

Reply to Etienne Billette de Villemeu's (Referee 1) Report on the paper "**Indirect Taxation, Public Pricing and Price Cap Regulation: A Synthesis**"

First of all I want to thank Etienne Billette de Villemeu's for his sympathetic report. His comments will be very helpful for my revision of the paper.

In what follows I provide specific answers to all his comments.

I agree with his general comment that the current version of the paper lacks to mention how some hypotheses underlying the surveyed literature on price-cap regulation might limit its relevance. Therefore, when revising my paper, I will try to explain better the role played by myopia and time invariance of cost and demand. Moreover, as the population's size is typically greater than the number of goods, I will also clarify that the inverse optimal problem does not allow to detect the regulator's preferences (weights) over any single consumer but only over groups of consumers defined according to one specific characteristic (i.e. wealth, consumption level, geographic location and so on).

- p. 13,

- $\beta_h - \beta_{h+1}$ in formula (20') is correct. To see this consider a simple example with $H=3$.

Therefore, $\sum_{h=i}^{H-1} \left[(\beta_h - \beta_{h+1}) \sum_{k=1}^h dy_k \right] + \beta_H \sum_{k=1}^H dy_k$ in (20') becomes

$$(\beta_1 - \beta_2)dy_1 + (\beta_2 - \beta_3)(dy_1 + dy_2) + \beta_3(dy_1 + dy_2 + dy_3) = \beta_1 dy_1 + \beta_2 dy_2 + \beta_3 dy_3$$

which is indeed $\sum_{h=1}^H \beta_h dy_h$ on the left hand side of (20'). What is wrong, instead, is $\beta_h \geq \beta_{h-1}$ in the

following line that should be replaced by $\beta_h \geq \beta_{h+1}$ as long as y_h is supposed to be lower than y_{h+1} . This typo has probably led the referee to suspect that (20') was not correct.

- My example above should also elucidate why we need an index $k \neq h$ in the sums of dy_k within the squared brackets of (20').

- p. 16

- On the basis of the referee's comment I will replace D_a^s and D_b^s in (25), with D_a^i and D_b^i .

- In (25') I used the same formulation which is employed in Makdissi and Wodon (2007): as y is the level of income and $z \in [0, z^+]$ is the poverty line defined in the income space, it is not strange to have the dominance curves defined over y , with $y \leq z^+$.

- I thank the referee for drawing my attention to the part of the paper where I introduce formula (27). His comment allows me to realize that the whole explanation of (27) and (27') was ambiguous because it does not explain the role of the profits' constraint in defining $dD^s(z)$. I will try to clarify this point which is well explained at p. 690, before Proposition 1 of the original paper by Makdissi and Wodon (2007). I will convey their argument into this part of my paper.

- All the other referee's comments on pp. 18, 20, 23 and 26 will be addressed according to his suggestions.

- p. 28. v_h is the indirect utility of household h and its use in section 3.3 is legitimated by the social welfare function defined in (1) [note that in section 3.3 we assume that the regulator's maximization problem is the same as in (4)]. When I presented the Feldstein's analysis I also followed his notation introducing u_h that, however, has a different meaning. As a matter of fact, by comparing (11) and (11') we can note that the Feldstein's marginal social utility of income, $u'(y_h)$, is equivalent to the social

welfare weight, $\beta_h = \frac{\partial W}{\partial v_h} \alpha_h$, which is derived by the more general social welfare function which defined in (1).