spatial Price Discrimination with Public Infrastructure. PET 2016 (Association of Public Economics Theory)
2. Chih-Min She and Ya Po Yang (2016) , Uniform vs Discriminatory Pricing in Spatially Separate Market. 2016 International Conference on Business and Information.

國內學術性專書論文

1. 林文承，”異質性產品廠商的競爭：廠址區位決策與產品定位選擇”，2015國立中山大學經濟學碩士論文，指導教授吳世傑與楊雅博。
2. 王廷中，”企業社會責任、跨界污染與貿易政策”，2016國立高雄大學經營管理碩士 論文 指導教授楊雅博。
3. 王筱評，”垂直相關產業下的環保技術授權”， 2016國立高雄大學經營管理碩士 論文指 導教授楊雅博。

摘 要

「貿易、產業與公共經濟理論」研究群原先是南部地區中山大學、高雄大學、南台科技大學、高苑科技大學四所大專院校貿易、產業與公共經濟理論等領域的師生所組成的經濟學跨校研究成長社群，於 100 年 5 月成立，迄今已有 4 年多的歷史。研究社群的主要目的是希望集結南部地區在國際貿易、產業經濟學、環境經濟學、公共經濟理論等相關領域的學者，齊聚於高雄大學，每週排定固定的時間，討論除了討論上述相關領域最新的研究成果外，也希望能邀請國內外在這些領域研究傑出的學者，到本社群來分享其最新的研究成果及其研究心得，提昇南部地區經濟學相關領域的研究質量，以期縮小南北經濟學研究的差距。

本研究群在自 2014 年至今共發表或被接受 18 篇期刊論文，其中包含 12 篇 SSCI 期刊(包含經學門 A⁺: 1 篇, B⁺ 級: 6 篇, B 級: 2 篇, 其它: 3 篇。), TSSCI 經學門第一級: 3 篇, 其它期刊 3 篇。

關鍵詞：國際貿易、產業組織、公共經濟

Abstract

Trade ∙ Industrial and Public Economic Theory Workshop was established in May 2011. Members in the Workshop includes the faculty members and students of National Sun Yat-Sen University, National University of Kaohsiung, Kao Yuan University, Southern Taiwan University of Science and Technology in south Taiwan. We discuss published Journal and working papers on trade ∙ industrial and public economics every week. We also invited distinguished scholars in these fields to share their recently work. We expect the workshop can improve both the quantity and quality of economic research in south Taiwan.

Since 2014, we had published or been accepted 18 economic journal papers, including 12 in SSCI Journals (1 classified as level A+, 6 classified as B+, 2 classified as B and 3 others), 3 in TSSCI economic journals (classified as level 1) and 3 in others.

Keywords : International Trade ∙ Industrial Organization ∙ Public Economics

目 錄

一 前言	1
二 研究群成員	2
三 研究群的執行方式	3
四 研究群執行收穫及成果	4
五 結 論	13
附件一 研究群歷次討論會議記錄	14

一 前言

本研究群的構想、目的及重要性如下：

(一)背景

自 1980 年代以 Brander and Spencer 為首的學者，發表一系列以不完全競爭市場及賽局理論為分析架構的國際貿易論文以來，此一領域的研究，不但在理論上獲得許多有趣的成果，在實務上，也提供了許多關於貿易自由化及區域經濟整合相當有價值的政策涵義，因此，「策略性貿易」儼然成為國際貿易理論最重要的一支。當前「策略性貿易」的研究也不因時間已久而退色，近年來與產業經濟學理論、環境經濟理論及公共經濟理論有更加緊密的結合趨勢，而且使得相關領域的研究論文更加豐富而有趣。職是之故，本研究社團擬結合南部地區有志於研究國際貿易、產業經濟學論、環境經濟理論及公共經濟理論等相關領域的年輕學者，每週齊聚一堂，探討相關議題，以期提升南部地區經濟學的研究能量。

(二)目的及重要性

「貿易、產業與公共經濟理論」研究群原先是南部地區中山大學、高雄大學、南台科技大學、高苑科技大學四所大專院校貿易、產業與公共經濟理論等領域的師生所組成的經濟學跨校研究成長社群，於 100 年 5 月成立，迄今已有 5 年多的歷史。研究社群的主要目的是希望集結南部地區在國際貿易、產業經濟學、環境經濟學、公共經濟理論等相關領域的學者，齊聚於高雄大學，每週排定固定的時間，討論除了討論上述相關領域最新的研究成果外，也希望能邀請國內外在這些領域研究傑出的學者，到本社群來分享其最新的研究成果及其研究心得，提昇南部地區經濟學相關領域的研究質量，以期縮小南北經濟學研究的差距。

南台灣的學術研究風氣及成果，一直被學術界公認為落後北部地區甚多，經濟學界也不例外。本研究社群的主要目的是希望集結南部地區在國際貿易、產業經濟學、環境經濟學、公共經濟理論等相關領域的學者，齊聚於高雄大學，每週排定固定的時間，討論除了討論上述相關領域最新的研究成果外，也希望能邀請國內外在這些領域研究傑出的學者，到本社團來分享其最新的研究成果及其研

究心得，提昇南部地區經濟學相關領域的研究質量，以期縮小南北經濟學研究的差距。

近年來國內外經濟學界的研究水準大幅提升，使得投稿於具水準的國內外期刊難度也愈來愈高，新進教師承受相當大的研究壓力。本研究社群由資深教授帶領，對資淺社團群成員提供研究的議題的建議，對紓緩升等壓力，提昇研究動能，可收事半功倍之效；對資深教授而言，也獲得教學相長的助益，共創「雙贏」的利益，使南部地區的經濟學研究質量更因此而獲得提升，可謂一舉多得。

二 研究群成員

「貿易與產業經濟理論」研究社群於 100 年 5 月成立，迄今已有 5 年多的歷史，是南部地區四所大專院校師生所組成的經濟學跨校研究成長社群。目前研究社群成員包括中山大學政治經濟系 1 位、高雄大學經營管理所 1 位、高雄大學應用經濟系 3 位、高雄大學應用科技大學 1 位、南台科技大學 1 位、高苑科技大學 1 位，共 8 位教師所組成，並邀請高雄大學經營管理所及應用經濟系共 6 位學生參與討論。本研究群如下表 1 所示：

表 1 研究群成員資料表

姓 名	服務單位	職 稱	社群 職 稱
楊雅博	高雄大學/經營管理研究所/教授	楊雅博	召集人
吳世傑	中山大學/政治經濟學系/教授	吳世傑	副召集人
李仁耀	高雄應用科技大學/國際企業系/教授	李仁耀	副召集人
蔡建樹	高苑科技大學/國際商務系/副教授	蔡建樹	副召集人
蔡宗秀	高雄大學/應用經濟學系/副教授	蔡宗秀	社群成員
許淑嫻	南台科技大學/國際企業系/副教授	許淑嫻	社群成員
宋皇叡	高雄大學/應用經濟學系/助理教授	宋皇叡	社群成員
佘志民	高雄大學/應用經濟學系/助理教授	佘志民	社群成員

三 研究群的執行方式

本研究群除春節連假期間外，不分寒暑假，原則上「每週」於週一下午一時至下午四時在高雄大學經營管理研究所之管 308 教室聚會一次，每次研討時間約三小時，運作模式包括下列五種方式：

- (一) **由本研究群成員負責報告一至二篇重要文獻：**藉著研讀重要參考文獻，可增進成員對現有貿易、產業及公共經濟理論文獻及研究發展趨勢的了解，再透過彼此的腦力激盪，尋求可行的研究議題。
- (二) **由本研究群成員報告其最新的研究成果：**透過演講者的報告，聽眾的詢問，可協助釐清論文的經濟涵義，或文中存在的缺陷，有助於尋找研究主題，改善論文品質以及日後投稿學術期刊的被接受率。
- (三) **邀請國內經濟學者共同切磋並分享其最新的研究成果：**本計畫將不定期邀請國內研究表現優異的經濟學者演講，互相切磋，增進彼此的研究水準。
- (四) **邀請國際知名的經濟學者交流訪問：**邀請國際知名的經濟學者交流訪問，探索貿易、產業經濟、環境經濟、公共經濟理論的熱門議題並分享其最新的研究成果，可促進本研究群成員對上述領域熱門議題的了解，也可提昇本研究群的國際觀與研究水準。
- (五) **設立專屬網站推廣研究成果：**本計畫預定將以上四種研討項目的演講資訊與成果定期公佈於本研究群之網站（路徑：至國立高雄大學經營管理研究所網頁 <http://iem.nuk.edu.tw>，點選「學術活動/貿易、產業與公共經濟理論研究社群」），期盼與國內經濟學界共同分享與成長。

四 研究群執行收穫及成果

本研究群計畫值 行一年後主要成果如下：

(一) 本研究群成員負責報告重要文獻

本研究群一年內共執行 40 週，報告 40 篇文章，歷次討論文章如表 2 所示。

執行期間之簽到表與會議記錄請參考附件一。

表 2 研究群歷次討論文章

項次	日期	報告人	篇名	出處
1	2016/03/07	顏廷軒	Is Corporate Environmentalism Good for Domestic Welfare?	Review of International Economics 21.5 (2013): 901-911.
2	2016/03/14	王筱評	Multimarket Linkages, Trade and the Productivity Puzzle	Review of International Economics 23.1 (2015): 1-13.
3	2016/03/21	林文丞	Protection versus Free Trade: Lobbying Competition between Domestic and Foreign Firms	Southern Economic Journal 81.2 (2014): 489-505.
4	2016/03/28	李仁耀	Optimal Discriminatory Tariffs under Foreign Ownership	Working paper
5	2016/04/11	袁聖貽	Environmental cooperation: ratifying second-best agreements	Public Choice 151.3-4 (2012): 565-584.
6	2016/04/18	許懷仁	The role of uncertainty and learning for the success of international climate agreements	Journal of Public Economics 103 (2013): 29-43.
7	2016/04/25	蔡穎義	Foreign Penetration and Domestic Competition	Working paper
8	2016/05/02	楊雅博	Mixed Duopoly, Location Choice, and Shadow Cost of Public	Southern Economic Journal 2015, 82(2), 416-429

			Funds	
9	2016/05/09	許淑嫻	Price premia to name brands: an empirical analysis	The Journal of Industrial Economics (1996): 377-388.
10	2016/05/16	王廷中	企業社會責任、跨界污染與貿易政策	國立高雄大學經營管理研究所 碩士論文
11	2016/05/23	王筱評	垂直相關產業下的環保技術授權	國立高雄大學經營管理研究所 碩士論文
12	2016/05/30	林文丞	Product Innovation Incentives: Monopoly vs. Competition	Journal of Economics & Management Strategy, 22(3), 513-528
13	2016/06/13	楊孟軒	Public, private and nonprofit regulation for environmental quality	Journal of Economics & Management Strategy, Volume 18, Number 1, Spring 2009, 105-123
14	2016/06/20	黃誼庭	Can Eco-labeling Schemes Preserve the Environment?	Environmental and Resource Economics June 2008, Volume 40, Issue 2, pp 233-249
15	2016/06/27	吳世傑	Insecure Resources, Trade, and National Defense: Will Greater Trade Openness Reduce Conflict?	Working Paper
16	2016/07/18	林寬宏	Vertically Related Markets, Foreign Competition and Optimal Privatization Policy	Review of International Economics, 23(2), 303-319, 2015
17	2016/07/25	潘冠舟	Discriminatory nonlinear pricing, fixed costs, and welfare in intermediate-goods markets	International Journal of Industrial Organization 46 (2016): 107-136.
18	2016/08/01	楊孟軒	Entering New Markets in the Presence of	Journal of Economics & Management Strategy,

			Competition: Price Discrimination versus Cannibalization	Volume 24, Number 2, Summer 2015, 369–389
18	2016/08/08	黃誼庭	Corporate Social Responsibility or Payoff Asymmetry? A Study of an Endogenous Timing Game	Southern Economic Journal 2014, 81(2), 457-473
20	2016/08/15	黃煒哲	Social responsibility in a bilateral monopoly	Journal of Economics 115.3 (2015): 275-289.
21	2016/08/22	林寬宏	Price Discrimination in Two-Sided Markets	Journal of Economics & Management Strategy, Volume 22, Number 4, Winter 2013, 768–786
22	2016/08/29	佘志民	Spatial Price Discrimination and Public Infrastructure	Working paper
23	2016/09/06	李長英	Do Consumers Gain from Looking Forward	Working paper
24	2016/09/12	楊孟軒	Green markets, eco-certification, and equilibrium fraud	Journal of Environment Economics and Management ,November 2006
25	2016/10/03	潘冠舟	Differential pricing when costs differ: a welfare analysis	Journal of Economics 46.2 (2015): 442-460.
26	2016/10/17	黃誼庭	Altruism and Relational Incentives in the Workplace	Journal of Economic & Management Strategy 2015, 24(3), 485-500
27	2016/10/24	林燕淑	Coordination of Trade and Intellectual Property Rights Policies	Working paper
28	2016/10/31	賴孚權	Spatial Cournot Competition with an Urban-Rural Framework	Working paper

29	2016/11/07	蔡建樹	Production Externality, Bargaining wage, Pollution Tax and Compensation Schemes	Working paper
30	2016/11/14	林寬宏	Negotiation over Intellectual Property Rights Protection in a Mixed Market	Review of Development Economics, 19(4), 759–775, 2015
31	2016/11/21	黃煒哲	Market Effects of Changes in Consumers' Social Responsibility	Journal of Economics & Management Strategy, Volume 18, Number 1, Spring 2009, 235–262
32	2016/11/28	潘冠舟	Inspection, testing errors and trade in tainted products	Journal of the Japanese and International Economies 35 (2015): 99-116.
33	2016/12/05	盧昕郁	Selling customer information to competing firms	Economics Letters 149 (2016): 10-14.
34	2016/12/12	陳冠宇	Pre-emptive mergers and downstream cost asymmetry	Economics Letters 147 (2016): 23-26.
35	2016/12/19	鄭竹君	Innovation and the merger paradox	Economics Letters 147 (2016): 5-7.
36	2016/12/26	潘冠舟	Monopoly price discrimination and privacy: The hidden cost of hiding	Economics Letters 149 (2016): 141-144.
37	2017/01/16	黃誼庭	Eco-Labeling Scheme, Environmental Protection, and Protectionism	The Canadian Journal of Economics / Revue canadienne d'Economie, Vol. 36, No.3 (Aug., 2003), pp. 608-633
38	2017/01/23	楊孟軒	Standards and protection	Journal of International Economics, 52(2), 377-400

39	2017/02/13	林寬宏	Intellectual Property Rights and Entry into a Foreign Market: FDI versus Joint Ventures	Review of International Economics, 18(4), 633–649, 2010
40	2017/02/20	潘冠舟	Should Firms Employ Personalized Pricing?	Journal of Economics & Management Strategy 24.4 (2015): 887-903.

(二) 邀請國內、外經濟學者互動交流

研究群邀請之國內外講員如下表 3，過程中大家討論熱烈，也收獲許多。

表 3 研究群邀請支國內外講員

來訪日期	姓名	任職單位與職稱	報告題目
2016/09/06	李長英	山東大學經濟學院教授	Do Consumers Gain from Looking Forward
2016/10/24	林燕淑	東華大學經濟系教授	Coordination of Trade and Intellectual Property Rights Policies
2016/10/31	賴孚權	中央研究院人文社會科學研究中研究員	Spatial Cournot Competition with an Urban-Rural Framework

(三) 究群成員一年來的研究成果

本研究群成員近三年來的研究成果如下：

(1) 期刊論文共 18 篇，SSCI 經學門 12 篇(含 A⁺ 級：1 篇，B⁺ 級：6 篇，B 級：2 篇，

其它：3 篇)，TSSCI 經學門第一級：3 篇，其它：3 篇。研討會論文共 6 篇。進行中論文共 9 篇。碩士論文 3 篇。

1. Hwang, Horn, Mai, Cho-Cheng, and **Wu, Shih-Jye** (2017), “Tariff escalation and vertical market structure”, *The World Economy*, forthcoming. (SSCI B+)
2. Angela C. Chao, **Jen-yao Lee** and Leonard F.S. Wang (2017). Stackelberg Competition, Innovation and Social Efficiency of Entry. *The Manchester School*.

- 85(1),1-12. (SSCI, B).
3. 蔡明芳、楊雅博，(2016)。“技術授權與最適貿易政策”，*經濟論文叢刊*，44(4),641-658。(TSSCI)。
 4. **Tsung-Hsiu Tsai**, Chia-Chi Wang and Jiunn-Rong Chiou, 2016, “Can Privatization Be a Catalyst for Environmental R&D and Result a Cleaner Environment?” *Resource and Energy Economics* 43, 1-13. (SSCI B+)
 5. Shih-Jye Wu ,Yang-Ming Chang and Hung-Yi Chen (2016). Imported Inputs and Privatization in downstream mixed oligopoly with Foreign Ownership. *Canadian Journal of Economics* 49(3),1179-1207.(SSCI A)
 6. Lo, C. P. and Hsu, S. Y. (2016). International Outsourcing, FDI, and Middleman Strategy. *Transylvanian Review* , Vol 14 (5), 421-431.
 7. 許淑嫻 楊雅博 胡均立，(2015)。“環境污染型式、市場集中度與環境政策”。*經濟論文*(TSSCI)。43 , 45-80。
 8. Hong Hwang and Chao-Cheng Mai and Ya-Po Yang (2015), “Specific vs. Ad Valorem Strategic Export Subsidies with Taxation Distortion” *Review of Development Economics* ,19,820-828.(SSCI B) .
 9. Leonard F.S. Wang, Angela C. Chao, **Jen Yao Lee** (2015). R&D and Social Inefficiency of Entry. *Journal of Industry, Competition and Trade*. 15(2) 181-187.
 10. Chih-Min She (2015). What Determines the Technology Adoption of Firms under Optimal Tax?. *International Review of Economics and Finance*, 37, 274-89. (SSCI, B+).
 11. 楊雅博，許淑嫻，(2015年三月)“開放經濟體系下之環境政策：跨界污染與區域污染”，*東吳經濟商學報* 88期 45-72.
 12. **Jen-yao Lee**, **Chien-shu Tsai** (2014). Trade Liberalization and Corporate Social Responsibility with Consumer-friendly Initiative. *Asia-Pacific Economic and Management Review*, 18(1), 85-96.
 13. Chang, Yang-Ming, Hung-Yi Chen, L.F.S. Wang, and Shih-Jye Wu (2014). Corporate Social Responsibility and International Competition: A Welfare

- Analysis. *Review of International Economics*, 22:3, 625-638. (SSCI B+).
14. Lo,Chu-Ping, **Wu, Shih-Jye, Hsu, Su-Ying** (2014). The role of overseas Chinese-speaking regions in global sourcing. *China Economic Review*, 30(1), 133-142. (SSCI)
 15. Yi-Wen Chen, **Ya-Po Yang**, Leonard, F.S. Wang, and **Shih-Jye Wu** (2014). Technology Licensing in Mixed Oligopoly. *International Review of Economics and Finance*, 31,193-204. (SSCI B+).
 16. **Su-Ying Hsu**, Chu-Ping Lo, and **Shih-Jye Wu** (2014). The Nexus of Market Concentration and Privatization Policy in Mixed Oligopoly. *Economics Modelling*, 33, 196-203. (SSCI).
 17. **Wu, Shih-Jye**, Yang-Ming Chang, and Hung-Yi, Chen (2014). Antidumping Duties and Price Undertaking: A Welfare Analysis. *International Review of Economics and Finance*, 29, 97-107. (SSCI B+).
 18. **吳世傑**、陳宏易 (2014年)。代工出口與貿易政策。經濟論文叢刊，42(3), 333-361。(TSSCI)。

(2)研討會論文(共5篇)

1. 吳世傑、楊雅博與佘志民(2016)，啞鈴模型與風險趨避廠商的區位選擇，台灣經濟學會2016年年會暨當代經濟議題學術研討會。
2. 佘志民與楊雅博(2016)，Endogenous Location and Spatial Discrimination in Input Market with Fixed Cost，台灣經濟學會2016年年會暨當代經濟議題學術研討會。許竹筌、李仁耀與蔡建樹(2016)，Production Externality, Bargaining Wage, Pollution Tax and Compensation Schemes，台灣經濟學會2016年年會暨當代經濟議題學術研討會。
3. Chih-Min She (2016, Jul). Endogenous Location and Spatial Price Discrimination with Public Infrastructure. PET 2016 (Association of Public Economics Theory)

4. Chih-Min She and Ya Po Yang (2016) , Uniform vs Discriminatory Pricing in Spatially Separate Market. 2016 International Conference on Business and Information.
5. Wu, Shih-Jye, Che-Wen Wu, and Hung-Yi Chen, (2015)Optimal import tariff rate toward a multinational firm with alternative channels of market entry, presented at the Bilateral International Meeting of WEAI, Wellington, New Zealand-.

(3)成員進行的works in progress(working paper共9篇)

1. Chih-Min She, Aug 2016. “Location and Spatial Discrimination with Public Infrastructure.” *Working Paper*.
2. Yang, Y. P. Jul 2016. “Location of Monopoly supplier in a Barbel Market.” *Working Paper*.
3. Shih-Min She and Leonard F.S. Wang, “Market Structure, Private Goods and Public Goods” ◦
4. Lee, Jen-yao; Tsai, Chien-shu; Wang, Leonard, Foreign Ownership, Strategic Export Policy and Optimal Discriminatory Tariffs, submitted.
5. Su-Ying Hsu, Lo, Chu-Ping and Shih-Jye Wu, “Foreign Intermediate Market and Downstream Privatization,” ◦
6. Wu, Shih-Jye, Che-Wen Wu, and Hung-Yi Chen (2016), Optimal import tariff rate toward a multinational firm with alternative channels of market entry, memo.
7. Wu, Shih-Jye, Ya-Po Yang, and Huang-Reuy, Sung, (2016),Uniform vs. Discriminatory pricing in a barbell model under uncertainty, memo
8. Wu, Shih-Jye, Yang-Ming Chang, and Hung-Yi, Chen, (2014),FTO and trade policy, submitted.
9. Ya-Po Yang, Yang-Ming Chang, and Chia-Chun Hong (2014) “Technology Licensing, Entry Mode and Trade Liberalization”.

(4)研究群培育的博碩士論文(共碩士論文3篇)

1. 林文承，”異質性產品廠商的競爭：廠址區位決策與產品定位選擇”，2015國立中山大學經濟學碩士論文，指導教授吳世傑與楊雅博。
2. 王廷中，”企業社會責任、跨界污染與貿易政策”，2015國立高雄大學經營管理碩士 論文指導教授楊雅博。
3. 王筱評，”垂直相關產業下的環保技術授權”， 2015國立高雄大學經營管理碩士 論文指導教授楊雅博。

(5)成員於研究群中發表的演講

1. 吳世傑, Jun 2016, “ Insecure Resources, Trade, and National Defense: Will Greater Trade Openness Reduce Conflict?”, working paper
2. Yang, Y. P. Jul 2016. “Location of Monopoly supplier in a Barbel Market.” *Working Paper*.
3. Chih-Min She, Aug 2016. “Location and Spatial Discrimination with Public Infrastructure.” *Working Paper*

五 結 論

從本研究群成員在計畫執行期間，共報告 40 篇文章，並有 18 篇文章刊登或接受刊登於經濟學專業期刊，其中 SSCI 期刊有 12 篇，包括一篇刊登於 *Canadian Journal of Economics*，經濟學門列為 A 的期刊，以及經濟學門列為 B+ 的期刊 6 篇。在微薄的經費補下，可謂研究成果豐碩，也達到初步達到提升南部學術水準的目的。

遺憾的是，本研究群再度提出 106 年計畫時已獲得通過，研究群希望在有限的補助經費下，繼續發揮最大質量上的效益。

附件一：研究群歷次討論會議記錄

國立高雄大學貿易與產業經濟理論討論會 報告人： 顏廷軒

2016/03/07

篇名	<i>Is Corporate Environmentalism Good for Domestic Welfare?</i>
作者	<i>Jinji, Naoto</i>
出處	Review of International Economics 21.5 (2013): 901-911
摘要	Many private firms voluntarily care about the environment and declare that their products and production processes are environmentally friendly. This paper shows that corporate environmentalism may reduce the effectiveness of government policies. A simple third-market trade model with strategic environmental and trade policy is employed, in which an environmentally conscious domestic firm competes with a profit-maximizing foreign firm. It is shown that even if emission taxes and export subsidies are both available, corporate environmentalism may reduce domestic welfare when pollution is transboundary. In the realistic situation where export subsidies are prohibited, welfare may fall even if pollution is local.
研究動機	Corporate environmentalism are not always good for the society (Lutz et al., 2000). This is because self-regulation is motivated not only by moral concerns (Baron, 2010) but also by self-interest. Self-interested firms may reduce voluntarily emissions to preempt or weaken the future regulations (Lutz et al., 2000; Conrad, 2001; Maxwell et al., 2000). In this paper, we shed light on another aspect of corporate environmentalism by considering government policy in an international oligopoly. We ask whether corporate environmentalism enhances the effectiveness of government policy when there is strategic interaction between countries and whether it improves domestic welfare in such a situation.
模型	Consider that a home and a foreign firm export a homogenous good to a third market. We assume away domestic consumption of the good in exporting countries. An asterisk is used to denote foreign variables. The basic set-up follows Walz and Wellisch (1997). The two firms share the identical production technology. The production of each unit of output x and x^* generates a constant per unit emission of e . Each firm can reduce emissions by abatement efforts. To reduce the fraction $a \in [0, 1]$ per emission unit, the firm incurs an abatement cost of $c(a)e$ per unit of output, where $c'(a) > 0$. The home and foreign governments impose emission taxes t and t^* , respectively, on each unit of the remaining emissions and/or provide an export subsidy s and s^* per unit of output, respectively. An important

	<p>assumption is that emission taxes must be non-negative, i.e. $t, t^* \geq 0$. This is because emission subsidies are not feasible politically.</p> $D = \gamma(E + \alpha E^*) \quad \text{and} \quad D^* = \gamma(E^* + \alpha E), \quad (1)$ $\pi - \theta(D + D^*), \quad (2)$
研究結果	<p>The main results are as follows. When both emission taxes and export subsidies are used, the degree of environmental consciousness of the firm is irrelevant to social welfare and pollution if pollution is local. This is because environment-friendly actions are completely offset by adjustments to environmental regulations. In contrast, if pollution is partially transboundary and the domestic firm is sufficiently environment friendly, domestic welfare falls, relative to the case of the profit-maximizing firm. The environmentally conscious firm over-internalizes the externality and the government cannot fully externalize the over-internalized externality. Consequently, the environmentally conscious firm engages in too much abatement from the government's viewpoint. If only emission taxes are available, corporate environmentalism may reduce domestic welfare even if pollution is local. In contrast, if only export subsidies are available, corporate environmentalism can improve domestic welfare because it enables the government to implement the first-best policy using only one tool.</p>
研究貢獻	<p>We showed that corporate environmentalism may reduce the effectiveness of government policies. The government cannot force private firms to change their objective functions. If firms are "too much environmentally conscious" from the government's viewpoint, it is difficult for it to attain the locally optimal emission level by implementing environmental policies. Thus, corporate environmentalism may not be welcomed by the policymakers.</p>
未來研究方向	None

篇名	<i>Multimarket Linkages, Trade and the Productivity Puzzle</i>
作者	<i>Noriaki Matsushima and Laixun Zhao</i>
出處	Review of International Economics
摘要	This paper examines the relationship between firms' productivity improvement and the volume of exports, and shows that it can be sometimes negative, which seems to be an empirical puzzle. The key lies in that we simultaneously take into account intermediate retailers (i.e. vertically) and multimarket linkages (i.e. horizontally). With convex cost functions, when market conditions worsen, the manufacturer increases supply to the retailer who is larger or more efficient in trade cost.
研究動機	<p>Many makers do not directly sell to consumers but sell through retailers. For example, automobile manufacturers contract with car dealers and consumer-electronics makers supply to retailers, who then sell to consumers. Further, different retailers and contractors can be located in different countries and they may respond asymmetrically to demand shocks. As such, the manufacturer's output may expand in one market but contract in another market. For instance, facing the current wave of globalisation, Buick has been shrinking in its US market share but thriving in the Chinese market; and Suzuki, a small compact-car maker in Japan, is the number one maker in India occupying more than 50% of the market share, out-performing all other makers combined.</p> <p>There is very little existing research on the relationship between manufacturers and retailers in different markets, especially with regard to trade. Standard literature predicts that higher productivity leads to more exports, which is certainly intuitive and easily explainable. However, there are empirical studies that find the opposite.</p>
模型	Consider two independent downstream markets in two countries. In each market, there is a monopolistic retailer (D in one country and F in the other) that sells an identical product, which is produced by a common upstream manufacturer M located in country D.
研究結果	This paper analyzed the relationship between a firm's productivity improvement and its volume of exports. Specifically, we simultaneously take into account intermediate traders (i.e. vertically) and multimarket linkages (i.e. horizontally) which have not been considered in the existing literature. We found that the manufacturer will adjust exports when facing productivity shocks, by making corresponding changes in other related markets, to take

	<p>advantage of its improved outside options. The model highlights the importance of taking into account the vertical relationship between the manufacturer and retailers, as well as their strategic interactions through which profit shifting is carried out across multi-markets horizontally.</p> <p>The existence of retailers is essential. If the manufacturer directly sells to consumers instead, the quantity supplied in each market monotonically increases with the efficiency improvement (the decrease in c).¹⁰ Intuitively, without the retailers, the monopolist can increase production at its discretion when efficiency is improved.</p> <p>It has been assumed that the manufacturer must negotiate with both retailers. We can relax this to have a three-stage game. First, the manufacturer determines the number of trading partners. Second, it negotiates with the retailers independently and simultaneously. Finally, each retailer determines its retail price. If only one retailer is chosen, it must be in the larger market. However, we find that for any $c < c^*$, the manufacturer always decides to trade with both retailers simultaneously.</p> <p>Our model can be extended to examine merger incentives under multimarket linkages especially on the relationship between buyer power, profitability and social surplus.</p>
研究 貢獻	<p>Several papers (Horn and Wolinsky, 1988; Lommerud et al., 2005; Symeonidis, 2010) show that horizontal merger is unprofitable if the bargaining power of the upstream supplier is strong. It would be interesting to see whether this property holds true in our setting, which we leave for future research.</p>
未來 研究 方向	<p>We can study the optimal location of a manufacture firm in a barbell model by considering the fixed cost of the two retailer.</p>

篇名	Protection versus Free Trade: Lobbying Competition between Domestic and Foreign Firms
作者	<i>Dapeng Cai, Jie Li</i>
出處	Southern Economic Journal (2014)
摘要	In sum, our results suggest that the preferences of policymakers toward foreign contributions may be a critical determinant of trade policy. Our article also at least partially explains the “rich get richer” phenomenon in international intraindustry inequality.
研究動機	Import-competing domestic firms, for instance, may lobby for protection from imports, whereas foreign firms may lobby for the free trade of exports (Bhagwati 2000). Unsurprisingly, lobbying by domestic and foreign firms on domestic trade policymaking has become increasingly significant in recent years.
模型	Consider a domestic market served by a domestic firm (firm 1) and a foreign firm located in the foreign country (firm 2). Then we compare the three different welfares under certain conditions.
研究結果	Because of lobbying competition between foreign and domestic firms, even a less competitive foreign firm can successfully elicit a tariff reduction under reasonable conditions.
研究貢獻	Lobbying competition may also increase the level of aggregate domestic welfare when the market powers of the competing firms are sufficiently alike.
未來研究方向	We can consider the foreign firm lobbying for tariff rate quotas.

篇名	<i>Optimal Discriminatory Tariffs under Foreign Ownership</i>
作者	<i>Chien-shu Tsai^a Jen-yao Lee^b</i> <i>a Department of International Business, Kao Yuan University, Taiwan, R.O.C.</i> <i>b Department of International Business, National Kaohsiung University of Applied Science, Taiwan, R.O.C.</i>
出處	Working paper
摘要	In this paper, we show that when the portion of equities of lower-marginal cost country owned by domestic investors is sufficiently high in asymmetric equilibrium, the importing country will impose a lower tariff on the exporting country with a lower cost of production, while a tariff will further decrease or turns out to be a subsidy with the production efficiency improvement. Furthermore, we show that in the presence of foreign ownership, the higher-marginal cost exporting country will provide a higher export subsidy and the importing country will impose a higher tariff on higher-marginal cost exporting country with a larger portion of equities.
研究動機	Does internationalized ownership of firms affect the decision of an individual country's government seeking her own national interest or welfare? Implications of foreign ownership on industrial and trade policies motivate the analysis in the present paper. More specifically, we construct a familiar third-market export competition model with foreign ownership examining the importing government's strategic incentive for choosing import tariffs or subsidies.

模型

Consider an oligopolistic industry that spans three countries, two exporting countries and one importing country which is the domestic country without domestic production. It is assumed that the demand function of the importing country is $P = a - Q$, and the composition of the firms in the market is foreign firms i and j engaging Cournot competition. The supply equation is given by $Q = q_i + q_j$, where q_i and q_j denote, respectively, the output of the firm i and j . It is also assumed that their cost functions are $C_i = c_i q_i$ and $C_j = c_j q_j$, with $c_i > c_j > 0$ meaning that the production efficiency of firm i firm is lower than that of firm j . We assume that the importing country levies the tariff on imports and the magnitude of it is given by τ_i and τ_j , the tariff revenue is $T = \tau_i q_i + \tau_j q_j$.

The exporting firms need to maximize the profit in the absence of export subsidy through the following optimization problems:

$$\max_{\{q_i\}} \pi_i = (P - c_i - \tau_i) q_i,$$

$$\max_{\{q_j\}} \pi_j = (P - c_j - \tau_j) q_j.$$

Let α_i and α_j denote the portion of equities of firm i and firm j owned by the domestic investor on foreign firms, where $\alpha_i \in [0,1]$ and $\alpha_j \in [0,1]$. The social welfare of the importing country is defined as,

$$W = CS + \alpha_i \pi_i + \alpha_j \pi_j + T$$

研究 結果	<i>When the portion of exporting firm's equities owned by domestic investors is symmetric and $\alpha > 0.5$, the optimal trade policy will be import subsidy and the importing country will provide a higher subsidy on the exporting country with a lower cost of production.</i>
研究 貢獻	本文考慮進口國對於外國廠商的持股時，在某些參數條件下會打破 Hwang and Mai(1991)低成本高關稅的結論。
未來 研究 方向	可考慮兩外國廠商對消費者具有企業社會責任(CSR)下的最適差別關稅政策。

篇名	<i>Environmental cooperation: ratifying second-best agreements</i>
作者	<i>Matthew McGinty</i>
出處	Source: Oxford Economic Papers, New Series, Vol. 59, No. 1 (Jan., 2007), pp. 45-62
摘要	<p>This paper generalizes the benchmark model of self-enforcing international environmental agreements (IEAs) by allowing for all possible coalitions of n asymmetric nations. Asymmetries introduce gains from trade in pollution permits, reducing the incentive to deviate from a properly designed agreement. Coalitions are stable when the aggregate payoff to members is greater than the sum of individual payoffs from leaving the coalition. A benefit-cost ratio rule is proposed which distributes any remaining surplus after each coalition member receives their payoff as a non-signatory. Simulations of 20 asymmetric nations illustrate that even when the gains to cooperation are large, IEAs can achieve substantial emissions reductions. For example, when the benefit-cost ratio is one, stable coalitions can result in 47% of the difference between the full and no cooperation outcomes, compared with 5% for symmetric nations. Furthermore, 72% of the global payoff difference is obtained, relative to 9% for symmetry</p>
研究動機	<p>The theoretical literature on international environmental agreements (IEAs) reaches pessimistic conclusions. IEAs suffer from the free-rider problem since reduced emissions are a global public good. Furthermore, the free-rider problem becomes more severe as the potential gains to an IEA increase (Barrett, 1994).</p> <p>This paper reverses some of that pessimism. It argues that the source of the conventional wisdom is the convenient, but highly unrealistic, assumption that nations are identical. When that assumption is relaxed by letting the marginal costs and benefits of abatement vary across nations, we find that a much higher level of abatement can be sustained by an IEA. This paper is the first to provide a solution to the benchmark model of IEAs (Hoel, 1991; Carraro and Siniscalco, 1993; Barrett, 1994) for all possible coalitions of n asymmetric signatories.</p>

模型	<p>Benefit for nation i is:</p> $C_i(q_i, c_i) = \frac{c_i q_i^2}{2}$
研究 結果	<p>Symmetric models may vastly understate the degree of abatement achievable by a selfenforcing IEA regardless of the size of the gains to cooperation. In general, when the covariance between the benefit shares and the MAC slopes is negative the non-cooperative level and stable coalition abatement is greater than symmetry would indicate. The full cooperation level of abatement is unambiguously higher when nations differ</p> <p>The size and scope of an agreement is increased by exploiting asymmetries, which introduce the possibility of IEAs that can substantially overcome the freerider problem given the appropriate set of abatement requirements</p>
研究 貢獻	<p>Increasing variance should lead to even higher levels of abatement and payoffs attainable by a self-enforcing IEA, even if the number of signatories does not dramatically increase</p>
未來 研究 方向	<p>None</p>

篇名	<i>The role of uncertainty and learning for the success of international climate agreements</i>
作者	<i>Michael Finus , Pedro Pintassilgo</i>
出處	Journal of Public Economics
摘要	In this paper, we explain why and under which conditions this can be true. However, we argue that those conditions are the exception rather than the rule. Most important, we suggest a mechanism for those conditions where learning has a negative effect on the success of cooperation which removes this effect or even turns it into a positive effect. Our results apply beyond the specifics of climate change to similar problems where cooperation generates positive externalities.
研究動機	International environmental agreements are typical agreements where countries have to decide whether they are in or out, participation is voluntary and membership is open, i.e. a country can neither be forced into nor excluded from participation. Therefore, we model coalition formation as a two-stage open membership single coalition game. In the first stage, players decide whether to join an agreement or to remain outsiders as singletons. In the second stage, players choose their policy levels
模型	In the first stage, players' membership decisions lead to a coalition structure $K = \{S, 1n - m\}$, n the total number of players S the coalition of size m , $m \leq n$, $1n - m$ the $n - m$ singletons, N the set of players, Because coalition formation is only interesting if there are at least three players, we assume subsequently $n \geq 3$. Due to the simple structure of this coalition formation game In the second stage, players choose their abatement levels q_i . The decision is based on the following payoff function $\Pi_i = B_i \left(\sum_{k=1}^n q_k \right) - C_i(q_i), i \in N \quad \max_{q_i} \sum_{i \in S} \Pi_i(S) \Rightarrow \sum_{i \in S} B_i' \left(\sum_{k=1}^n q_k \right) = C_i'(q_i) \quad \forall i \in S$ $\max_{q_i} \Pi_i(S) \Rightarrow B_i' \left(\sum_{k=1}^n q_k \right) = C_i'(q_i) \quad \forall i \notin S$ <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> $\text{internal stability: } \Pi_i^*(S) \geq \Pi_i^*(S \setminus \{i\}) \quad \forall i \in S \quad (4)$ $\text{external stability: } \Pi_i^*(S) > \Pi_i^*(S \cup \{i\}) \quad \forall i \notin S. \quad (5)$ </div> </div>
研究結果	This paper addressed the role of uncertainty and learning for the formation of self-enforcing international environmental agreements (SEIEAs). The central question was whether the veil of uncertainty impacts positively or negatively on the success of such agreements.

研究 貢獻	The previous literature suggested a positive impact with the conclusion that “learning is bad”. From our model the answer appears to be less straightforward.
未來 研究 方向	In fact, we showed that the negative impact of learning on the success of SEIEAs requires a couple of special assumptions and can also be mitigated in some cases by a transfer mechanism that is designed to minimize free-rider incentives.

篇名	<i>Foreign Penetration and Domestic Competition</i>
作者	<i>Sajal Lahiri^a and Yingyi Tsai^b</i> <i>Department of Economics, Southern Illinois University</i> <i>z. Department of Applied Economics, National University of Kaohsiung, Kaohsiung University</i>
出處	Working paper
摘要	They consider an oligopolistic model with a number of domestic and a number of foreign firms. The two sets of firms produce differentiated goods and serve the domestic market. They consider different market structures depending on the existence or otherwise of free entry and exit of either or both sets of firms. In this context, they examine the structure of optimal lump-sum taxes, and the effect of an increase in the number of foreign firms on, inter alia: (i) the free entry number of domestic firms, (ii) the optimal number of domestic firm, and (iii) domestic welfare. One of our findings is that foreign penetration unambiguously reduces excessive competition among domestic firms.
研究動機	Foreign penetration by direct investment is often taken to be a danger to host countries, especially from the viewpoint of their effect on domestic firms. The standard economic theory generally shows that improvements in consumers' surplus caused by increases in supply by foreign firms dominate reductions in domestic producers' surplus. However, it is not necessarily the case when the domestic market structure is oligopolistic. In this paper they combine the afore-mentioned two strands, and examine the welfare effect of FDI, including an additional channel of the effect of foreign penetration by FDI on welfare loss arising from excessive competition.

模型

We consider a market in which there are two groups of firms d and f . Group d consists of n_d identical domestic firms, each with constant unit variable cost c_d , and Group f consists of n_f identical foreign firms, each with constant unit variable cost c_f . The two groups of firms produce two goods for the market—to be called goods d and f —that are imperfectly substitutes. The inverse demand functions are:

$$p_d = \alpha_d - \beta_d Q_d - \gamma Q_f, \quad p_f = \alpha_f - \beta_f Q_f - \gamma Q_d, \quad (1)$$

where p_k and Q_k are respectively the price and total demand of good k ($k = d, f$). That is

$$Q_k = n_k q_k, \quad k = d, f, \quad (2)$$

where q_d and q_f are outputs per firm for the two groups of firms.

Profits for each firm in the two groups are given by:

$$\pi_k = (p_k - c_k)q_k - F_k + S_k, \quad k = d, f, \quad (3)$$

where F_k and S_k are respectively fixed costs of, and lump-sum subsidy to, each firm in group k ($k = d, f$).

Assuming Cournot conjectures, the first-order profit-maximizing conditions are:

$$p_k - c_k = \beta_k q_k, \quad k = d, f. \quad (4)$$

Welfare of the country is given by

$$W = n_d \pi_d + CS - n_d S_d - n_f S_f, \quad \text{where} \quad (5)$$

$$dCS = -Q_d dp_d - Q_f dp_f. \quad (6)$$

Finally, we shall consider sub-cases depending on whether the number of firms in either group is exogenous or endogenous, i.e., whether or nor there is free and exits of the firms.

In case of free entry and exit for domestic firms, we shall have:

$$\pi_d = (p_d - c_d)q_d - F_d + S_d = 0, \quad (7)$$

and in case of free entry and exit for foreign firms:

$$\pi_f = (p_f - c_f)q_f - F_f + S_f = 0. \quad (8)$$

研究 結果	The optimal levels of both S_d and S_f are negative, i.e., both sets of firms are taxed. When a lump-sum tax/subsidy policy is applied only to domestic firms and there is free entry and exit of both sets of firms, an increase in the taxed cost of the domestic firms reduces (increases) the level of optimal tax when the initial level of taxed costs is large (small).
研究 貢獻	They find that FDI unambiguously reduces excessive competition among domestic firms and increases welfare when there is free entry and exit of firms. When the number of foreign firms is exogenous, we also find conditions under which there is excessive competition among domestic firms. When there are free entry and exit among both sets of firms, the optimal policy is to apply lump-sum tax on both sets of firms. The level of optimal tax goes down(up) when taxed costs go up if the initial level of fixed costs is large (small).
未來 研究 方向	(i)可考慮 Bertrand 競爭下的結果,(ii)如果廠商的生產排放污染時結果又如何。

篇名	<i>Mixed Duopoly, Location Choice, and Shadow Cost of Public Funds</i>
作者	<i>Toshihiro Matsumura^a Yoshihiro Tomaru^b</i> <i>a Institute of Social Science, The University of Tokyo,</i> <i>b School of Economics, Chukyo University,</i>
出處	Southern Economic Journal 2015, 82(2), 416-429
摘要	They examine the relationship between equilibrium and efficient levels of product differentiation in a mixed duopoly, where a welfare-maximizing public enterprise competes with a profit maximizing private firm. They introduce shadow costs of public funding (i.e., the excess burden of taxation). The profits of public firms obtained by the government reduce these costs. They find that in a mixed duopoly, the level of product differentiation is too low for social welfare. This result is in sharp contrast to the private oligopoly, where the level of product differentiation is too high. Finally, They show that when the shadow cost is high, privatizing the public enterprise improves welfare.
研究動機	In this article, we explicitly consider the shadow cost of public funds and examine the equilibrium locations (product differentiation) in a mixed duopoly.

模型

We formulate a duopoly model, where firm 0 is a welfare-maximizing public firm and firm 1 is a profit-maximizing private firm. We consider a two-stage location-price model with a linear city model, originally proposed by Hotelling (1929) and d'Aspremont, Gabszewicz, and Thisse (1979). Consumers are distributed uniformly and with unitary density along the interval $[0, 1]$. Firms 0 and 1 produce a homogeneous good with zero marginal cost (normalized for expositional simplicity). Let firm i 's location be $x_i \in [0, 1]$. We assume that $x_0 < x_1$, that is, the public firm is located to the left of the private firm.

A consumer living at $z \in [0, 1]$ incurs a transportation cost of $t(x_i - z)^2$ when she purchases the product from firm i . The consumers have unit demands; that is, each consumer consumes one or zero units of the product.³ Each consumer derives a surplus from consumption (gross of price and transportation costs) equal to s . We assume that s is so large that every consumer consumes one unit of the product.

The price charged by the public firm is denoted as p_0 and that charged by the private firm as p_1 . Let \tilde{x} be the critical location at which the consumer is indifferent between buying from any of the two firms,

$$\tilde{x} = \frac{x_0 + x_1}{2} + \frac{p_1 - p_0}{2t(x_1 - x_0)}.$$

Consumers located up to \tilde{x} will purchase from firm 0 and consumers located beyond \tilde{x} will purchase from firm 1. Thus, the two firms' demand functions are, respectively, $D_0(p_0, p_1, x_0, x_1) = \tilde{x}$, $D_1(p_0, p_1, x_0, x_1) = 1 - D_0(p_0, p_1, x_0, x_1)$. The profit of each firm is given by

$$\Pi_i(p_0, p_1, x_0, x_1) = p_i D_i(p_0, p_1, x_0, x_1). \quad (2.1)$$

Let $\lambda \geq 0$ be a measure of the dead-weight loss due to distortionary taxation. The profit of firm 0 becomes the government's revenue that the government can use to reduce tax rates in other markets; this results in the reduction of dead weight loss due to taxation. Thus, welfare includes additional benefits from a removal of distortion, $\lambda \Pi_0$. Under these conditions, welfare is given by

$$\begin{aligned} W(p_0, p_1, x_0, x_1, \lambda) &= s - \int_0^{\tilde{x}} [p_0 + t(x - x_0)^2] dx - \int_{\tilde{x}}^1 [p_1 + t(x - x_1)^2] dx \\ &\quad + \Pi_1(p_0, p_1, x_0, x_1) + (1 + \lambda) \Pi_0(p_0, p_1, x_0, x_1), \\ &= s - t \int_0^{\tilde{x}} (x - x_0)^2 dx - t \int_{\tilde{x}}^1 (x - x_1)^2 dx + \lambda \Pi_0(p_0, p_1, x_0, x_1). \end{aligned}$$

The above equation can be rewritten as

$$W(p_0, p_1, x_0, x_1, \lambda) = W(p_0, p_1, x_0, x_1, 0) + \lambda \Pi_0(p_0, p_1, x_0, x_1). \quad (2.2)$$

Matsumura (1998) presents a model in which a partially privatized firm (owned by both the public and private sectors) maximizes the sum of welfare and its profit, that is, $(1 - \theta)W + \theta \Pi_0$.⁴ This function

	<p>implies that the privatized firm places emphasis on the profit, as the private sectors hold more shares. Like the partially privatized firm's objective in this partial privatization approach, our welfare function (Eqn. 2.2) can be expressed as a weighted average of the public firm's profit Π_0 and welfare defined as the net surplus $W(p_0, p_1, x_0, x_1, 0)$.⁵ An increase in the taxation burden λ makes the public firm place greater emphasis on its profit. Thus, the behavior of the public firm in the case of excess taxation burden is the same as that of the partially privatized firm in Matsumura's (1998) partial privatization approach. A larger λ corresponds to a higher degree of privatization in the partial privatization approach. Thus, the two approaches qualitatively lead to the same equilibrium properties (Proposition 1).</p> <p>We emphasize, however, that the welfare implications of the partial privatization approach and our approach are in sharp contrast. This is because the definition of welfare is different in Matsumura's (1998) and our model. In Matsumura (1998), the objective function of the partially privatized firm, and not welfare, is a function of the degree of privatization θ. Therefore, welfare is indirectly affected by θ through a change in the equilibrium outcomes. However, in our model, welfare is a function of the excess burden of taxation λ, because a removal of distortion due to taxation improves the welfare. This implies that welfare is directly affected by λ. This difference in the definition of welfare gives rise to different welfare implications. Propositions 2 and 3 discussed in sections 4 and 5, respectively, clearly demonstrate this.</p> <p>The game runs as follows. In the first stage, each firm i ($i = 0, 1$) chooses its location simultaneously. In the second stage, each firm i chooses its price $p_i \in [0, \infty)$ simultaneously. Our solution concept is a subgame perfect Nash equilibrium and we solve the game by back-</p>
研究 結果	<p>An increase in excess taxation burden facilitates product differentiation. Furthermore, the maximal differentiation occurs in equilibrium if the social cost of public fund is greater than 1. The equilibrium locations are the second best for the social cost of public fund is greater than 1, whereas the equilibrium level of product differentiation is too low if the social cost of public fund is less than 1.</p>
研究 貢獻	<p>In this study, they investigate a mixed duopoly where a welfare-maximizing public firm competes with a profit-maximizing private firm. They introduce the shadow cost of public funding into a standard location-price model. They find that (i) an increase in the shadow cost increases the level of product differentiation, (ii) further product differentiation improves welfare, and (iii) privatization of a public firm can improve welfare when the shadow cost is large. These results are in sharp contrast with those existing in the literature on mixed and private oligopolies and have important welfare implications.</p>
未來 研究 方向	<p>考慮市場是圓形時,結果會跟本文所有差別。</p>

篇名	<i>Price premia to name brands: an empirical analysis</i>
作者	<i>Steven N. Wiggins and David G. Roboy</i>
出處	The Journal of Industrial Economics, XLIV, Dec1996
摘要	This paper examines the factors affecting prices in the North America banana market. There are substantial price differences not only between brand name and generic companies, but also among branded companies. Investigation reveals numerous potential differences, including important quality dimensions such as method of shipment and sourcing, as well as differences in brand name recognition.
研究動機	There are three well-known companies selling in the North America banana market in 1990s: Chiquita, Dole, and Del Monte. Although less concentrated in late 1990s, the market for bananas has been concentrated. The existence of branding and market concentration would appear initially to support the attribution of price premia to subjective product differentiation. This conclusion would be premature. Further observation establishes differences in the rates Key questions are as follows: what causes these price differences, how are they related to the brand names of leading companies, and what role does quality paly.
模型	The study carries econometric analysis and shows that objective quality characteristics explain the bulk of price variation and that subjective factors like brand names explain little price variation.
研究結果	Investigation reveals numerous potential differences, including important quality dimensions such as method of shipment and sourcing, as well as differences in brand name recognition.
研究貢獻	This study can be a reference to Taiwanese banana market.
未來研究方向	Relevant studies can be conducted in Taiwanese banana market.

篇名	企業社會責任、跨界污染與貿易政策
作者	Yang Ya Po, Wang Ting Jung
出處	國立高雄大學經營管理研究所 碩士論文
摘要	<p>本論文建立一個Brander & Spencer (1985)的三國兩廠商模型，以探討本國廠商的最適出口補貼政策。在模型中，本國廠商與外國廠商同時生產並出口產品到地主國家的市場進行數量競爭，本國廠商及外國廠商在生產的過程中會製造污染物，並可能污染本國、外國及地主國。本國廠商為一具備社會責任之企業，他可能關心地主國的消費者或跨界污染，而地主國消費者可能對於企業的社會責任有所認知而給予較高的願付價格。</p>
研究動機	<p>眾多企業開始重視企業社會責任的現今，從事社會責任的企業是否能夠保證這些行為能夠為企業帶來更大的獲利或是更優良的企業績效表現，而政府對於這些有意願從事企業社會責任的企業會給予支持或是採取相關政策去限制企業或是廠商在這方面的作為，若是政府採取相關政策去限制企業的社會責任又會產生何種結果，希望可藉由本文探討之結果給予一定程度之解釋。</p>
模型	<p>假設本國廠商與外國廠商生產產品並全數出口到第三國市場從事Cournot競爭，本國廠商及外國廠商在生產的過程中會製造污染物，並可能污染本國、外國及第三國。本國廠商為一具備社會責任之企業，他可能關心地主國的消費者或跨界污染，而地主國消費者可能對於企業的社會責任有所認知而給予較高的願付價格。</p> <p>本國廠商生產的邊際成本為 c_d，外國廠商生產時所需邊際成本為 c_f；在生產產品的過程中會產生污染，該污染會擴散到其餘兩個國家，譬如：本國廠商所造成的污染會對於外國以及地主國產生影響。本國政府給予本國每單位的出口 s 的從量補貼，在上述設定之下，兩廠商的目標函數如下：</p> $\begin{aligned} \text{Max } \phi_d &= [a + \theta(k_e + k_c) - q_d - q_f]q_d \\ &\quad - k_e \cdot e(D_d^h + D_d^d + D_d^f)q_d + k_c \left(\frac{q_d^2}{2} + \frac{q_f^2}{2} + q_d q_f \right) - c_d q_d + s q_d \\ \text{Max } \pi_f &= (a - q_d - q_f)q_f - c_f q_f \end{aligned}$

研究 結果	<p>在本國廠商愈在意其污染的邊際損害時，產生了將產量下降的動機，但政府除了社會福利極大化之外也希望在政府的最適出口補貼之下，本國廠商可以在 Cournot 競爭中取得優勢地位，故增加對於本國廠商的補貼以彌補減少的產量；當本國廠商愈在意地主國消費者剩餘時，會增加生產數量，此時政府並不需要給予過多的補貼，但本國廠商仍舊可以在數量競爭中取得優勢地位；而本國廠商雖然為在意企業社會責任的廠商，但當其對於鄰近兩國家的污染損害愈高時，政府卻是給予了愈高的出口補貼。</p> <p>本國廠商對於污染損害和消費者剩餘的態度也會對地主國的社會福利產生影響。本國廠商對於地主國消費者剩餘和污染排放關心程度愈高，會使得地主國的社會福利也愈高；本國廠商對本國的污染損害愈嚴重，會使得地主國的社會福利愈低；若外國廠商對本國的污染損害愈高，卻能使得地主國的社會福利上升。</p>
研究 貢獻	<p>Brander & Spencer(1985)的文中提到，政府對於國內的廠商會有動機給予一出口補貼使得廠商得到一個數量領導的地位。在加入了本國廠商對於企業社會責任關心的設定之後，得到了不同的結果在於本國所給予的最適貿易政策 會取決於本國廠商對於地主國消費者剩餘和其污染損害的關心程度，產生出不同的結果出現，絕非一定為一補貼政策。</p>
未來 研究 方向	<p>未來研究部分，除了企業社會責任活動的成本考量、產品的異質性之外，尚能夠考慮策略性的企業社會責任，即是對手在得知本國廠商考量企業社會責任時可獲得較大的利潤及社會福利之下，是否會考慮跟進並進行企業社會責任的行為；或甚至是外國政府也可能對外國廠商進行補貼的政策；再將上述可能的延伸結果與過往的企業社會責任和三國兩廠商數量競爭的相關文獻進行比較。</p>

篇名	<p>垂直相關產業下的環保技術授權</p> <p><i>Environmental technology licensing in a vertically related market</i></p>
作者	楊雅博、王筱評
出處	國立高雄大學經營管理研究所 碩士論文
摘要	<p>本論文建立了一個垂直相關市場的模型，市場中有三家廠商，原料供應商、被授權廠商及減排專利授權廠商，專利授權廠商決定其授權方式給被授權廠商並進入市場。專利授權廠商在決定進入市場方式及授權方式之後，原料供應商才決定採取單一訂價或是差別訂價策略，而政府對最終產品課徵污染排放稅。</p> <p>透過模型，我們的研究結果得出，原料供應商採取差別訂價下，專利授權廠商不進入市場生產時，其最適授權方式為單位權利金，即產業外授權方式以單位權利金授權為最佳；專利授權廠商進入市場生產時，其最適授權方式為單位權利金，即產業內授權方式以單位權利金授權為最佳。原料供應商採取差別訂價下，專利授權廠商最適進入模式為進入市場並授權單位權利金；當社會污染損害較低時，政府會課徵較低的污染稅率，專利授權廠商所授權之最適單位權利金會隨著稅率及技術創新程度降低而下降；反之，當社會污染損害較高時，政府會課徵較高的污染稅率，專利授權廠商所授權之最適單位權利金會隨著技術創新程度及市場規模提高而上升，但是卻會隨著污染稅率及生產成本的提高而下降。</p> <p>原料供應商採取單一訂價下，專利授權廠商不進入市場生產時，其最適授權方式為單位權利金，即產業外授權方式以單位權利金授權為最佳；專利授權廠商進入市場生產時，其最適授權方式為單位權利金，即產業內授權方式以單位權利金授權為最佳。原料供應商採取單一訂價下，專利授權廠商最適進入模式為進入市場並授權單位權利金；當社會污染損害較低時，政府會課徵較低的污染稅率，專利授權廠商所授權之最適單位權利金會隨著稅率及技術創新程度降低而上升；反之，當社會污染損害較高時，政府會課徵較高的污染稅率，專利授權廠商所授權之最適單位權利金會隨著技術創新程度及市場規模提高而上升，但是卻會隨著污染稅率及生產成本的提高而下降。當考慮廠商間的環保技術授權為單位權利金時，原料供應商差別訂價下的利潤最佳。</p>
研究動機	<p>近年來，世界各國開始對於工業、商業的節能減碳議題與環境污染議題等有了更高度的關注，而先進國家對於環保能源的開發及環保技術的研發也如雨後春筍般地湧現。國內許多專家學者、學術研究單位及企業也相繼投入研發各種環保能源技術，期望能夠減少環境污染並降低所使用之能源成本。</p>

模型	<p>本模型為一個四階段賽局(four-stage game)。在第一階段中，擁有環保技術專利的專利授權廠商決定其是否進入最終財市場從事生產，若其決定不進入市場以”O”表示；若其決定進入市場則以”E”表示；在第二階段中，專利授權廠商在決定是否進入市場生產後，若不進入市場，向被授權廠商提出單位權利金 r^O 或固定權利金 f^O 的要求；若進入市場，則向被授權廠商提出單位權利金 r^E 或固定權利金 f^E 的要求，讓被授權廠商決定是否接受專利授權廠商的授權；在第三階段中，原料供應商 U 對兩下游最終財廠商訂定單一原料價格 w 或是差別原料價格 w_1 及 w_2；最後，在第四階段中，專利授權廠商及被授權廠商決定 Cournot 競爭之最適產量。為求解此一子賽局完全均衡(subgame perfect equilibrium, SPE)，本文將採用後推法(backward induction)，由最後的第四階段往回求解。</p>
研究結果	<p>當政府課徵之污染稅率愈高，技術授權廠商所授權之單位權利金會下降；反之，當政府課徵之污染稅率愈低，技術授權廠商所授權之單位權利金會上升。考慮廠商間的環保技術授權為單位權利金時，原料供應商差別訂價下的利潤最佳。</p>
研究貢獻	<p>不論專利授權廠商採取產業內授權或是產業外授權，其最適之授權契約皆為單位權利金，而 Kamien & Tauman (1986)、Katz & Shapiro (1986)、Kamien et al. (1992) 等文均得出，產業外授權廠商以固定權利金方式授權的利潤最大，本文與其所得出的之結果大不相同。</p>
未來研究方向	<p>考慮廠商具有 CSR 之下的授權行為及相關福利效果。</p>

篇名	<i>Product Innovation Incentives: Monopoly vs. Competition</i>
作者	<i>Yongmin Chen , Marius Schwartz</i>
出處	Journal of Economics & Management Strategy, 22(3), 513-528
摘要	In contrast to Arrow's result for process innovations, we show that the gain from a product innovation can be larger to a secure monopolist than to a rivalrous firm that would face competition from independent sellers of the old product. A monopolist incurs profit diversion from its old good but may gain more than a rivalrous firm on the new good by coordinating the prices. In a Hotelling framework, we find simple conditions for the monopolist's gain to be larger. We also explain why the ranking of innovation incentives differs under vertical product differentiation.
研究動機	Does initial market power dilute a firm's incentive to invest in substitute new technologies in order to protect its existing profit? This question has longstanding interest to policymakers and economists. In a seminal paper, Arrow (1962) showed that a secure monopolist gains less from perfectly patentable process innovations—that lower the marginal cost of an existing homogeneous product—than would a competitive firm facing the same market demand. The logic is simple for a drastic innovation—one that renders the old technology irrelevant. Postinnovation profit will then equal the lower cost monopoly level whatever the initial market structure, so the gain from innovation is lower for an initial monopolist because only it enjoys status quo profit that the innovation cannibalizes or “replaces.”
模型	The market has an initial product, A. An innovation will bring a new product, B, to the market. The innovator obtains exclusive rights over B. Product A and product B (if it is innovated) are located at the two end points of an Hotelling line, $x = 0$ and $x = 1$, respectively, with their prices being p_A and p_B , and their constant unit costs c_A and c_B . A unit mass of consumers, each having a unit demand, are uniformly distributed on the Hotelling line. When purchasing a unit of product A or product B, a consumer at location $x \in [0, 1]$ receives net surplus $u_A = v_A - tx - p_A$ and $u_B = v_B - t(1 - x) - p_B$, respectively. If $v_A = v_B$, the setting is the standard Hotelling model with pure horizontal product differentiation.
研究結果	A priori, either effect may dominate. An important factor is the extent to which an increase in the price of the old product will shift sales to the new

	<p>product rather than drive consumers out of the market. This diversion ratio—and the ranking of product innovation incentives of a monopolist compared to a rivalrous firm—varies with the nature of product substitutability, as shown by the contrasting findings under our Hotelling differentiation versus Greenstein and Ramey’s (1998) for vertical differentiation.</p>
研究 貢獻	<p>In contrast to Arrow’s famous result for process innovations, this paper showed that the incentive to invest in nondrastic product innovations could be higher for a secure monopolist (unconcerned with strategic preemption) than under alternative market structures where the innovating firm would face competition from the old good. Although a monopolist’s incentive is diluted because a new substitute product would divert sales from its initial product, our analysis highlights an opposing effect: a monopolist can coordinate the pricing of the two products to increase profit from the new good.</p>
未來 研究 方向	<p>For future research, it would be interesting to identify natural experiments that control for other factors and exogenously generate different market structures, some involving a secure monopolist and others allowing product market rivalry, and compare the extent of product innovation. The natural experiments may involve an industry in a given country at different points in time (e.g., following a regulatory change) or across different countries. The regulatory differences that alter market structure could track some of the policy scenarios in the Introduction, for example, varying the breadth of patent protection or the stringency of merger policy.</p>

篇名	<i>Public, private and nonprofit regulation for environmental quality</i>
作者	<i>Lucie Bottega, Jenny De Freitas</i>
出處	Journal of Economics & Management Strategy, Volume 18, Number 1, Spring 2009, 105–123
摘要	This paper studies the welfare implications of different institutions certifying environmental quality supplied by a monopoly. The monopolist can voluntarily certify the quality of the product through an eco-label provided either by an NGO or a for-profit private certifier (PC). The NGO and the PC may use advertisement to promote the label. We compare the NGO and PC regimes with the regime where the regulator imposes a minimum quality standard.
研究動機	One reason for self-regulation” is the emergence of green consumers, at least in developed nations, willing to pay a higher price for products of less impact on the environment. The most effective way to solve this type of information problem and to signal product quality is to rely on third party certification (Cason and Gangadharan, 2002). Among the voluntary schemes promoted by private firms we have (eco)-labels. Eco-labels signal the products of less impact from production and use on the environment and can command a higher market price. This price premium gives producers an economic incentive to incur the additional costs associated with meeting the standards.
模型	<p>We develop a monopoly model of vertical differentiation. Environmental quality is our vertical differentiation variable. Consumers, then, prefer high environmental quality products to low quality ones when offered at the same price. The monopoly chooses the quality q of its variants in the range of environmental qualities technically feasible given by $[\underline{q}, \bar{q}]$.</p> <p>The demand side of the market consists of a continuum of consumers indexed by θ.</p> $V_{\theta}(p, q, E) = \theta q - p + \gamma E \quad (1)$ <p>E is the average environmental quality over all consumers. The parameter $\gamma > 0$ measures the marginal social benefit of the externality associated to the average environmental quality. We assume that the consumer with the highest valuation for quality is willing to pay twice the</p>

	<p>marginal cost of the lowest quality variant: $\bar{\theta} > 2c\underline{q}$.</p> $E = \frac{1}{\bar{\theta} - \underline{\theta}} \int_{\underline{\theta}}^{\bar{\theta}} q(\theta) d\theta \quad (2)$
研究結果	<p>High levels of green advertisement reduces the MQS level. In the absence of a regulator we give general conditions under which the NGO performs better than the private certifier. We find that the NGO always label a higher quality variant than the private certifier.</p>
研究貢獻	<p>For any level of green advertisement the presence of a private certifier in the market decreases the scope for public intervention. The role of the MQS changes, it has to correct for the otherwise excessive differentiation that decreases profits and consumers surplus. Optimal environmental regulation depends upon the institution interplaying with the regulator.</p>
未來研究方向	<p>We can compare the welfare effects of the three scheme when there are n firms.</p>

篇名	<i>Can Eco-labeling Schemes Preserve the Environment?</i>
作者	<i>Lisette Ibanez · Gilles Grolleau</i>
出處	Environmental and Resource Economics June 2008, Volume 40, Issue 2, pp 233-249
摘要	Can eco-labels reduce the pollution level ? The production technology and the subsequent pollution level are non-observable by consumers. A polluting firm may also usurp the eco-label by incurring a certain cost. The only way to inform consumers about the environmental quality of the product is to stick an eco-label on it. This paper is study the impact of eco-labeling, in a duopoly model of vertical product differentiation and use a three-stage game of production technology, signal and price competition.
研究動機	Some consumers derive utility from buying and using products produced under specific processes, such as environmentally friendly practices (Cason and Gangadharan 2002). At first glance, environmentally friendly products are similar to the conventional version of the same product, except that they are less harmful for the environment and frequently more expensive. In order to capture the consumers' willingness to pay, some producers market products labeled as 'environmentally friendly'.
模型	We consider a three-stage game. In the first stage, firms choose simultaneously their production technology (t) which is either a polluting one (b) or one that respects the environment (g) ; $t_1 \in \{b, g\}$. After the first stage, choices become common knowledge for both firms. On the other hand, consumers are not able to observe the technology choices. They observe signal choices made in the second stage where firms decide simultaneously whether they stick a label on their products (s). Either the firm sticks a label on its products (s = 1) or do not (s = 0). In the last stage, firms fix simultaneously product prices, $p_i \in \mathbb{R}^+$. $U(\eta) = \begin{cases} \theta - p_i(s_i, s_j) - \eta EB(\rho_i(s_i, s_j)) - P & \text{if he buys a product with signal } s_i \\ & \text{from firm } i \\ \theta - p_j(s_j, s_i) - \eta EB(\rho_j(s_j, s_i)) - P & \text{if he buys a product with signal } s_j \\ & \text{from firm } j \\ -P & \text{if he doesn't buy at all} \end{cases}$

研究 結果	(1)The reduction of labeling costs for firms who preserve the environment. e.g., by subsidizing a recognized labeling organization and (2)The increase of labeling costs for polluting firms by enforcing stricter labeling guidelines and severe punishment in case of deceptive use of environmental claims.
研究 貢獻	Ecolabeling is not a well-defined category. It includes a broad variety of environmental claims going from third party certification schemes to self-declaratory statements. According to the institutional context, this ecolabel variety generates different levels of ecolabeling costs. The main result of our analysis is to show that market can partly mitigate imperfections of “green” markets if certain restrictive conditions on labeling costs are satisfied. If it is sufficiently more costly for a polluter to use a green label than for an environmentally friendly producer, the informational problem is solved. The environmentally friendly producer will stick a green label on its products and inform perfectly consumers about the environmental quality of the product. At the same time, the pollution emitted during production (negative externality) is reduced. However, we show that pollution cannot be totally regulated through market mechanisms.
未來 研究 方向	We can consider the situation when firms engage in Cournot competition.

篇名	<i>Insecure Resources, Trade, and National Defense: Will Greater Trade Openness Reduce Conflict?</i>
作者	<i>Shih-Jye Wu, Yang-Ming Chang</i>
出處	Working Paper
摘要	<p>This paper examines how interstate conflict over scarce resources affects final goods trade and vice versa. Specifically, we develop a game-theoretic model of conflict and trade to identify conditions under which two contending countries may (or may not) engage in trade while deciding on their welfare maximizing levels of arming for protecting their resources. In bilateral trade between “large open economies” under resource conflict, the impact of a country's arming on its domestic welfare is shown to contain three different effects. The first is a terms-of-trade effect, which positively affects domestic welfare since an increase in arming increases its revenue from final good exports to the rival country. The second is an output distortion effect, which negatively affects domestic welfare due to the fact that increasing arming lowers the amount of resource allocated to final good production. The third is a resource appropriation effect, which positively affects domestic welfare because increasing arming enhances the probability of successfully appropriating its rival's resource for producing more final goods. We show that these three effects interact simultaneously in determining how resource conflict affects the equilibrium volumes of imports and exports between two adversaries, as well as how greater trade openness through reducing trade barriers and how interstate discrepancies in resource security affect their optimal amounts of arming for defense. The liberal peace hypothesis that trade reduces conflict and promotes peace may not hold true for contending countries with resource security <i>asymmetries</i>.</p>
研究動機	<p>How does security concern over resources (i.e., resource appropriation possibilities) affect a country's optimal decision on military buildup when engaging in final goods trade with its threatening rival? Will the classical liberal theory of “trading with the enemy” constitute an effective mechanism in reducing conflict and promoting peace?</p>
模型	<p>We develop a game-theoretic model of conflict and trade to identify conditions under which two contending countries may (or may not) engage in trade while deciding on their welfare maximizing levels of arming for protecting their resources.</p>

研究 結果	We find that under resource security asymmetry, the more secure country has a higher level of arming than the less secure country. Greater trade openness through trade cost reductions has a positive effect in reducing the arming level of the relatively more secure country. But the effect on the arming level of the relatively less secure country can be positive, zero, or negative. As such, whether opening trade reduces the overall conflict intensity cannot be determined unambiguously.
研究 貢獻	In view of the growing tensions in the international arena due to resource insecurity, our theoretical findings have relevant implications for trade between resource-conflict countries and their investments in armaments. However, we admittedly recognize that our trade-conflict model has been built upon a number of simplifying assumptions.
未來 研究 方向	One potentially interesting extension of the model is to see how the conflict-trade equilibrium in a two-country framework is altered by the strategic intervention of a third country. Another possible extension is to see how differences in production technologies affect the trade equilibrium of two resource-conflict countries and their arming decisions.

篇名	<i>Vertically Related Markets, Foreign Competition and Optimal Privatization Policy</i>
作者	<i>Winston W. Chang* and Han Eol Ryu</i>
出處	Review of International Economics, 23(2), 303–319, 2015
摘要	This paper examines the optimal privatization policy in vertically related markets in which an upstream public firm competes with a foreign private rival in supplying a produced input to the domestic and foreign downstream firms competing in the domestic market. It shows that if the upstream public firm's market share is sufficiently high, full nationalization is optimal and the resulting profit margin is positive. However, complete privatization is never optimal. Numerical simulations reveal both the diverse optimal privatization regimes and the patterns of optimal privatization levels with varying numbers of the domestic and foreign downstream firms.
研究動機	The SOE industries have exhibited some important features. First, they are often in the upstream industries. Christiansen (2011) reported that around half (in value terms) of all SOEs in OECD countries are in sectors such as transportation, telecommunications, power generation, finance, mining, manufacturing and other energy industries—most of which can be classified as the upstream industries. There is therefore a need to study the privatization issue in the vertical structure. Second, it is often observed that even with the existence of SOEs, foreign competition is still allowed as reported in Wade (1990).
模型	In the final good market, both home and foreign downstream firms compete in the domestic market. Their gross profits are ² $\pi^i = p(Q)q_{1i} - vq_{1i}, \quad i = 1, \dots, n_1,$ $\Pi^j = p(Q)q_{2j} - vq_{2j}, \quad j = 1, \dots, n_2.$ Taking the input price as given, the first-order conditions of their profit maximization are ³ $\frac{\partial \pi^i}{\partial q_{1i}} = p - v - bq_{1i} = 0, \quad (1)$ $\frac{\partial \Pi^j}{\partial q_{2j}} = p - v - bq_{2j} = 0. \quad (2)$ $\pi^u(x_1, x_2) = v(X)x_1 - c(x_1), \quad (3)$ $\Pi^u(x_1, x_2) = v(X)x_2 - C(x_2), \quad (4)$

	<p>The home country's social welfare function is the sum of consumer surplus and domestic firms' profits:</p> $W = \left(\int_0^Q p(s) ds - p \cdot Q \right) + \pi^u + n_1 \pi. \quad (5)$ <p>In the second stage, we assume that U1's manager chooses x_1 to maximize a weighted average of domestic welfare and upstream firm's profit:</p> $M = gW + (1-g)\pi^u, \quad (6)$ $M_1(x_1, x_2) = v - c' - \frac{b(N+1)x_1}{N} + g \left(1 + \frac{2n_1}{N^2} \right) bX = 0, \quad (7)$ $\Pi_2^u(x_1, x_2) = v - C' - \frac{b(N+1)x_2}{N} = 0, \quad (8)$ <p>To be more precise in examining U1's profit margin, we obtain from (7)</p> $v \geq c' \text{ according to } \theta^u \geq g \frac{2n_1 + (n_1 + n_2)^2}{(n_1 + n_2)(n_1 + n_2 + 1)}, \quad (9)$ <p>where $\theta^u = x_1/X$, which is the domestic upstream firm's market share. Note that θ^u</p>
研究結果	<p>It shows that if the upstream public firm's market share is sufficiently high, full nationalization is optimal and the resulting profit margin is positive. However, complete privatization is never optimal.</p> <p>Numerical simulations reveal both the diverse optimal privatization regimes and the patterns of optimal privatization levels with varying numbers of the domestic and foreign downstream firms.</p>
研究貢獻	<p><i>The simple framework presented in this paper serves to demonstrate the sensitivity of the optimal privatization policy to the upstream and downstream market structures. The results of this paper suggest that when the government determines the privatization policy for an upstream public firm, the vertical market structure should not be ignored.</i></p>
未來研究方向	<p><i>This paper has laid a foundation in studying the privatization issues with a vertical structure. We believe vertical structure is more relevant than the horizontal one since major public firms are often present in the upstream markets.</i></p>

篇名	<i>Discriminatory nonlinear pricing, fixed costs, and welfare in intermediate-goods markets</i>
作者	<i>Fabian Herweg , Daniel Müller</i>
出處	International Journal of Industrial Organization
摘要	We investigate the welfare effects of third-degree price discrimination in input markets when nonlinear wholesale tariffs are feasible. After accepting their respective wholesale contracts, two downstream firms have to pay a fixed cost in order to become active in the downstream market. If the downstream firm with lower marginal cost has significantly higher fixed cost, uniform pricing leads to lower marginal wholesale prices for all downstream firms and thus higher quantities of the final product being produced. This in turn implies that banning price discrimination improves welfare and consumer surplus. If the downstream firm with lower marginal cost has only weakly higher (or even lower) fixed cost, banning price discrimination deteriorates welfare and consumer surplus
研究動機	We model a vertically related industry where a monopolistic manufacturer supplies an essential input to two downstream firms. These downstream firms differ not only in their marginal cost of transforming the manufacturer's input into a final product, but also with regard to a fixed cost component, that they have to incur in order to become active in the downstream industry. The manufacturer has all the bargaining power and makes an observable two-part tariff offer to each downstream firm. Under price discrimination these tariffs can be different, whereas under uniform pricing the manufacturer is forced to offer the same tariff to both downstream firms. In our baseline model, we focus on the case where downstream firms are local monopolists, i.e, they operate in independent markets. Then, under price discrimination the unit wholesale price equals upstream marginal costs of production and the fixed fees are set in order to extract all the rents from the downstream firms.
模型	Consider a vertically related industry where the upstream market is monopolized by manufacturer M. This manufacturer produces an essential input at constant marginal cost $K > 0$, which is supplied to a downstream sector. There are potentially two downstream firms, $i \in \{0, k\}$, that transform one unit of input into one unit of a final good. Downstream firm i produces at constant marginal cost k_i and with sunk fixed cost F_i . Without loss of generality, we assume that downstream firm 0 produces with lower marginal

	<p>cost than downstream firm k. Specifically, we set $k_k = k > 0 = k_0$ so that k denotes the production cost disadvantage of downstream firm k. The fixed costs are weakly positive, $F_i \geq 0$, and downstream firm 0 can have higher or lower fixed cost than firm k. Let $F := F_0 - F_k$ denote the fixed cost advantage of downstream firm k, which may be a disadvantage; i.e. F may be negative. We posit that the downstream firms serve independent markets. Both markets are symmetric and characterized by the same inverse demand function $P(q)$, which is strictly decreasing and three times continuously differentiable where $P' < 0$. Moreover, we impose the standard assumptions that $P(0) > K + k$ and $P'(q) < \min\{0, -qP''(q)\}$ where $P'' < 0$. Additionally, we impose the following assumption that guarantees that the optimal wholesale tariffs are always well defined.</p>
研究結果	<p>We find that uniform pricing leads to lower marginal wholesale prices for all downstream firms than price discrimination if the individual rationality constraint of the downstream firm with the lower marginal cost is binding due to a substantial fixed cost disadvantage. This fixed cost disadvantage may arise, for example, if the downstream firm with the lower marginal cost is a potential entrant who has to incur an entry fee (e.g., the acquisition of a business license), whereas the downstream firm with the higher marginal cost is already incumbent in the downstream industry. Alternatively, if the fixed cost is interpreted as a downstream firm's outside option, the fixed cost disadvantage might as well reflect that backward integration or demand-side substitution leads to higher profits for the downstream firm with the lower marginal costs than for the one with higher marginal costs. Thus, several scenarios may lead to the fixed fee under uniform pricing being determined by the individual rationality constraint of the downstream firm with lower marginal cost, which implies that marginal wholesale prices are lower for all firms under uniform pricing than under price discrimination. These lower marginal wholesale prices translate into higher welfare and consumer surplus under uniform pricing.</p>
研究貢獻	<p>Their analysis focused on the welfare effects of a ban on price discrimination in the short run.</p>
未來研究方向	<p>The investment reduces that downstream firm's effective marginal cost and increases the quantity it sells to final consumers. Hence, uniform pricing will typically increase consumer surplus and total welfare in the long run. A detailed analysis of the long-run welfare effects of a ban on price discrimination can be future research.</p>

篇名	<i>Entering New Markets in the Presence of Competition: Price Discrimination versus Cannibalization</i>
作者	<i>Ralph Siebert</i>
出處	Journal of Economics & Management Strategy, Volume 24, Number 2, Summer 2015, 369–389
摘要	This study focuses on firms' optimal entry strategies in new markets when products are differentiated in quality. We are interested in investigating how many products of different qualities firms should introduce into an empty market. Our results show that firms' optimal strategy to enter new markets is described by introducing a single product only. Firms differentiate their products not only toward their rivals' products to soften price competition, but also toward their own goods in order to avoid cannibalizing their own (high quality) product demand.
研究動機	We rarely observe that a firm simultaneously introduces multiple products of high quality, or multiple products of low quality, or a mixture of low quality and high-quality products when entering new markets. The question arises, why do firms introduce only a single product of a certain quality into a new market instead of introducing multiple products of different qualities? This study examines firms' incentives to introduce new products of different qualities into new markets. We are not aware of any study that focuses on firms' optimal product line decisions when entering new markets characterized by vertical product differentiation.
模型	We focus on a vertically differentiated product market and consider a simple model in which a monopolist considers to introduce a single or multiple product qualities into an empty market. In the first stage, the firm chooses whether to introduce one or two product qualities, where the quality of product i , $s_i \in [0, \bar{s}]$ is bounded above. The monopolist maximizes profits and decides on product qualities and prices. We assume that each product costs the same to produce and set the unit variable cost equal to zero. Consumers' preferences are described by $U = \theta s - p$ if they buy a good and zero otherwise. Note, consumer preferences are linear in consumer types (θ). Consumers differ in their willingness to pay (θ) for quality, or the inverse of the marginal utility of income. The willingness to pay for quality is distributed over the interval $[0, 1]$, where the probability density function of theta, $f(\theta)$, follows a uniform distribution.
研究	This study analyzes firms' optimal strategies to introduce products of

結果	different qualities into new markets. We find that firms will not offer two adjacent products with lowest quality in the market. Moreover, firms will not offer two adjacent products with highest quality. We find that product qualities will not be offered in staggered form either, as price competition toward the rival's product is intensified which lowers profits to a greater extent compared to introducing an additional product and gaining on demand. Interesting is also the result that firms differentiate their own products from their own goods in order to avoid cannibalizing their own high-quality demand.
研究 貢獻	We establish a simple game-theoretic model in which two firms face an empty market and have the choice to simultaneously introduce multiple products of different quality into a new market. Firms compete in prices in the product market. Hence, strategic decisions on product qualities and prices play an important role in our study.
未來 研究 方向	None

篇名	<i>Corporate Social Responsibility or Payoff Asymmetry? A Study of an Endogenous Timing Game</i>
作者	<i>Toshihiro Matsumura and Akira Ogawat</i>
出處	<i>Southern Economic Journal</i> 2014, 81(2), 457-473
摘要	This paper revisits an endogenous timing game by introducing corporate social responsibility into firms' payoffs. Previous research investigates an endogenous timing game in a mixed oligopoly, wherein one welfare-maximizing public firm competes against profit-maximizing private firms. It shows that the outcome is completely different from that of private oligopoly. In contrast to its result, we find that this change in payoff does not matter as long as the payoffs are symmetric. Our result indicates that asymmetry, and not welfare-concerning objectives, yields specific results in the literature on mixed oligopoly.
研究動機	In this article, we follow their approach and investigate the observable delay game formulated by Hamilton and Slutsky (1990). We find that introducing CSR does not affect the timing choice as long as the payoffs are symmetric. The Cournot, Bertrand, and Stackelberg models have occupied important positions in the literature on oligopoly theory. The Cournot and Bertrand models involve simultaneous moves, while the Stackelberg model involves sequential moves. Each of these models produces a different equilibrium outcome; that is, the equilibrium outcome crucially depends on the timing of each firm's choice.
模型	This paper adopts a standard differentiated duopoly with linear demand (Dixit 1979). Firms 1 and 2 produce differentiated commodities for which the inverse demand function is given by $p_i = 1 - q_i - \delta q_j$ ($i=1,2, i \neq j$), where p_i and q_i are firm i 's price and quantity, respectively; and $\delta \in (0, 1)$. Each firm i 's marginal production cost m is constant. We assume that $m < 1$. Firm i 's payoff is $V_i = \theta_i SW + (1 - \theta_i) \pi_i$, where $\theta_i \in (0, 1)$, SW is the total social surplus (sum of the firms' profits and consumer surplus), and π_i is firm i 's profit. Here, θ_i ($i=1,2$) indicates the weight of social responsibility in the payoff of each firm, and π_i ($i=1,2$) and SW are given by

	$\pi_i = (p_i - m)q_i = (1 - q_i - \delta q_j - m)q_i,$ $SW = \pi_1 + \pi_2 + \left[(q_1 + q_2) - \frac{(q_1^2 + 2\delta q_1 q_2 + q_2^2)}{2} - p_1 q_1 - p_2 q_2 \right]$ $= \pi_1 + \pi_2 + \frac{1}{2}(q_1^2 + 2\delta q_1 q_2 + q_2^2).$
研究結果	<p>In this article, we introduce the effect of CSR formulated by Ghosh and Mitra (2010b) into an endogenous timing game. We obtain results in contrast to those of Pal (1998) and Barcena-Ruiz (2007), who discuss mixed oligopolies. In quantity-competition and price-competition models, simultaneous-move and sequential-move outcomes appear in equilibrium, respectively. These equilibrium outcomes are equal to the outcomes of private duopolies where all firms are profit maximizers. This implies that introducing welfare-concern objectives does not matter as long as the payoff functions are symmetric.</p> <p>Although we cannot solve the game explicitly with regard to general asymmetric objective functions, we present numerical results suggesting that it is not welfare-concern objectives but asymmetric objectives that are important for the known results in mixed oligopolies.</p>
研究貢獻	<p>Our article also sheds new light on the literature on mixed oligopoly. Most studies in the literature assume that only one firm is concerned with welfare. Our results suggest that this assumption is not innocuous. We should check the robustness of welfare implications in the literature on mixed oligopoly by extending the study to cases with more than one public firm.</p>
未來研究方向	<p>In this article, we investigate firms concerned with social welfare as well as their own profits. Other non-profit-maximizing objectives such as relative profit maximization may yield similar implications.¹⁰ We leave this problem for future research.</p>

篇名	<i>Social responsibility in a bilateral monopoly</i>
作者	<i>Björn Brand · Michael Grothe</i>
出處	Journal of Economics (2015) 115:275–289 DOI 10.1007/s00712-014-0412-6
摘要	We work on a linear bilateral monopoly to analyze the effects of firms' social concern. Both firms in the market, the up-stream manufacturer and the down-stream retailer, can be socially concerned. Firm's social concern is modeled through a broader firm objective. In addition to their profit both firms also care about a share of consumer surplus. In our two stage game, at first the manufacturer fixes the wholesale price per quantity, which has to be paid by the retailer. Subsequently, the retailer chooses the optimal quantity. First, the game is analyzed for exogenous levels of social concern for both firms.
研究動機	“What is worse than a monopoly? A chain of monopolies.” (Tirole 1988, p. 175) Paul Pollack, the CEO of the global corporation “Unilever”, implements a “sustainable living plan” (The Economist 2012, p. 68) into its firm mission to generate a sustainable profit in the long-run. ¹ Critics of the shareholder value approach argue for a modern management which should concentrate on a broader company mission with additional goals like “customer satisfaction” (p. 68), instead of the exclusive concentration on (short-term) shareholder value. The trend toward more social actions by firms, which is very often summarized as “Corporate Social Responsibility”, is confirmed by diverse surveys [e.g. KPMG (2011); Ernst and Young (2011); UN Global Compact and Accenture (2010); McKinsey and Company (2007); Economist Intelligence Unit (2007)].
模型	$p = a - bq \quad \text{for } a > c > 0 \text{ and } b > 0. \quad (1)$ $q^{**} = \frac{3(a-c)}{8b}, \quad p^{**} = \frac{5a+3c}{8}, \quad w^{**} = \frac{3a+5c}{8}, \quad F^{**} < \frac{3(a-c)^2}{32b},$ $\pi_m^{**} = \frac{9(a-c)^2}{64b} + F, \quad v_m^{**} = \frac{3(a-c)^2}{16b} + F,$ $\pi_r^{**} = \frac{3(a-c)^2}{32b} - F, \quad v_r^{**} = \frac{15(a-c)^2}{128b} - F,$ $CS^{**} = \frac{9(a-c)^2}{128b}, \quad PS^{**} = \frac{15(a-c)^2}{64b}, \quad WF^{**} = \frac{39(a-c)^2}{128b}.$

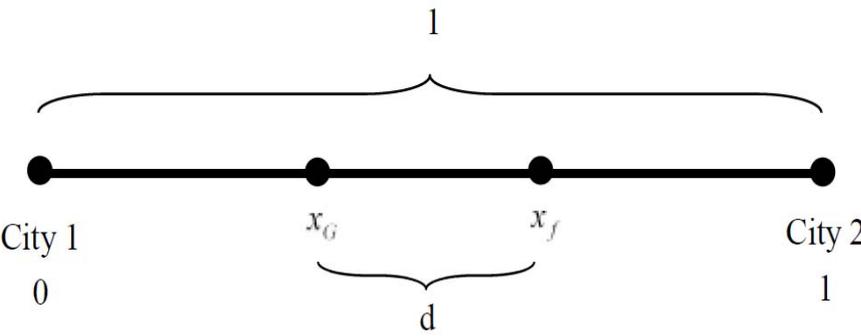
研究 結果	<p>Our model sheds light on the double marginalization problem (in an imperfectly coordinated marketing channel) when firms are socially concerned. We work on a linear bilateral monopoly framework where a manufacturer sells an intermediate product to the retailer. The retailer offers the final product to end-consumers. We show that a broader firm objective displayed through firm’s own profit and a share of consumer surplus softens the double marginalization problem. In equilibrium, both firms strategically care about a share consumer surplus, because the broader firm objective increases profit. Additionally, the customers benefit from firms’ implementation of consumer surplus in its objective, in fact that also consumer surplus increases.</p>
研究 貢獻	<p>In summary, socially concerned firms with an “Enlightened Value Maximization Approach” (Jensen 2001, 2002) or a “Corporate Social Strategy” (Husted and Allen 2011) in a bilateral monopoly yields a Pareto improvement, because all players are better off. But from a consumer surplus and a total welfare perspective, the perfect marketing channel coordination is better qualified to solve the double marginalization problem. Moreover, the results of our paper confirm two findings made by the empirical literature. First, we show that social concern can be “chosen strategically” by the firms also in a bilateral monopoly. This is in line with the empirical survey of Hillman and D. Keim (2001) and McWilliams and Siegel (2001, 2011). The concept of “strategically chosen CSR” is also a result pointed out by the analytical framework introduced by Baron (2001). Second, our model indicates that the social concern of the retailer has a higher impact on the equilibrium values than the manufacturer’s social responsibility. Fisman et al. (2005, 2006) suggest that firms at the final market connected to end-consumers are more likely to be socially concerned than firms without this connection.</p>
未來 研究 方向	<p>Our model and the frameworks treated by Goering (2012) and Brand and Grothe (2013) analyze bilateral monopolies—both perfectly and imperfectly coordinated— with socially concerned firms. Even so, there is a lot of further research to be done. How do the results change if a second retailer enters the market? What, if the manufacturer changes to a vertically integrated producer [see Arya et al. (2008); Arya and Mittendorf (2010)] and competes against the retailer at the final market? How do the results change if the firm’s social concern is not observable by the other firm? We see, this interesting research topic leaves open a lot of unanswered questions for further research.</p>

篇名	<i>Price Discrimination in Two-Sided Markets</i>
作者	<i>Qihong Liu , Konstantinos Serfes</i>
出處	Journal of Economics & Management Strategy, Volume 22, Number 4, Winter 2013, 768–786
摘要	We examine the profitability and welfare implications of targeted price discrimination (PD) in two-sided markets. First, we show that equilibrium discriminatory prices exhibit novel features relative to discriminatory prices in one-sided models and uniform prices in two-sided models. Second, we compare the profitability of perfect PD, relative to uniform prices in a two-sided market. The conventional wisdom from one-sided horizontally differentiated markets is that PD hurts the firms and benefits consumers, prisoners' dilemma. We show that PD, in a two-sided market, may actually soften the competition. Our results suggest that the conventional advice that PD is good for competition based on one-sided markets may not carry over to two-sided markets.
研究動機	A related paper that also deals with PD in a two-sided market is Jullien (2008).Jullien (2008), in a leader–follower model, focuses on the issue of pricing strategies, market power and barriers to entry. Relatedly, he investigates how PD can help a platform to coordinate the choices of consumers. In contrast, we focus on the effect of PD on the structure of prices and we perform a comparison with respect to uniform prices.
模型	<p>The common per-unit transportation cost of both groups is denoted by $t > 0$. We assume that each agent joins only one platform (single-homing).⁸ Each member of a group who joins a given platform cares about the number of members from the other group who join the same platform. Denote by $n_{\ell k}$ the number of participants from group ℓ that platform k attracts. The maximum willingness to pay for a member of group ℓ if he joins platform k is given by $V + \alpha_{\ell} n_{mk}$, where V is a stand-alone benefit each agent receives independent of the number of participants from the other group on platform k.⁹ The parameter $\alpha_{\ell} > 0$ measures the cross-group externality for group ℓ participants. The indirect utility of an agent from group ℓ who is located at point $x \in [0, 1]$ is given by,</p> $U_{\ell} = \begin{cases} V + \alpha_{\ell} n_{mA}^e - tx - p_{\ell A}(x), & \text{if he joins platform } A \\ V + \alpha_{\ell} n_{mB}^e - t(1-x) - p_{\ell B}(x), & \text{if he joins platform } B' \end{cases} \quad (1)$

	<p>The next proposition summarizes the main result when platforms cannot price discriminate within each group of agents with a general distribution of preferences.¹²</p> <p>PROPOSITION 1: (Uniform prices) <i>If a symmetric equilibrium exists, then it is given by:</i></p> $p_{1A}^* = p_{1B}^* = \frac{t - \alpha_2 f_1\left(\frac{1}{2}\right)}{f_1\left(\frac{1}{2}\right)} + c \text{ and } p_{2A}^* = p_{2B}^* = \frac{t - \alpha_1 f_2\left(\frac{1}{2}\right)}{f_2\left(\frac{1}{2}\right)} + c. \quad (2)$ <p>The equilibrium profits are,</p> $\pi_A = \pi_B = \frac{t - \alpha_2 f_1\left(\frac{1}{2}\right)}{2f_1\left(\frac{1}{2}\right)} + \frac{t - \alpha_1 f_2\left(\frac{1}{2}\right)}{2f_2\left(\frac{1}{2}\right)}. \quad (3)$ <p>If we assume that the distribution is uniform ($f_1(x) = f_2(x) = 1$), then the equilibrium prices and profits are.¹³</p> $p_{1A}^* = p_{1B}^* = t - \alpha_2 + c, p_{2A}^* = p_{2B}^* = t - \alpha_1 + c \quad (4)$ <p>and</p> $\pi_A = \pi_B = t - \frac{(\alpha_1 + \alpha_2)}{2}. \quad (5)$
研究結果	<p>First, we show that equilibrium discriminatory prices exhibit novel features relative to discriminatory prices in one-sided models and uniform prices in two-sided models. Second, we compare the profitability of perfect PD, relative to uniform prices in a two-sided market. The conventional wisdom from one-sided horizontally differentiated markets is that PD hurts the firms and benefits consumers, prisoners' dilemma. We show that PD, in a two-sided market, may actually soften the competition. Our results suggest that the conventional advice that PD is good for competition based on one-sided markets may not carry over to two-sided markets.</p>
研究貢獻	<p><i>First, they show that equilibrium discriminatory prices exhibit novel features relative to discriminatory prices in one-sided models and uniform prices in two-sided models.</i></p> <p><i>Second, we compare the profitability of perfect PD, relative to uniform prices in a two-sided market. The conventional wisdom from one-sided horizontally differentiated markets is that PD hurts the firms and benefits consumers, prisoners' dilemma. They also show that PD, in a two-sided market, may actually soften the competition. Our results suggest that the conventional advice that PD is good for competition based on one-sided markets may not carry over to two-sided markets.</i></p>
未來研究方向	<p><i>They derive new results regarding the equilibrium discriminatory prices. When indirect externality is weak (relative to marginal cost), contrary to predictions from one-sided models, equilibrium prices are not distribution-free. Moreover, they do depend on both</i></p>

	<i>group externalities, as opposed to uniform prices in two-sided models which only depend on the other-group externality.</i>
--	--

篇名	<i>Spatial Price Discrimination and Public Infrastructure</i>
作者	<i>Chih-Min She</i> <i>Department of Applied Economics, National University of Kaohsiung,</i> <i>Taiwan</i>
出處	Working paper
摘要	The output and location of a monopolist and social welfare are re-examined with the spatial model a la Hwang and Mai (1990). Under spatial price discrimination, they found that the welfare could be greater while the output is lower, a result sharply different from conventional wisdom, and the monopolist always chooses a corner location. This paper considers the presence of a public infrastructure that generates benefit for the firm decreasing in distance to the firm; hence an extra centripetal (converging) force exists. Similar results are obtained only when this new force is dominated. Otherwise, converging and interior location, identical output, and lower welfare arises in the equilibrium. In other words, the model is more comprehensive. I further investigate the role of arbitrage. It could occur only under price discrimination and in previous equilibria of interior location and the big city. Arbitrage could induce the firm to relocate to the big city and lead to a reduction in social welfare.
研究動機	<ul style="list-style-type: none"> ■ In Hwang and Mai (1990), endogenizing firm's location in a barbell model leads to unconventional results: <ul style="list-style-type: none"> ■ Price discrimination reduces output and could lead to higher social welfare. ■ With linear demand, optimal location is on the corner (city) and opposite between two pricing regimes. ■ How will these results stand if there exists a public infrastructure?

<p>模型</p>	<div style="text-align: center;">  </div> <p style="text-align: center;">Figure 1. A location line</p> $q_1 = A - p_1 \quad (1) \quad q_2 = \alpha A - p_2 \quad (2)$ <ul style="list-style-type: none"> ■ Supply: <ul style="list-style-type: none"> ■ The monopolist (manufacturer) does not incur any cost except g. ■ In each city there are numerous, immobile, and competitive retailers and two markets are separated because none can sell to the other city. r is born by the retailer. <p>g : a per-unit/distance cost associated with the public infrastructure, capturing the decreasing net benefit derived from the public infrastructure by the firm as d becomes larger.</p> <p>r : per-unit/distance product shipping cost to a market</p> <p>$A > r + g$: both markets are profitable.</p>
<p>研究結果</p>	<p>Similar results are obtained only when this new force is dominated. Otherwise, converging and interior location, identical output, and lower welfare arises in the equilibrium. In other words, the model is more comprehensive. I further investigate the role of arbitrage. It could occur only under price discrimination and in previous equilibria of interior location and the big city. Arbitrage could induce the firm to relocate to the big city and lead to a reduction in social welfare.</p>
<p>研究貢獻</p>	<p>More understanding on price discrimination</p>
<p>未來研究方向</p>	<p>To incorporate competition in the model.</p>

篇名	<i>Do Consumers Gain from Looking Forward</i>
作者	<i>Changying Li^a Jianhu Zhang^b</i> <i>a School of Economics, Shandong University</i> <i>b School of Economics, Shandong University</i>
出處	Working paper
摘要	When consumers look forward, they care about both the current and future quality of a product. Firms might, however, respond by changing their quality investment and therefore make consumers get more kicks than halfpence. This paper studies the dynamic effect of consumers' expectation on firms' marketing mix decision, and derives conditions for the existence of a unique equilibrium in affine strategies. The analysis shows that, with a higher rate of discount and a higher speed of depreciation, rational consumers may meet with a "rational trap" in which their stationary surplus is lower than that when they are myopic. This surprising result is caused by firms being induced to cut their quality investment in response to consumers' rational expectation.
研究動機	Firms especially those who face competitive pressure in these markets often make continual efforts to improve their product quality (goodwill). Forward-looking consumers who can exactly forecast firms' investment plan are able to fully comprehend their future payoff and accordingly raise their current willingness to pay. Several questions would naturally arise in this environment. How consumers anticipate firms' investment plan? How firms respond to consumers' rational expectation? More importantly, do consumers gain from looking forward? The purpose of this paper is to investigate the dynamic nature of consumers' expectation and address these questions.

模型

Consider an entire-line market in which a durable-good monopoly is located at $y=0$. The market exists over $t \in [0, +\infty)$. Unit production cost is assumed to be constant, which is normalized to be zero without loss of generality. At time t , the firm posts a price $p(t)$ for its good and engages in product R&D with an investment, $C(I(t)) = \eta I^2(t)/2$, to improve the quality of its good, $\eta > 0$. Obviously, the parameter η measures the R&D efficiency. $I(t)$ is the R&D effort. It is assumed that the quality of the product depreciates over time,⁷ and thus the current level of quality depends on both the depreciation rate and the firm's cumulative R&D effort. As a result, quality evolves over time as a function of the maintenance effort. Define $V(t)$ as the product quality at date t , the law of motion of quality is given by⁸

$$\frac{dV(t)}{dt} = V'(t) = I(t) - \delta V(t), \quad V(0) = V_0, \quad (1)$$

where $\delta > 0$ is a constant proportional depreciation factor, and V_0 is the quality level at the beginning time.

Consumers are uniformly distributed along the line with constant density of one. At each instant of time, newborn consumers enter the market and old consumers exit the market. For simplicity, we assume that the number of the new consumers equals that of the old consumers, so the population is stationary. When newborn consumers arriving in the market, they pay a subscription price and enjoy a lifelong flow of service. The quality of the service, however, depends on the quality (goodwill) investment of the firm. Due to the nature of the model, unit demand is assumed, and

therefore one unit of output is demanded by each individual.

2.1 Myopic consumers

If consumers are myopic, the utility obtained by a consumer located at $\theta \in (-\infty, +\infty)$ who buys the product at instant t is given by

$$U^{MIR}(\theta, t) = S + V(t) - \tau|\theta| - p(t).$$

$S > 0$ is a reservation utility. $\tau > 0$ is a unit-length transportation cost and therefore the term $-\tau|\theta|$ represents the disutility associated with buying a product that differs from the consumer's desired product.

The marginal consumer, who is indifferent between buying the good or not, is either located at $\tilde{\theta}^{MIR}(t)$ or located at $-\tilde{\theta}^{MIR}(t)$, where

$$\tilde{\theta}^{MIR}(t) = (S + V(t) - p(t)) / \tau.$$

Thus, the firm's instantaneous demand and profit are, respectively,

$$D^{MIR}(t) = 2\tilde{\theta}^{MIR}(t) \quad \text{and} \quad \pi^{MIR}(t) = p(t)D^{MIR}(t) - \eta I^2(t)/2.$$

The firm chooses a pair of strategies $(p(t), I(t))$ to maximize its total discounted profit

$$\Pi^{MIR} = \int_0^{\infty} \pi^{MIR}(s) e^{-rs} ds.$$

In order to ensure the existence of equilibrium, we assume that $\tau\eta > \frac{1}{\delta(r+\delta)} \equiv \Upsilon_1$.

In this paper, Markov strategy is used for the analysis. A strategy is said to be Markovian if it is a pair of price and R&D rules $\{P^{MIR}(\cdot), G^{MIR}(\cdot)\}$ that guides the firm's action at moment t , based on the current level of quality $V(t)$.

研究 結果	The stationary levels of quality and investment are negatively related to the degree of product differentiation, R&D efficiency, discount and depreciation rate. The steady-state levels of quality and consumer surplus might be lower than when consumers are myopic. The steady-state levels of quality and consumer surplus might be lower than when consumers are myopic.
研究 貢獻	This paper studies a dynamic game where firms engage in quality-enhancing research and development (R&D). Consumers are assumed to be forward looking so they can correctly anticipate the future levels of product quality and accordingly choose a product to maximize their expected lifetime utility. This paper analyzes how firms' strategy and equilibrium outcome are affected by the existence of rational consumers.
未來 研究 方向	可考慮比較一級差別訂價與單一訂價下的相關福利。

篇名	<i>Green markets, eco-certification, and equilibrium fraud</i>
作者	<i>Stephen F. Hamiltona, David Zilberman</i>
出處	Journal of Environment Economics and Management ,November 2006
摘要	Consumers voluntarily pay significant price premiums to acquire unobservable environmental attributes in green markets. This paper considers the performance of eco-certification policy under circumstances where consumers cannot discern environmental attributes in goods, but are able to form rational expectations regarding the extent of illicit activities in the green market.
研究動機	<p>Markets for environmentally-friendly goods and services are becoming increasingly common. Consumers pay significant price premiums for organic foods, and for various environmental attributes such as sustainable, recycled, and non-toxic. Consumers prefer environmental attributes in their products much like they prefer any other desirable product quality attribute in market goods. This makes collective reputation issues important in green markets. This creates an opportunity for fraud in green markets that motivates third-party certification.</p> <p>This paper examines the performance of eco-certification policy in green markets with the potential for fraud. There are three key elements of the analysis:</p> <ul style="list-style-type: none"> (i) consumer willingness-to-pay premiums exist for environmentally-friendly products (ii) certification policy agglomerates firms in quality space under a common eco-label (iii) consumers are unable to discern environmental attributes in products, but can nonetheless form rational expectations regarding the overall extent of fraud in the market.

模型	<p>This structure, which follows Mussa and Rosen, has several precursors in the literature on environmental quality provision under oligopoly.</p> <p>We depart from this structure to consider two vertically differentiated markets—a “brown” market and a “green” market—each of which is comprised of multiple firms. Moreover, because our main focus is on collective reputation and fraud in the green market, we suppress the usual strategic duopoly interaction in vertical differentiation models by considering perfect competition among firms in the brown market.</p> <p>Consider a market with two technologies (polluting and non-polluting) and two goods. The good produced with the non-polluting technology is denoted y_g and referred to as the green product, and the good produced with the polluting technology is denoted y_b and referred to as the brown product.</p> <p>Let y_f denote the quantity of fraudulently-labeled brown products disguised for sale as green products. There are thus three types of production (y_b, y_f, and y_g) and only two markets.</p>
研究 結果	<p>The main results are:</p> <p>(i) fraud is less prevalent in green markets when entry barriers limit the number of firms.</p> <p>(ii) conventional environmental policies on polluting techniques increase the incidence of fraud, and can even preclude the use of non-polluting techniques which would otherwise emerge in green markets.</p> <p>(iii) voluntary eco-certification policies can decrease fraud, increase output, and raise profits per firm.</p> <p>(iv) in cases where the socially optimal resource allocation can be supported, the optimal policy involves negative unit certification fees, positive fixed certification fees and is revenue-generating for the certifying agent.</p>
研究 貢獻	<p>Eco-certification fees can thus provide a profit motive for voluntary certification. Fixed eco-certification costs have the potential to increase global output.</p>
未來 研究 方向	<p>An interesting possibility for future research is to examine the performance of various eco-certification policies under endogenous detection.</p>

篇名	<i>Differential pricing when costs differ: a welfare analysis</i>
作者	<i>Yongmin Chen and Marius Schwartz</i>
出處	Journal of Economics
摘要	This article analyzes the welfare effects of monopoly differential pricing in the important, but largely neglected, case where costs of service differ across consumer groups. Cost-based differential pricing is shown to increase total welfare and consumer welfare relative to uniform pricing for broad classes of demand functions, even when total output falls or the output allocation between consumers worsens. We discuss why cost-based differential pricing tends to be more beneficial for consumers than its demand-based counterpart, third-degree price discrimination. We also provide sufficient conditions for welfare-improving differential pricing when costs and demands differ across consumer groups.
研究動機	This article presents a welfare analysis of monopoly differential pricing when marginal costs differ across consumer groups. Our focus is on the case where only costs differ, but we also compare the results to those under price discrimination and consider the mixed case with both cost and demand differences, thereby providing a unified treatment of the problem. To facilitate the comparison with classic price discrimination, we adopt the standard setting of that literature: under uniform pricing, the firm serves two consumer groups or markets, and moving to differential pricing raises price in one market but lowers it in the other. The extant literature suggests that price discrimination – except where it opens new markets – is tilted against aggregate consumer welfare and is more likely to reduce than to increase total welfare, which includes profit. By contrast, we find that differential pricing motivated (only) by cost differences will raise aggregate consumer welfare under broad demand conditions, and increase overall welfare more generally still.
模型	Consider two markets, H and L, with strictly decreasing demand functions $D_H(p)$, $D_L(p)$, and inverse demands $P_H(q)$, $P_L(q)$. When not needed, we omit the subscripts. The markets can be supplied at constant marginal costs c_H and c_L , with $c_H \geq c_L$. Denote the prices in the two markets by p_H and p_L denote profit in market i , $i = H, L$. Assume $\pi_i(\cdot)$ has a unique maximum for the relevant domain of prices. Under differential pricing, maximum profit in each market is achieved when $p_i = p^*_i$, where p^*_i satisfies

研究 結果	Prevailing economic analysis of third-degree price discrimination by an unregulated monopolist paints an ambivalent picture of its welfare effects relative to uniform pricing. In order for overall welfare to rise, total output must expand. Without specific knowledge of the shapes of demand curves, the literature yields no presumption about the change in output unless discrimination leads the firm to serve additional markets. Moreover, because discrimination raises profits, an increase in overall welfare is necessary but not sufficient for aggregate consumer surplus to rise. This article showed that judging differential pricing through the lens of classic price discrimination understates its beneficial role when price differences are motivated at least in part by differences in the costs of serving various markets. Differential pricing then saves costs by reallocating output to lower-cost markets, and benefits consumers in the aggregate under broad demand conditions by creating price dispersion which – unlike classic price discrimination – does not come with a systematic bias for average price to rise.
研究 貢獻	Their analysis formalizes the intuition that price uniformity mandated in pursuit of social goals likely comes at a cost to aggregate consumer welfare. It also cautions against hostility in unregulated settings to differential pricing that is plausibly cost based, such as the common and growing practice of add-on pricing that unbundles the pricing of various elements from the price of the base good.
未來 研究 方向	An important extension would be to analyze whether and how the beneficial aspects of differential pricing under different costs might extend beyond monopoly to imperfect competition, building on the analyses of oligopoly price discrimination.

篇名	<i>Altruism and Relational Incentives in the Workplace</i>
作者	ROBERT DUR 、 JAN TICHEM
出處	Journal of Economic & Management Strategy 2015, 24(3), 485-500
摘要	<p>This paper studies how altruism between managers and employees affects relational incentive contracts. To this end, we develop a simple dynamic principal-agent model where both players may have feelings of altruism or spite toward each other. The contract may contain two types of incentives for the agent to work hard: a bonus and a threat of dismissal. We find that altruism undermines the credibility of a threat of dismissal but strengthens the credibility of a bonus. Among others, these two mechanisms imply that higher altruism sometimes leads to higher bonuses, whereas lower altruism may increase productivity and players' utility in equilibrium.</p>
研究動機	<p>The present paper contributes to this literature by studying how altruism between managers and employees affects the optimal design of relational contracts. To this end, we develop a simple dynamic principal-agent model where both players have some bargaining power. A moral hazard problem exists because both the agent's effort and performance are non-verifiable. For this reason, contracts that condition on effort or performance are not enforceable in court, and must therefore be self-enforcing.</p> <p>The contract may contain two types of incentives for the agent to work hard: a promise to pay a bonus for good performance as in, for example, Baker et al. (1994), and a high wage combined with a threat of dismissal following bad performance (efficiency wages) as in Shapiro and Stiglitz (1984). Our key innovation is that we allow both players to have feelings of altruism and/or spite toward each other. These feelings need not be symmetric. Our analysis yields several potentially testable hypotheses as well as a number of management implications.</p>

模型	<p>We develop a principal–agent model where both players may be altruistic or spiteful toward each other. To focus on the effect of altruism and spite and avoid unnecessary Altruism in the Workplace 489 complications, we assume that players are risk-neutral. The utility of the principal is given by $\Pi = \pi + \gamma U$, where $\pi \equiv q(e) - w$ is the principal’s profits, w is the agent’s compensation, and $q(e)$ is the value of output which is a function of agent’s effort e. The term γU denotes the altruistic part of the principal’s utility where U is the agent’s utility and γ denotes the degree of the principal’s altruism. We call γ the principal’s altruism parameter. Similarly, the agent’s utility is given by</p> $U = u + \alpha \Pi,$
研究結果	<p>The theoretical analysis conducted yields a number of clear implications for management. First, we have shown that the credibility of relational incentives depends on the altruism or spite between a manager and employee. Altruism reinforces the credibility of bonus pay whereas it undermines the credibility of a threat of dismissal. Our model therefore suggests that firms in which relationships between management and employees are characterized by altruism benefit more from using bonus pay compared to efficiency wages. Further, when actively shaping organizational culture, firms should be aware that altruism does not necessarily improve the credibility of incentive schemes. This is only the case if incentive schemes rely sufficiently on promises rather than threats.</p>
研究貢獻	<p>The model’s predictions can be tested using laboratory experiments and field data. In laboratory experiments, the researcher has the freedom to fine-tune the profitability of the various types of contracts, which is hard outside the lab. Moreover, in contrast to the field, one can easily observe when players decide not to enter into a contract. A bottleneck may be to bring feelings of altruism and, particularly, feelings of spite into the lab. This difficulty may be resolved by recruiting subject pools in which these feelings are already present.</p>
未來研究方向	<p>There are avenues for future theoretical research as well. First, it would be interesting to endogenize feelings of altruism. Dur (2009), Englmaier and Leider (2012), and Non (2012) have taken some steps in this direction in one-shot games. Second, it is worth studying how our results change when performance evaluations are done by a potentially altruistic middle manager who is not residual claimant.</p>

篇名	<i>Coordination of Trade and Intellectual Property Rights Policies</i>
作者	<i>Te-Cheng^a Jin-Li Hu^b Yan-Shu Lin^c</i> <i>a Department of Economics, National Dong Hwa University</i> <i>b Institute of Business and Management, National Chiao Tung University</i> <i>c Department of Economics, National Dong Hwa University</i>
出處	Working paper
摘要	They employ a bilateral R&D spillover model to analyze how a domestic country coordinates its intellectual property rights (IPR) and trade policies and hence affects a foreign firm's choice between export (EX) and foreign direct investment (FDI). Preferences are consistent in some combinations of trade and IPR policies for the domestic government and foreign firm. Under the EX regime the domestic country should keep the tariff as high as possible, which increases with its IPR protection. Under the FDI regimes the domestic country can find an optimal interior IPR policy, which is different from conventional results. The profitability and desirability may decrease with the strength of process IPR protection and hence result in a welfare-reducing R&D. The domestic country's maximized welfare in FDI regimes is lower than that in EX regimes if the fixed investment cost is sufficiently high.
研究動機	Little research has been done on the relation between trade liberalization and IPR policies. This research bridges the gap by discussing the coordination of trade and IPR policies. They study how a domestic country's trade and IPR policies affect the foreign firm's entry decisions and the domestic country's welfare, in the presence of two-way spillover.
模型	Consider two firms, firms d and f , which locate in domestic country D and foreign country F , respectively. They produce homogeneous products and compete in Cournot fashion in the domestic market. Firm f has two options to enter the domestic market: export or FDI. In EX regimes, firm f has to pay a specific tariff t per unit of exports; otherwise, it pays a set-up cost G in FDI regimes. The inverse demand is as follows:

	$p = a - q_d - q_f, \tag{1}$ <p>where $q_i, i = d, f$, is the quantity of firm i.</p> <p>The cost function of each firm i can be presented as follows:</p> $C_i = c - x_i - s\gamma x_j \geq 0, \quad i = d, f, i \neq j,$ <p>where c is marginal cost; x_i is R&D investment; $\gamma \in [0,1]$ denotes the spillover rate from R&D done by its rival.⁴ If γ is 0 (1), it implies a case of no (complete) spillovers or full (no) IPR protection equivalently. To economize space, let $s = 0$ ($s = 1$) denote the export (FDI) regime. Therefore, the cost function is $C_i = c - x_i$ ($C_i = c - x_i - \gamma x_j$) in the export (FDI) regime.</p> <p>We derive the equilibrium that would result from the following game. At stage 0, country D chooses optimal specific tariff rate t or spillover rate γ to maximize social welfare corresponding to firm f's action. At stage 1, firm f determines its market access: export or FDI. If firm f chooses to export, then R&D investment has no spillover ($\gamma = 0$) since each firm undertakes its R&D investment in its home country. In contrast, a firm spills out γ share of R&D investment to another firm if firm f chooses FDI, since both firms do R&D in country D.⁵ At stage 2, each firm undertakes R&D investment x_d and x_f, respectively. At stage 3, each firm chooses quantities in order to maximize their own profits. We solve this model by the backward induction to find the subgame-perfect Nash equilibrium (SPNE) of this game.</p>
研究結果	Country D can coordinate trade and intellectual property rights policies and reach a high welfare level by affecting firm f 's entry decisions. The preference of country D matters and implies a positive relation between trade liberalization and IPR protection.
研究貢獻	They analyze how a domestic country coordinates its IPR and trade policies as well as its optimal choices and find following interesting results. The domestic country should keep its trade policy as rigorous as possible, and the optimal tariff decreases with the spillover rate. Under FDI regimes the domestic country can find an optimal IPR policy which is different from the conventional result. The profitability and desirability may decrease with the strength of process IPR protection and hence result in a welfare reducing R&D. Moreover, the domestic country's maximized welfare in FDI regimes is lower than that in EX regimes if fixed investment cost is sufficiently high. Although Coe et al. (2009) find that two-way R&D spillovers benefits country's ease of doing business, we discover a welfare reducing R&D that bilateral R&D spillovers may deteriorate producer surplus and social welfare when IPR protection is strengthened. Their study results show that there are many welfare tradeoffs between liberalizing trade and IPR protection.

	Policy-makers therefore have to balance the welfare gains and losses between liberalizing trade and IPR protection.
未來 研究 方向	可考慮兩國合作 R&D 下的 IPR 政策與相關的福利效果。

篇名	<i>Spatial Cournot Competition with an Urban-Rural Framework</i>
作者	<i>Wen-Chung Guo^a Fu-Chuan Lai^b</i> <i>a Department of Economics, National Taipei University</i> <i>b Research Center for Humanities and Social Sciences, Academia Sinica</i>
出處	Working paper
摘要	The purpose of this paper is to introduce an urban-rural framework into a circular market with duopoly Cournot competition. Their result shows that both firms agglomerated at the urban center is an equilibrium when the density disparity is large, and a separated location equilibrium will approach the urban center as the density disparity increases, and eventually agglomerate.
研究動機	Matsushima (2001) found that when the number of firms is even, half of the firms located at one end of a diameter, and the other half located at the other end of this diameter in equilibrium. This result overturns the traditional wisdom, in which firms are separated in a circular market such as Pal (1998) and Anderson (1986). The contrary results between Pal (1998) and Matsushima (2001) were eventually unified by Gupta et al. (2004), where many location patterns are shown to be equilibria, including the above two opposite results. Nevertheless, all the above studies assumed identical density in each location of the market, which may not fit the reality.
模型	There is a unit-length circular market with a high demand ($1 \leq \mu < 2$) in the right half circle (urban area) and a low demand ($2 - \mu$) in the left half circle (rural area). The total demand sums up to one. Two identical firms (1 and 2) engage in a two-stage Cournot competition by choosing their locations (x_1 and x_2) simultaneously in the first stage, while they simultaneously decide their quantities in each location in the second stage.

	<p>Production costs are assumed to be zero.</p> <p>The demand function of an urban location is μ times demand of a standard demand with unit density such that</p> <p>$q^u = \mu q = \mu \cdot [a/b - 1/b \cdot p^u]$, where the superscript “u” represents “urban” area, and the inverse demand function at location $x \in [0, 1/2]$ is</p> $p^u(x) = a - \frac{b}{\mu} (q_1^u(x) + q_2^u(x)). \quad (1)$ <p>The inverse demand function of a location x in the rural area is</p> $p^r(x) = a - \frac{b}{2 - \mu} (q_1^r(x) + q_2^r(x)).$ <p>The profit functions at x are</p> $\pi_i^u(x) = (p(x) - t x - x_i) q_i^u(x), \quad i = 1, 2, \quad \text{if } x \in [0, \frac{1}{2}],$ $\pi_i^r(x) = (p(x) - t x - x_i) q_i^r(x), \quad i = 1, 2, \quad \text{if } x \in [\frac{1}{2}, 1],$
研究結果	<p>Proposition 1</p> <p>(1) There exists a separated location equilibrium ($x_1 = \frac{4a(\mu-1)-t(\mu-1)}{8t}, x_2 = \frac{4a(1-\mu)+t(\mu+3)}{8t}$) when $\mu < \frac{4a+t}{4a-t}$.</p> <p>(2) Both firms agglomerating at the center of the urban area ($x_1 = 1/4, x_2 = 1/4$) is a unique equilibrium when $\mu \geq \frac{4a+t}{4a-t}$.</p> <p>Proposition 2</p> <p>(1) If $a \geq \frac{9t}{8}$, then the socially optimal locations are ($x_1^o = \frac{(\mu-1)(4a-t)}{14t}, x_2^o = \frac{4a(1-\mu)+t(\mu+6)}{14t}$), which will converge to ($x_1^o = x_2^o = 1/4$) when $\mu > \hat{\mu} \equiv \frac{8a+5t}{8a-2t}$.</p> <p>(2) If $a < \frac{9t}{8}$, then $0 < x_1^o < \frac{1}{4}$ and $\frac{1}{4} < x_2^o < \frac{1}{2}$.</p>

	<p>Proposition 3</p> <p>In a mixed market:</p> <p>(1) $(x_1^{mix} = 0, x_2^{mix} = \frac{t\mu - 4a(\mu - 1) + \sqrt{(\mu - 1)^2(16a^2 - 8at + t^2) + t^2}}{4t})$ when $1 \leq \mu \leq \frac{224a - 23t}{56(4a - t)}$.</p> <p>(2) $(x_1 = \frac{224a(\mu - 1) + t(23 - 56\mu)}{484t}, x_2 = \frac{128a(\mu - 1) - t(32\mu + 177)}{484t})$ when $\frac{224a - 23t}{56(4a - t)} < \mu < \frac{16a + 7t}{4(4a - t)}$.</p> <p>(3) When $\mu \geq \frac{16a + 7t}{4(4a - t)}$, the equilibrium locations are $(x_1 = x_2 = \frac{1}{4})$.</p>
研究 貢獻	<p>This paper constructs a novel spatial model with varying population density in a circular market, in which half of the market is high density (urban) and the other half is low density (rural). It is shown that if the urban density is high enough, then both firms agglomerating at the urban center is the unique location equilibrium, and there exists a separated location equilibrium when density disparity is low.</p>
未來 研究 方向	<p>本模型的計算複雜可再延伸的空間有限。</p>

篇名	<i>Production Externality, Bargaining wage, Pollution Tax and Compensation Schemes</i>
作者	<i>Chu-Chuan Hsu^a Jen-Yao Lee^b Chien-shu Tsai^c</i> <i>a Department of Marketing and Logistics Management, Yu Da University of Science and Technology, Taiwan.</i> <i>b Department of International Business, National Kaohsiung University of Applied Sciences, Taiwan.</i> <i>c Department of Tourism Management, Kao Yuan University, Taiwan.</i>
出處	Working paper
摘要	<p>This research established a model to explore negative externality, pollution across industries. A three-stage game was utilized to investigate some issues such as output determination, the wage negotiation with the labor union, and how the government enacts the optimal pollution tax and pollution subsidy. This study concluded as follows: firstly, when the economy is less developed or the statutory minimum wage is relatively lower in the market, the subsidy on pollution-damaged industries will outnumber the pollution tax revenue. On the other hand, when the economy is well developed or the statutory minimum wage is relatively higher in the market, the pollution tax revenue will outnumber the subsidy. Secondly, if the government offers a labor subsidy on pollution-damaged industries, the optimal wage negotiation offered by the union will be lower than the statutory minimum wage. However, this situation does not occur in regard to the production subsidy. Finally, if the pollution tax rate equals to the subsidy rate, the subsidy expenditure will always exceed pollution tax revenue.</p>
研究動機	<p>This research utilized the model of Bárcena-Ruiz (2011), and similarly due to negative externality, or pollution. However, we amended the absurd assumption of the joint centralization wage bargaining in different industries in Bárcena-Ruiz (2011). Instead, this study considered that government may subsidize the damaged firms or labors. According to Taiwan's policy experience.</p>

模型

There are two monopolistic industries in the market and their inverse demand functions are:

$$p_k = A - q_k, \quad k = X, Y \quad (1)$$

where p_k is the price of industry k , A is the market scales parameter, q_k denotes the output quantity of industry k . We assume that the firms have the same cost structures. That is, $C = (w_k - w_r)L_k$, $k = X, Y$ is the function of the wage. w_r is the statutory minimum wage, and L_k is the employee number of employees in individual firm. w_k is the bargaining wage of the labor union. This study discusses when there is negative externality, how the government levies taxes to subsidize the industries hurt by pollution. Subsidies can be divided into two cases: one for production subsidies and another is labor subsidies. The detail discussion is described respectively in the following:

The profit function of the polluter firm and that of the polluted firm can be respectively expressed as :

$$\pi_X = p_X q_X - (w_X - w_r)L_X - te_X - \frac{(a_X)^2}{2} \quad (2)$$

$$\pi_Y = p_Y q_Y - (w_Y - w_r)L_Y + sq_Y \quad (3)$$

X is the polluting industry, and one unit product yields one unit pollution. The monopolistic firm of industry X is making efforts in pollution abatement a_X and the pollution abatement cost is in quadratic form, $(a_X)^2/2$. The government levies environmental tax t on the remaining pollution e_X ($e_X = q_X - a_X$) and the total environmental tax levied on industry X is te_X . To highlight production inefficiency due to transboundary pollution, we assume that the remaining pollution of X industry will affect the labor productivity of Y industry. We have $q_X = L_X$, $q_Y = L_Y/(1 + \beta e_X)$. $\beta > 0$ indicates that how pollution affects the productivity of industry Y . When there is no trans-boundary pollution effects, $\beta = 0$. Finally, the government compensates industry Y for pollution damage by giving unit subsidy s .

Individual firms have their own labor union, and wages are negotiated by both sides of the labor union and the firm. We assumed the statutory minimum wage is w_r , the utility maximization problems of labor unions are:

$$\max_{w_k} u_k = (w_k - w_r)^\theta L_k, \quad k = X, Y \quad (4)$$

θ stands for how much the labor union emphasizes the wage. By following the Booth (1995), Haucap and Wey (2004), Leahy and Montagna (2000), Lommerud et al. (2003) and Choi (2010), we assume that $\theta = 1$ in order to simplify the analysis.

The government objective function of environmental policy, or the social welfare function, is the summation of the consumer surplus, the producer surplus, the total labor union utilities and the political taxation minus subsidy expenditure:

$$SW = \sum_{k=X}^Y CS_k + \sum_{k=X}^Y PS_k + \sum_{k=X}^Y u_k + T - S$$

It can be expressed as equation (5):

$$SW = CS_X + CS_Y + \pi_X + \pi_Y + u_X + u_Y + te_X - sq_Y \quad (5)$$

where CS_k is consumer surplus equaling $(q_k)^2/2$.

2.2 Labor subsidy policy

The profit function of the polluter firm and that of the polluted firm can be respectively expressed as :

$$\pi_X = p_X q_X - (w_X - w_r) L_X - te_X - \frac{(a_X)^2}{2} \quad (6)$$

$$\pi_Y = p_Y q_Y - (w_Y - w_r) L_Y \quad (7)$$

Individual firms have their own labor union, and wages are negotiated by both sides of the labor union and the firm. We assumed the statutory minimum wage is w_r , the utility maximization problems of labor unions are:

$$u_X = (w_X - w_r) L_X \quad (8)$$

$$u_Y = (w_X - w_r + s) L_Y \quad (9)$$

To compensate industry Y for pollution damage, the government gives then unit subsidy s .

As before, the government objective function of environmental policy is the summation of the consumer surplus, the producer surplus, the total union utilities and the political taxes minus subsidy expenditure:

$$SW = \sum_{k=X}^Y CS_k + \sum_{k=X}^Y PS_k + \sum_{k=X}^Y u_k + T - S$$

It can be expressed as equation (10):

$$SW = CS_X + CS_Y + \pi_X + \pi_Y + u_X + u_Y + te_X - sL_Y \quad (10)$$

研究
結果

When the economy is less developed or the statutory minimum wage is relatively lower in the market, the product subsidy on pollution-damaged industries will outnumber the pollution tax revenue. On the other hand, when the economy is well developed or the statutory minimum wage is relatively higher in the market, the pollution tax revenue will outnumber the subsidy. If the government offers labor subsidies to the pollution-hurt industry, the optimal bargaining wage suggested by the labor union will be lower than

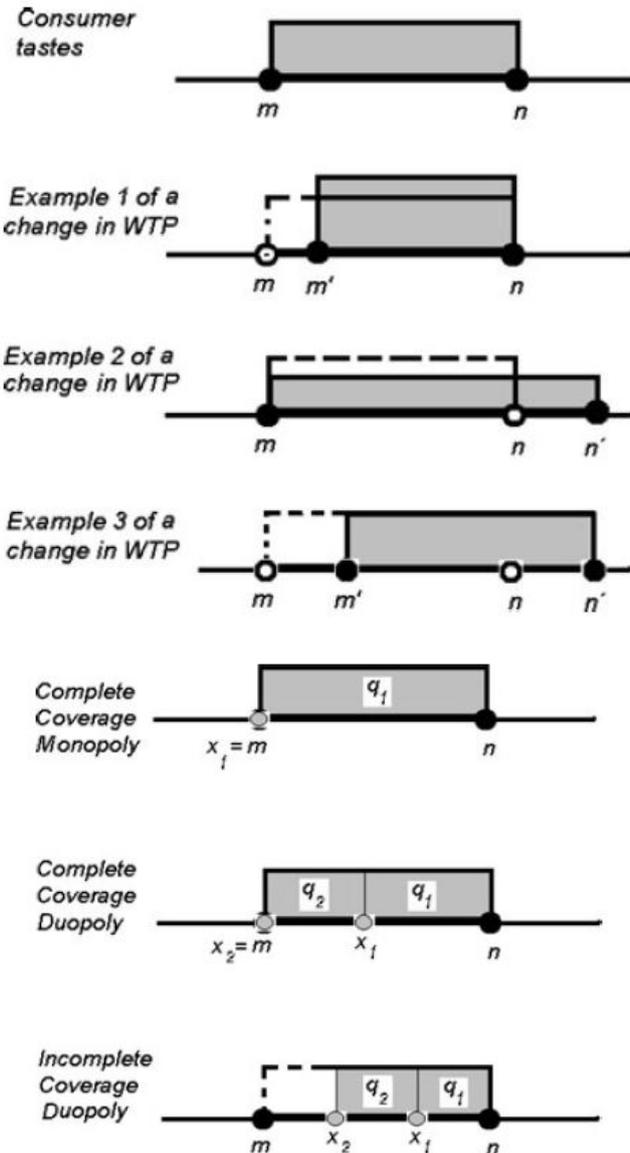
	<p>the statutory minimum wage.</p> <p>When the economy is less developed or the statutory minimum wage is relatively lower in the market, labor subsidies on pollution-damaged industries will outnumber the pollution tax revenue. On the other hand, when the economy is well developed or the statutory minimum wage is relatively higher in the market, the pollution tax revenue will outnumber labor subsidies.</p>
研究 貢獻	<p>This paper established a cross-industry pollution externality model. The three-stage game is to investigate the output, unions' bargaining wages and the optimal pollution tax policy and subsidy policy. This research has the following conclusion: Firstly, when the statutory minimum wage is relatively lower in the market, the product subsidy on pollution-damaged industries will outnumber the pollution tax revenue. On the other hand, when the statutory minimum wage is relatively higher in the market, the pollution tax revenue will outnumber the subsidy. Secondly, if the government offers labor subsidies to the pollution-hurt industry, the optimal bargaining wage suggested by the labor union will be lower than the statutory minimum wage.</p>
未來 研究 方向	<p>本模型考慮了太多因素如跨產業界污染、工會談判及污染稅使得討論的問題會失焦，未來將模型簡化將有趣的部份留下才會有機會被接受。</p>

篇名	<i>Negotiation over Intellectual Property Rights Protection in a Mixed Market</i>
作者	<i>Jie Li, Xiaohui Xu, and Jing Lu</i>
出處	Review of Development Economics, 19(4), 759–775, 2015
摘要	This article models a North–South negotiation under a mixed oligopolistic setting where a public firm in the South and a private firm from the North compete in the southern market. The southern firm is a public one whose objective is a weighted sum of the South’s social welfare and its own profit, whereas the northern firm is a pure profit maximizer. The North provides a quid pro quo in exchange for the strengthening of the enforcement of intellectual property rights (IPR) protection in the South. We show that when the northern and southern firms engage in quantity competition in the southern market, the southern government’s optimal choice is either complete protection or complete violation. We show this to depend on the southern government’s valuation of the quid pro quo. Moreover, strengthening IPR protection will deepen the privatization process in the South, though it brings about a social welfare loss to the South.
研究動機	Ever since the ratification of the Trade-related Aspects of Intellectual Property Rights (TRIPS) agreement of 1994, discussions regarding the North–South conflict over intellectual property rights (IPR) protection has been an important issue of international relationship, arousing broad attention all over the world. In reality, despite most developing countries establishing a relatively comprehensive legal system concerning IPR protection in line with the agreement on TRIPS, the South still appears reluctant to enforce IPR protection effectively and IPR infringement remains widespread and rampant.
模型	$C_n^s = M_n^s + b_2 z^s \quad b > 0 \quad (1)$ <p>In the fifth stage, when the Northern firm chooses to export, the two firms simultaneously choose their outputs to maximize their respective objectives, W_s, π_n. Under export, the northern firm’s profit function is:</p> $\pi_n^e = [a - q_n^e - q_s^e - (c - x)]q_n^e - tq_n^e \quad (2)$ <p>Following Matsumura (1998), the southern firm’s objective function is specified as:</p> $U_s^e = \theta W_s^e + (1 - \theta)\pi_s^e, \quad (3)$ <p>where $W_s^e = \pi_s^e + CS_s^e + tq_n^e$ is the South’s social welfare, $\pi_s^e = [a - q_n^e - q_s^e - c]q_s^e$ is the southern firm’s profit under export, $\theta (\in [0, 1])$ is the weight that the southern firm</p>

	<p>The optimal outputs are derived by differentiating equations (2) and (3) with respect to q_n and q_s, respectively:</p> $q_n^e = \frac{c - (t-x)(-2+\theta) + a(-1+\theta) - c\theta}{-3+\theta}, \quad (4)$ $q_s^e = \frac{a - c + t - x + a\theta - c\theta - t\theta + x\theta}{3-\theta}. \quad (5)$ <p>The corresponding payoff functions are given by:</p> $\pi_n^e = \frac{(c - (t-x)(-2+\theta) + a(-1+\theta) - c\theta)^2}{(-3+\theta)^2}, \quad (6)$ $U_s^e = \frac{1}{2(-3+\theta)^2} (a^2(2+4\theta-2\theta^2) + c^2(2+4\theta-2\theta^2) - 2c(-1+\theta)(-x(-2+\theta) + t(-2-2\theta+\theta^2)) - (-2+\theta)(x^2 - 2tx(1-3\theta+\theta^2) + t^2(1-6\theta+2\theta^2)) + 2a(2c(-1-2\theta+\theta^2) + (-1+\theta)(-x(-2+\theta) + t(-2-2\theta+\theta^2))))). \quad (7)$
研究結果	<p>Author(s) show that when the northern and southern firms engage in quantity competition in the southern market, the southern government's optimal choice is either complete protection or complete violation.</p> <p>They show this to depend on the southern government's valuation of the quid pro quo. Moreover, strengthening IPR protection will deepen the privatization process in the South, though it brings about a social welfare loss to the South.</p>
研究貢獻	<p><i>In this paper, they construct a North–South negotiation model under mixed oligopoly and explore the incentive compatible mechanisms that can improve the IPR protection in the South. We find that complete IPR protection can be realized if the South sufficiently values the quid pro quo offered by the North.</i></p>
未來研究方向	<p><i>By necessity, the analysis imposes a number of restrictive assumptions, and we must consider the above results in light of these restrictions. These assumptions include (i) linear demand and cost functions and (ii) that there is only one firm in each country. Further research is then needed to understand whether the basic conclusions of this article would be altered through changes in these assumptions.</i></p>

篇名	<i>Market Effects of Changes in Consumers' Social Responsibility</i>
作者	<i>AURORA GARCIA-GALLEGO, NIKOLAOS GEORGANTZIS</i>
出處	Journal of Economics & Management Strategy, Volume 18, Number 1, Spring 2009, 235–262
摘要	In a duopoly model of vertical differentiation, we study market equilibrium and the resulting social welfare following an increase in the consumer's willingness to pay (WTP) for products sold by socially responsible manufacturers. Different types of such changes emerge depending on their effects on consumer heterogeneity. We show that, in most cases, increases in the consumers' social consciousness yield higher profits to socially responsible firms and may lead to higher levels of social welfare, provided that the market structure is left unchanged. However, when an increase in the consumer's social consciousness changes the market structure, welfare may fall, while the duopolists' profits rise. The resulting tension between private and social interest calls for a cautious attitude toward information campaigns aimed at increasing the consumer's social consciousness.
研究動機	In modern societies, people are increasingly aware of the impact of their consumption choices on the quality of public goods like, for example, the environment. Ostrom (2000) suggests that such an increasing trend process leading to the emergence and expansion of social norms fostering prosocial behavior. Bénabou and Tirole (2006) illustrate several cases of interaction between an individual's self image and the social norms prevailing in the economy as a source of motivation for prosocial behavior.

模型



研究
結果

Despite its similarity with income increases, raising the consumer's WTP for the products of socially responsible firms is far from a trivial equivalent to "throwing money into the market." This is especially true when an increase in consumers' social consciousness causes a duopoly to shift from incomplete to complete market coverage. In that case, selling to a population of more socially responsible consumers leads to lower levels of social welfare because it reduces the more responsible firm's incentives to invest in socially beneficial activities. This result holds despite the fact that the shift from incomplete to complete market coverage causes the less responsible firm's CSR to rise and increases the number of consumers served in the market. The main message of our analysis is that increasing the consumer's WTP for the products of socially responsible firms is not monotonically beneficial, neither to the society nor to socially responsible entrepreneurs.

研究 貢獻	<p>That is, more information about a firm's social objectives may result in higher prices, but people paying higher prices for those products may be happier because this information makes them like the products they consume more. Then, the comparison of <i>pre</i>- and <i>post</i> information prices under the assumption that <i>pre</i>- and <i>post</i> information products are essentially the same may yield misleading conclusions. It would seem that, when markets have an externality on a public good like the environment, which can be objectively evaluated in terms of social welfare, the effects of changes in the consumers' WTP become easier to assess. Contrary to this conjecture, we find that the same factors that increase the consumer's WTP for the product of a socially responsible manufacturer may change the industry structure and reduce social welfare.</p>
未來 研究 方向	<p>Different approaches to the aspects of CSR omitted here are discussed in Windsor (2006) and Baron (2007). The robustness of our results with respect to further generalizations, like non-total-mass-preserving changes in the distribution of consumer tastes, and the numerous applications of this very simple framework to study other issues related with changing the consumers' attitude toward quality, leave considerable space for future research.</p>

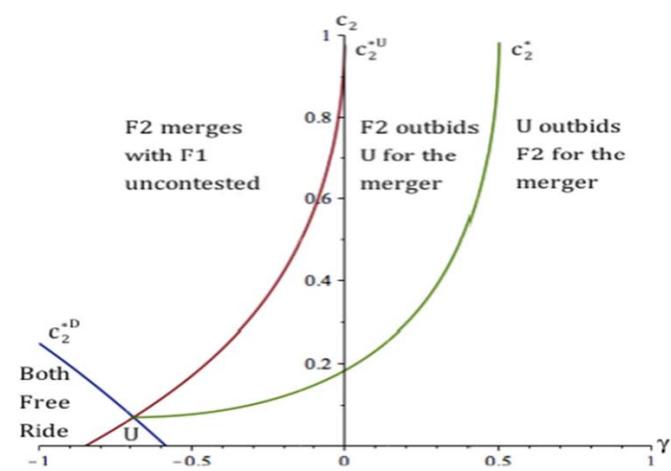
篇名	<i>Inspection, testing errors and trade in tainted products</i>
作者	<i>Jean-Marie Viaene , Laixun Zhao</i>
出處	Journal of The Japanese and International Economies
摘要	<p>Media around the world abound with examples of malpractices in the daily running of food production, especially when it comes to food imports. A simple search on the internet will turn out hundreds of infamous cases. For example, a couple of years ago, it was revealed that some unscrupulous companies in China have added melamine to milk to artificially boost protein readings in quality tests and exported some of these products to Japan.² Several Chinese firms have exported frozen catfish laden with banned antibiotics.³ Furthermore, firms from other developing and emerging economies have also been found guilty of using dangerous ingredients. For instance, during the first half of 2007, U.S. inspectors rejected more than 1700 and 1500 shipments from Mexico and India respectively.⁴ In 2011 the Center for Disease Control and Prevention estimated that about 48 million people got sick, 127,839 were hospitalized and 3037 died from food contamination in the U.S.⁵ Of these illnesses 80% were caused by unspecified sources and data show no clear evidence of progress in reducing food borne infections. Given this, many claim the numbers are linked to a greater dependence on cheap imports. Thus, faced with a security challenge, public health authorities and consumer advocates have repeatedly asked to fend off globalization and insisted that local production be increased and government oversight be strengthened.</p>
研究動機	<p>This paper examines the theoretical premises of such conjecture in a model of quality choice, with international trade involving tainted products and inspection. Especially we are interested in uncovering the conditions under which foreign firms choose to produce tainted goods. We ask questions such as: (i) Does globalization via freer trade lower product safety? (ii) Why are foreign goods still imported though notorious for their harmfulness? (iii) How is export quality affected by errors of testing and rival strategies such as sabotage? As more goods from distant locations are imported, these issues assume considerable importance. To our knowledge, the present paper is the first attempt at addressing them in a unified setting.</p>
模型	<p>Consider a home (H) and a foreign (F) firm that serve the H market only. Firm H only produces high quality using a technology represented by the cost function $C(x) = cx$, with c to ensure positive demands. Firm F has access to two technologies, one producing a high quality h and the other producing a tainted variant l, with marginal costs c_h and c_l respectively. Which quality is produced is private information to firm F only. The H government levies a specific tariff s on imports from F.</p>

研究 結果	This paper considered trade in tainted products and examined various incentive schemes for exporting firms to produce non-tainted, high-quality products. The issue arises because many governments and consumer organizations have repeatedly claimed that the process of further globalization should be modified. However, a main result of this paper shows the opposite: for a class of environments, free trade provides the highest incentives to foreign exporters to produce non-tainted high quality goods. In addition we provide mechanisms by which an economy has the ability to self correct when facing tainting. Nonetheless, there are other situations where free trade alone cannot prevent the export of tainted products.
研究 貢獻	The paper could be extended in numerous ways. For example, the model can include elements of income distribution such that a proportion of consumers demand high-quality products only whereas other (poorer) consumers demand low quality as long as price is sufficiently low to account for the risk of tainting. The logic of the model would remain the same, except that the gap between the marginal costs of low-quality and of tainted goods would matter as well. Also, food scares reveal how hard it is to control a global food supply when infections spread to other countries, mainly through international trade. Tainting by foreign firms can spread to domestic production as well and the outcome would be more complicated. Importantly, the assumption of certification could be relaxed. With certification, there is no reason for consumers to discount imports since the quality is assessed.
未來 研究 方向	The paper can also be extended to explain why governments adopt an import ban in some sectors and a tariff policy in others. For example, four U.S. states ban sales of consumer fireworks, while other states permit sales of all or most types. ²⁵ Likewise, while the European Union has banned toxic substances in toys, ²⁶ there is powerful resistance from the U.S. chemical and toy industries to adopt a similar legislation in the U.S. The international trade game in this paper could be extended to address the broad topic of the political economy of trade and health policies as long as social welfare is re-defined to include elements of the domestic political economy.

篇名	<i>Selling customer information to competing firms</i>
作者	<i>Francesco Clavorà Braulin , Tommaso Valletti</i>
出處	Economics Letters
摘要	They consider a data broker that holds precise information about customer preferences. The data broker can sell this data set either exclusively to one of two differentiated competing firms, or to both of them. If a downstream firm obtains the data set, it can practice personalized pricing, else it has to offer a uniform price to customers. The first-best allocation can be achieved when data are sold non exclusively, but this never arises in equilibrium. The data broker instead sells the data set exclusively either to the high quality firm or to the low quality firm rival, according to their quality-adjusted cost differential. This leads to inefficient allocations.
研究動機	The company receives better information about customers purchasing habits and is able to assess their willingness to pay for a given good or service. For the reason, the company that holds customer data would be able to set different prices for the different customer groups it has identified thanks to the data collected. Previous studies about behavior-based price discrimination consider the case where past behavior about customers is used to make targeted offers in future periods (see, e.g., Fudenberg and Tirole, 2000; Fudenberg and Villas-Boas, 2012). Moreover, The literature has mostly tackled cases where detailed customer information is either available or not available symmetrically among competing firms. In this paper they take a different point of departure, a data broker that has collected a unique data set will want to sell the data set to all competing downstream firms, or exclusively to some of them.
模型	There are three types of agents: consumers, two competing retailers supplying goods of different quality, and a data broker that holds information about consumer preferences. They describe consumer preferences first. Consumers buy one unit of a product at most, and their preferences follow a standard model of vertical product differentiation. A type θ buying a product of quality q_H at a price p_H enjoys a net utility of $U(\theta) - p_H$, where θ is uniformly distributed between $\underline{\theta}$ and $\bar{\theta}$ with unit density. Two differentiated retailers, denoted as $i = L, H$, compete in the downstream market, with $q_L < q_H$. The firms also have different marginal costs of

	<p>production, with . It will be useful at times to use the notation</p> <p>and</p> <p>In order to focus on a more interesting welfare analysis, we posit that</p> <p>This assumption on the quality-adjusted cost differential implies that it is efficient to serve the top end of the market ($\theta^w \leq \theta \leq \bar{\theta}$) with the high-quality product and the bottom end of the market ($\underline{\theta} \leq \theta < \theta^w$) with the low-quality product. Finally, the data broker holds a data set with precise information about consumers. If a downstream firm is given the data set, then it knows the precise type of each customer in the data set and can practice first-degree price discrimination. Else it just knows the distribution of types, and can offer a uniform price.</p>
研究結果	<p>The first best in their model would be achieved by banning exclusivity contracts, leaving the data seller only with the option of selling to both rivals. This conclusion depends on the data seller having access to the data in any case. If instead the data seller had to invest resources for acquiring or putting together the data set in the first place, it is conceivable that information would not be collected at all if exclusivity was banned, as ex post profits would then be lower. In this situation the more relevant comparison would be the one between allowing exclusivity and having no information at all. While there is generally no clear-cut comparison between these regimes, the concavity of the welfare function implies that no information at all is still preferred to data exclusivity when the quality-adjusted costs differential ($\Delta c/\Delta q$) takes intermediate values. On the contrary, exclusivity generates more total surplus when $\Delta c/\Delta q$ is either small or large—ignoring the costs of data acquisition.</p>

研究 貢獻	<p>The model has the added advantage, in case exclusivity is offered, to identify precisely which firm should be granted it: either the low-quality firm or the high-quality firm. In order to solve the model, they must consider asymmetric cases where one retail firm does not have information (and thus offers uniform prices) while the rival firm can target individual customers by practicing first-degree price discrimination. These asymmetric analyses are instrumental to derive all possible payoffs and determine the fee that competing firms would be willing to pay when the data set is put on offer. This interim analysis of mixed pricing between informed and uninformed vertically-differentiated firms is also new in the literature.</p>
未來 研究 方向	<p>The dynamic incentives of the upstream firm to acquire data information.</p>

篇名	<i>Pre-emptive mergers and downstream cost asymmetry</i>
作者	<i>J. Alejandro Gelves , John S. Heywood,</i>
出處	Economics Letters
摘要	<p>With sufficient downstream cost asymmetry a horizontal merger will be chosen over a vertical merger.</p> <p>This results because the technology transfer is large and the incentive to vertically merge shrinks as the horizontal merger eliminates a cost asymmetry induced “bottleneck.”</p>
研究動機	<p>Previous studies separately examine horizontal mergers in a differentiated Cournot market and the incentive for vertical foreclosure. Lommerud and Sorgard (1997) and Hsu and Wang (2010) show that increasing the degree of constant, shared product differentiation increases the profit from horizontal mergers. Ordober et al. (1990) analyze the incentive of firms to engage in vertical foreclosure, an analysis moved to product differentiation in vertical markets by Hackner (2003), Pepall and Norman (2001), Matsushima (2009) and Mukherjee and Zanchettin (2012). But researchers have yet to introduce cost asymmetry in a horizontal setting to uniquely examine whether horizontal or vertical integration prevails.</p>
模型	 <p>Fig. 1. Bidding outcomes. Notes: F1 – Firm 1, F2 – Firm 2 and U – Upstream Monopolist. In area U the upstream firm merges uncontested.</p>
研究結果	<p>Whenever cost asymmetry is high enough $c_2 > c_2^*$ the downstream firm outbids the upstream firm as the transfer in technology enhances its incentive to merge. When goods are complements, the reduced competitiveness between downstream firms reduces incentives to merge. However, the upstream firm benefits indirectly from the downstream merger.</p> <p>As a consequence, the figure shows that when the cost asymmetry is greater</p>

	<p>than $\max[c \cdot D_2, c \cdot U_2]$ and goods are complements, Firm 1 merges horizontally and is uncontested. Thus, both when Firm 1 wins the bidding and when it is uncontested, the downstream firms merge. The vertical merger, on the other hand, happens for small cost differences and very large degrees of substitutability.</p>
研究 貢獻	<p>This paper combines these two strands of literature, as did Colangelo (1995). It introduces cost asymmetry (see Faulí-Oller, 2002 and Gelves, 2014) in a horizontal setting to uniquely examine whether horizontal or vertical integration prevails.</p>
未來 研究 方向	<p>Additional research on how cost uncertainty, cost or demand convexity and quantity competition may influence this outcome appears warranted.</p>

篇名	<i>Innovation and the merger paradox</i>
作者	<i>Kaz Miyagiwa , Yunyun Wan^b</i>
出處	Economics Letters 147 (2016) 5–7
摘要	The merger paradox in Cournot oligopoly is revisited in the presence of R&D investment. Two cases are presented in which firms merge profitably without satisfying the 80-percent threshold requirement of Salant et al. (1983).
研究動機	The merger paradox refers to the fact that it is extremely difficult to explain merger using simple oligopoly models. Salant et al. (1983) showed that horizontal merger in Cournot oligopoly is unprofitable unless at least 80% of the firms in the industry participate. Since this 80-percent threshold is too high, researchers have sought ways out of this paradox by introducing asymmetries or switching to price competition.
模型	In this paper they ask whether R&D opportunities make merger profitable under n -firm Cournot competition. They consider two scenarios. <ul style="list-style-type: none"> ● In the first, only one firm invests in R&D. ● The second scenario considers $k (\geq 2)$ R&D firms and checks their incentive to merge into a single firm. The second model extends the bilateral case of Davidson and Ferrett (2007) to a merger of multiple firms.
研究結果	In the first model, they find that, over a range of R&D technology, this firm can merge profitably with any number of non-R&D firms regardless of n . Furthermore, they also find that there is a range of R&D technology over which merger is profitable, for any k and $n (>k)$. In the second model, There are two important differences. First, they suppose two merging firms coordinate output and R&D decisions to maximize the joint profit over two differentiated goods. Thus, the number of firms is unchanged after merger while it decreases here. More importantly, there, merger creates R&D spillovers between two labs while there is no such synergy creation here, as the new firm operates a single lab.
研究貢獻	<ul style="list-style-type: none"> ● They consider the merger paradox with R&D possibilities. ● If there is one R&D firm, it can merge profitably with any number of non-R&D firms. ● Multiple R&D firms can profitably merge into one regardless of the industry size.

未來 研究 方向	Since this 80-percent threshold is too high, researchers have sought ways out of this paradox by introducing asymmetries or switching to price competition. But in addition to these, what methods can be resolved this paradox.
----------------	--

篇名	<i>Monopoly price discrimination and privacy: The hidden cost of hiding</i>
作者	<i>Paul Belleflamme , Wouter Vergote</i>
出處	Economics Letters
摘要	Recent developments in digital technologies (e-commerce, social media and networks, mobile computing, sensor technologies) have not only driven individuals to leave an increasingly long digital trace behind them, but have also made available the tools to assemble, harness and analysis large and complex datasets (so-called 'Big data'). As a consequence, firms are now able to target advertising, product offerings and prices to their customers with an unprecedented precision
研究動機	We establish this point in a monopoly setting where the firm has access to a 'tracking' technology that allows it to identify the willingness to pay of its consumers with some probability; the firm then charges personalized prices to the consumers it identifies and a common regular price to the consumers it does not identify. Consumers have the possibility to acquire a 'hiding' technology that makes the firm's tracking technology inoperative. Our main result is to show that consumer surplus is often larger when this iding technology is not available. In fact, when the technology is available, the firm has an incentive to limit its use by raising the regular price of its product. As a result, what some consumers gain by protecting their privacy is often more than offset by what the other consumers lose by paying a higher price or by not purchasing any longer.
模型	A monopolist produces some product at a constant marginal cost, which is set to zero for simplicity. A unit mass of consumers have a unit demand for the monopolist's product. A consumer's valuation for the product is noted r . The distribution of valuations is given by the cumulative distribution function $F(r)$ with support $[0, r^-]$, where $r^- \in (0, \infty]$, and by a continuous and differentiable density $f(r) \equiv F'(r) \geq 0$. The monopolist can have access to a 'tracking technology' that allows it to identify the valuation of a consumer with probability λ (with $0 \leq \lambda \leq 1$). ⁴ The parameter λ can be interpreted as the precision of the tracking technology. In terms of pricing, this means that with probability λ , the monopolist knows the valuation of consumer r and charges this consumer a personalized price $p(r) = r$ (which captures the consumer's entire surplus), whereas with probability $(1 - \lambda)$, the monopolist does not know the consumer's valuation and charges then a 'regular' price p . Arbitrage is supposed to be impossible or prohibitively costly.

研究 結果	In this note, they have shown that when a monopolist has some probability to identify the consumers' valuation and, thereby, charge them personalized prices, the possibility for consumers to hide their valuation may reduce consumer surplus (even when hiding can be done at no cost). The reason is that the monopolist raises the regular price that it charges to unidentified consumers, which harms consumers who choose not to hide their valuation.
研究 貢獻	They consider Big data in the analysis of the welfare effects of pricing strategy of the monopolist.
未來 研究 方向	We can extend the analysis to a duopoly situation; in particular, allow sellers to choose the precision of the tracking technology (parametrized by λ in our setting), a decision that existing studies (e.g., Montes et al., 2015) are ill-equipped to analyse.

篇名	<i>Eco-Labeling Scheme, Environmental Protection, and Protectionism</i>
作者	<i>Huilan Tian</i>
出處	The Canadian Journal of Economics / Revue canadienne d'Économie , Vol. 36, No.3 (Aug., 2003), pp. 608-633
摘要	In this paper a model of international duopoly is developed involving competition in both prices and levels of environmental friendliness, and the implications of government policies are studied. It is shown that, contrary to the conventional wisdom, a regulatory increase in the minimum required level of environmental friendliness of imported goods may harm the home firm and may result in a rise in the volume of imported goods. Whether consumers lose or gain from such a regulatory increase depends on consumption spillover effects. We also show that, under certain conditions, the duopoly's equilibrium choice of levels of environmental friendliness is socially optimal.
研究動機	While it is widely accepted that international trade is generally gainful for all countries, the increase in trade volume in the past two decades has also been accompanied by environmental problems such as deforestation, increased use of chemicals in agriculture, depletion of scarce resources. In fact, the growth in trade volume and trade liberalization has gradually led to a widespread public awareness of environmental issues. Such awareness has found its expression in the formation of environmentally minded pressure groups that seek to put pressure on governments in order to influence policies on trade and the environment. The environmental awareness has also been manifested in the market place, as more and more consumers are becoming increasingly concerned with the environmental and health properties of goods and services.

<p>模型</p>	<p>We now specify the utility function U of the representative consumer in the home country. Assume that U is quasi-linear: it is linear in the numeraire good, denoted by Z, and non-linear in goods X and Y. The market for good Z is perfectly competitive and its price is $P_Z = 1$ by normalization. Let lowercase letters, such as x, y, and z, with subscript j, denote the quantities</p> <p style="text-align: center;">x_j y_j</p> <p>consumed by individual j. We denote by and the quantities of goods X and Y consumed by individuals other than j. We adopt the specific functional form,</p> $U(x_j, y_j, z_j) = u(x_j, y_j) + z_j,$ <p>where</p> $u(x_j, y_j) = \left\{ A_0 x_j - \frac{B}{2} x_j^2 + A_0 y_j - \frac{B}{2} y_j^2 - D x_j y_j \right\} \\ - \gamma[\theta_H - \theta_X][x_j + \beta X_{-j}] - \gamma[\theta_H - \theta_Y][y_j + \beta Y_{-j}]$
<p>研究 結果</p>	<p>We have used a simple model to study the equilibrium choice of levels of environmental friendliness by rival firms, and derived some implications for environmental policy. It is demonstrated that under certain conditions, the market outcome is socially optimal (in the second-best sense).</p>
<p>研究 貢獻</p>	<p>We also show that a government that seeks to maximize political support might want to interfere with the market by setting a minimum level of environmental friendliness on the imported goods or on the home goods. The effects of such intervention on the profit of the home firm and on consumers' surplus vary from case to case.</p>
<p>未來 研究 方向</p>	<p>Our analysis indicates that it would be too hasty to conclude that the imposition of a minimum requirement would reduce the volume of imports and would be protectionist in intent or in effect. The model points to some of the possible pitfalls in intuitive reasoning.</p> <p>To keep the analysis simple and to focus on key issues, we have abstracted from a number of real-world considerations. Among these are (i) consumers are heterogeneous: not all of them care about the environment; (ii) firms may carry out R&D activities to search for least-cost methods of producing environmentally friendly goods; (iii) entry and exit of firms when minimum environmental requirements are imposed. It is no doubt worthwhile to take up these issues.</p>

篇名	<i>Standards and protection</i>
作者	<i>Fischer, R., & Serra, P. (2000)</i>
出處	Journal of International Economics, 52(2), 377-400
摘要	We examine the behavior of a country that imposes a minimum standard (MS) on a good produced by a domestic firm and a foreign competitor. Costs rise with the standard, and there is a fixed setup cost of producing at two standard levels. Depending on the size of the foreign market and the fixed setup cost, the domestic firm will lobby for the lowest MS that excludes the foreign firm or for no standard at all. When there is a consumption externality, the MS chosen by the domestic social planner is a non-increasing function of the size of the foreign market and is always protectionist.
研究動機	As multilateral agreements lower tariff barriers, more subtle forms of protection are becoming common. One of the mechanisms that have recently acquired relevance is the use of minimum standards which are biased against imports. However, minimum standard may cloak protectionist intentions. Moreover, it is even possible that protection is the only goal of the standard. As the NRC points out, there are few studies that have attempted to analyze the use of standards as a protectionist barrier. This paper aims to partly fill this gap.
模型	<p>We consider the case of a homogeneous good produced by two firms: a domestic and a foreign firm. The latter exports and also produces for its own national market. We assume that the standard is reflected in a change in the level of a <i>negative</i> consumption externality, as in Copeland and Taylor (1995). We assume that in order to produce under two standards the foreign firm must incur a fixed setup cost. Hence an increase in the minimum standard demanded by the domestic country, over and above the worldwide standard, compels the foreign firm to choose between raising its standard (and, therefore, the costs of its entire production), incurring the setup cost for producing under two standards, or simply abandoning exports and concentrating on its own local market.</p> $\max_{\{q_b\}} H(q_b; q_f; \tau) = p(q_b + q_f)q_b - c(\tau)q_b$ $H_0^*(\tau) = \max_{\{q^*\}} \{p^*(q^*)q^* - c(0)q^*\}$ $H_1^*(\tau) = \max_{\{q_b, q^*\}} \{p(q_b + q_f)q_f + p^*(q^*)q^* - c(\tau)(q_f + q^*)\}$

	$H_2^*(\tau) = \max_{\{q_h, q^*\}} \{p(q_h + q_f)q_f + p^*(q^*)q^* - c(\tau)q_f - c(0)q^* - F\}$
研究 結果	<p>One of the paper's results is that it provides a consistent definition of a protectionist standard. According to our definition, a minimum standard is protectionist when it exceeds what a planner would impose if all producers were local. There are two possible reasons for this behavior: firstly, the planner wishes to transfer rents to local producers, and secondly, the planner knows that part of the costs of reducing the negative externality will be absorbed by foreign firms. Using this definition of a protectionist standard, we show that the minimum standard chosen by the social planner is always protectionist.</p>
研究 貢獻	<p>What policy conclusions can be drawn from this paper? In the first place, our results allow us to deduce which industries there will face significant pressure by local producers for protectionist minimum standards. These will be industries where foreign competition has significant alternative markets available and the cost of setting up production for a second standard is high. Second, standards will be more effective in protecting relatively small countries. Third, when the fixed setup cost of setting production under two standards is high, large exporting countries are more likely to press for regulatory changes rather than adapt to unreasonable standards. On the other hand, small countries are more likely to adopt the standards of the export market.</p>
未來 研究 方向	<p>Two assumptions in the paper should be relaxed in future research. First, the assumption that the domestic firm solely sells in the local market and, second, that the externality depends on consumption relative to the size of the country and not on the absolute level of consumption, which is the relevant case when a larger country reflects increased population density.</p>

篇名	<i>Intellectual Property Rights and Entry into a Foreign Market: FDI versus Joint Ventures</i>
作者	<i>Dermot Leahy and Alireza Naghavi*</i>
出處	Review of International Economics, 18(4), 633–649, 2010
摘要	We study the effect of the intellectual property rights (IPR) regime of a host country (South) on a multinational’s decision between serving a market via greenfield foreign direct investment to avoid the exposure of its technology or a North–South joint venture (JV) with a local firm, which allows R&D spillovers under imperfect IPRs. JV is the equilibrium market structure when R&D intensity is moderate and IPRs strong. The South can gain from increased IPR protection because it encourages a JV, whereas policies to limit foreign ownership in a JV gain importance in technology-intensive industries as complementary policies to strong IPRs.
研究動機	Mattoo et al. (2004) develop a model that differentiates between FDI and acquisition of existing domestic firms. They show circumstances where the preferences of the MNE and the host country government can be in conflict, justifying policy interventions through restrictions on FDI or JVs to induce the foreign firm to choose the socially optimal mode of entry. While this paper is the closest work to ours that deals with technology transfer and the decision of firms about the mode of entry, it leaves out matters concerning IPRs and technological spillovers.
模型	$p = A - Q, \tag{1}$ <p>where A represents the size of the market and Q is the total quantity produced.</p> $C = \alpha - \sqrt{gx}, \quad c = \alpha - \beta\sqrt{gx}, \tag{2}$ <p>where x is the R&D investment, g is the effectiveness of R&D, α is the pre-innovative production cost, and $x \leq \alpha^2/g$.¹¹ The level of technological spillovers are captured by $\beta = b\iota$. Parameter β is a product of the absorptive capacity $0 \leq b \leq 1$ and $0 \leq \iota \leq 1$, a measure of the weakness of IPRs in the host country with $\iota = 0$ indicating full IPR protection and $\iota = 1$ the complete lack thereof.</p> $\pi_F = (p - C)q_F - x, \quad \pi_{sj} = (p - \alpha)q_{sj}, \tag{3}$ $q_F = \frac{a + 3\sqrt{gx}}{4}, \quad q_{sj} = \frac{a - \sqrt{gx}}{4}, \tag{4}$ <p>for $j = 1, 2$. As $A - \alpha$ appears in all the upcoming equations, it is replaced by a to simplify</p>

	$x_F^* = \frac{9a^2g}{(16-9g)^2}. \quad (5)$ <p>It can be seen that R&D effort is higher the more technology-intensive is an industry (i.e. the higher is g). Finally, replacing the optimal output and R&D investment back into (3), the optimal profits for each firm can be found:</p> $\pi_F^* = \frac{a^2}{16-9g}, \quad (6)$ $\pi_{Sj}^* = \frac{a^2(4-3g)^2}{(16-9g)^2}. \quad (7)$ $\pi_J = (p-C)q_J - x, \quad (8)$ $\pi_{SO} = (p-c)q_{SO}, \quad (9)$ <p>where the second subscript O stands for outsider. Solving for the optimal output by each firm yields</p> $q_J = \frac{a+(2-\beta)\sqrt{gx}}{3}, \quad q_{SO} = \frac{a-(1-2\beta)\sqrt{gx}}{3}, \quad (10)$ <p>for the JV and the outsider Southern firm, respectively. Optimal R&D investment under a JV is</p> $x_J^* = \frac{a^2g(2-\beta)^2}{[9-g(2-\beta)^2]^2}. \quad (11)$
研究 結果	<p>JV is the equilibrium market structure when R&D intensity is moderate and IPRs strong. The South can gain from increased IPR protection because it encourages a JV, whereas policies to limit foreign ownership in a JV gain importance in technology-intensive industries as complementary policies to strong IPRs.</p>
研究 貢獻	<p><i>They demonstrated a precise set of conditions under which the JV will be established. When firms form a JV and coordinate their production they gain from reduced competition but tend to help their rivals gain market share. This, the well-known merger paradox, implies in our context that without R&D investment the JV is unprofitable.</i></p>
未來 研究 方向	<p><i>We have developed a North–South model in which a Northern multinational firm that engages in R&D must decide how to serve a Southern market. The basic ingredients that go into the model are fairly simple, but they nevertheless generate a rich set of results.</i></p>

篇名	<i>Should Firms Employ Personalized Pricing?</i>
作者	<i>Toshihiro Marsumura, Noriaki Matsushima</i>
出處	Journal of Economics & Management Strategy
摘要	Recent developments in information technology (IT) have enabled firms to employ personalized pricing (Arora et al., 2008 and references therein). In the U.K. supermarket industry, Tesco learns a variety of facts on customer purchasing activities using profiles developed based on information collected through loyalty cards. Tesco uses these data to send personalized coupons and other offers to all Tesco Clubcard households quarterly
研究動機	This raises the following question: Should all firms employ personalized pricing? If not, why not? The purpose of this paper is to provide a simple rationale behind why firms do not always employ personalized pricing
模型	Consider a linear city along the unit interval $[0, 1]$, where firm 1 and firm 2 are located at 0 and 1, respectively. Consumers are uniformly distributed along the interval, and the density of the consumer distribution is 1. Each consumer buys exactly one unit of the good, which can be produced by either firm 1 or firm 2. A consumer located at $x \in [0, 1]$ incurs a transportation cost of tx ($t(1-x)$) when purchasing a product from firm 1 (firm 2), where t is a positive constant. Each consumer derives a surplus from consumption (i.e., the gross total of price and transportation costs) equal to v . We assume that v is so large that every consumer consumes one unit of the product. We believe that the model reflects the spatial nature of competition, which is applicable to many markets, including competition among retailers in cities or manufacturers with differentiated products.
研究結果	The main result of this paper is that when the <i>ex ante</i> cost difference between the two firms is large, employing personalized pricing harms the less-efficient firm even when employing this pricing is <i>costless</i> . This result does not hold when the firms do not engage in cost-reducing activities. That is, when the <i>ex post</i> activities related to cost reductions are important to firms, less-efficient firms do not have to employ personalized pricing. This result has a managerial implication for firms that consider whether to employ personalized pricing. Our main result implies that such firms should consider their relative competitive positions and technological environments. When firms are relatively small and their cost structures are easily changed by their efforts, they should reconsider whether to employ personalized pricing.

研究 貢獻	Their main result implies that such firms should consider their relative competitive positions and technological environments. When firms are relatively small and their cost structures are easily changed by their efforts, they should reconsider whether to employ personalized pricing.
未來 研究 方向	Recent developments in IT have enabled firms to employ personalized pricing (Arora et al., 2008 and references therein). Following the recent trend, this paper provides a simple model to investigate whether firms should employ personalized pricing.