

## ADDENDUM AND CORRIGEDUM

Despite the care I took and great editorial assistance, I have discovered several mistakes and/or inaccuracies in my book "The Theory of Implementation of Socially Optimal Decisions in Economics". Since it is unlikely that the book will ever be reprinted but still used, I decided to make a Corrigendum. I also take this opportunity to complete the references that came out after the book was published. I thank to Carmen Beviá and Fabio Feriozzi for their help.

p. 12, l. 2. Replace  $\exists r_i \in \mathbb{R}^m$  by  $\exists (r_{11}, \dots, r_{1m}, \dots, r_{n1}, \dots, r_{nm})$ .

p. 12, l. 2. Replace  $\sum_{i=1}^n r_i = 1$  by  $\sum_{i=1}^n r_{ij} = 1$  all  $j = 1, 2, \dots, m$ .

p. 12, l. 10. Replace  $\sum_{i=1}^m r_{ij}$  by  $\sum_{i=1}^n r_{ij}$ .

p. 12, l. 10. Replace  $c_i(y_j)$  by  $c_j(y_j)$ .

p. 13, l. 16, left hand side of the equalities. Replace  $y'_i$  by  $y'_j$ .

p. 13, l. 21. Replace  $(\sum_{j=1}^m w_{i,0})$  by  $(\sum_{i=1}^n w_{i,0})$ .

p. 20. Add the following reference to Exercise 1.8, part a).

See pp. 31-2 in J. Silvestre. "Economic Analysis of Public Ownership", *Investigaciones Económicas*, 18, 19-66, 1994.

p. 37, l. 24. Replace round by found.

p. 38, l. 10. Replace Nou by Non.

p. 41, l. 13 and l. 17. Replace  $E_i$  by  $\mathcal{E}$ .

p. 43, l. -4. Replace  $\forall e_i$  by  $\forall e'_i$ .

p. 50, l. 16. Add at the end of the sentence: as long as the quantity of the public good is constant.

p. 58, Figure 3.4. The indifference curve of consumer 1 should cut the Pareto line at a point to the left of the intersection in the figure 3.4.

p. 59, Exercise 3.4. Replace  $a$  by  $a_i$ .

p. 74, l. ll. -6,-7. Replace  $U^1$  by  $U^l$  and  $u^1$  by  $u^l$ .

- p. 83, Exercise 4.27. Add that the social choice function is not dictatorial.
- p. 84, ll. -6, -3. The papers quoted there should read.  
 "Credible Implementation", *Games and Economic Behavior*, 57, 18-36, 2006.  
 "The Theory of Implementation when the Planner is a Player", *Journal of Economic Theory* 77, 15-33, 1997.
- p. 92, l. 7. Replace  $\sum_{j \in I} s_j$ , by  $\max(\sum_{j \in I} s_j, 0)$ .
- p. 95, Aurea Mediocritas. Unfortunately this axiom is not strong enough. For instance suppose that  $D_i(s_{-i}, \Pi_i) = D_i(s_{-i}, \pi_i) \cup 0$ . Clearly,  $D_i(s_{-i}, \pi_i)$  is strictly contained in  $D_i(s_{-i}, \Pi_i)$  but it does not follow that agent  $i$  has incentives to announce the average bid of all agents minus  $i$ ,  $\Pi_i$ . We need that for each  $(z_i, m_i) \in D_i(s_{-i}, \pi_i)$ ,  $\exists(z'_i, m'_i) \in D_i(s_{-i}, \Pi_i)$  such that  $(z'_i, m'_i) > (z_i, m_i)$ .
- p. 105, ll. -10,-14. Replace  $A_1$  and  $A_2$  by  $A_1(s^*)$  and  $A_2(s^*)$ .
- p. 110, Exercise 5.20. The paper quoted there should read:  
 "Nash Implementation of Matching Rules". *Journal of Economic Theory* 68, 425-439, 1996.
- p. 110, ll. -9, -5. The papers quoted there should read:  
 L. C. Corchón and S. Wilkie: "Doubly Implementing the Ratio Correspondence by a Market Mechanism". *Review of Economic Design*, 2, 325-337, 1996.  
 C. Beviá, L. C. Corchón and S. Wilkie: "Implementation of the Walrasian Correspondence by Market Games". *Review of Economic Design*, 7, 429-442.
- p. 117, l. 22. Delete more generally.
- p. 139, ll. -8, -9. The definition of Closure is not correct. The correct definition is: The Social Choice Set  $F$  satisfies closure if for any two common knowledge events  $T_1$  and  $T_2$  that partition  $T$  and any pair  $f_1, f_2 \in F$ , we have that  $f \in F$  where  $f$  is defined by  $f(t) = f_1(t)$  if  $t \in T_1$  and  $f(t) = f_2(t)$  if  $t \in T_2$ .
- p. 153, Exercise 7.2. Add the following reference  
 Peter J. Hammond: "Ex-ante and Ex-post Welfare Optimality under Uncertainty" *Economica*, 48, pp. 235-50, 1981.
- p. 154, Exercise 7.18. Replace Proposition 2 by Proposition 4.
- p. 156, l. -7. Add at the end of the sentence: as long as this announcement is less than the announcement made by the highest bidder.