Incentive Problems with Unidimensional Hidden Characteristics: A Unified Approach - Corrigendum

Martin F. Hellwig
Max Planck Institute for Research on Collective Goods
Kurt-Schumacher-Str. 10, D - 53113 Bonn, Germany
hellwig@coll.mpg.de

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Sergei Vieira Silva, from the Instituto Nacional de Matematica Pura e Aplicada in Rio de Janeiro, has alerted me to an error in my article "Incentive Problems with Unidimensional Hidden Characteristics: A Unified Approach", Econometrica 78 (2010), 1201 – 1237. Fortunately, the error does not affect the validity of the analysis.

The analysis of the paper rests on replacing the notion of a type \( t \) in the usual sense by the notion of a pseudo-type \( x \) constructed so that the distribution \( G \) of pseudo-types has a density even though the distribution \( F \) of types does not. Absolute continuity of \( G \) is asserted in Lemma 3.1, p. 1215. For the given definition of \( G \), however, this assertion is false; for it to be true, the definition must be modified.

The definition of \( G \) in the paper takes the map \( t \rightarrow \xi(t) = t + F(t) \), from types to pseudo-types, and sets \( G := F \circ \xi^{-1} \). With this definition, however, \( G \) is discontinuous whenever \( F \) is discontinuous. In the proof of Lemma 3.1, the assertion that equation (3.9) holds for all \( x \) is incorrect. I apologize for the error and thank Sergei Vieira for pointing it out.

To correct the error, replace the given definition of \( G \) by one that starts from equation (3.9), i.e., define \( G \) so that

\[
G(x) = x - \tau(x)
\]

for all \( x \), where \( \tau(x) := \sup_s \{ s | \xi(s) \leq x \} \). With this definition, absolute continuity of \( G \) follows from the observation that \( \tau \) is nondecreasing and Lipschitz with constant 1. Moreover, it is still true that \( F = G \circ \tau^{-1} \), which provides the basis for the subsequent analysis.