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ERRATUM

Erratum to: Value Functions and Transversality Conditions for Infinite-Horizon Optimal Control Problems

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In the original article an error occurred in Corollary 4.1. The following condition, the *uniform coercivity* of L, is required in addition to the hypothesis in Corollary 4.1.

$$\lim_{\|x\|\to\infty} \inf\{L(t,x,u) \mid (t,u) \in \operatorname{graph}(U)\} = \infty. \tag{$*$}$$

For completeness, I provide the proof of Corollary 4.1.

Proof of Corollary 4.1 For every admissible process $(x(\cdot), u(\cdot))$ for (P), we have $\lim_{t\to\infty} \|x(t)\| < \infty$ by $(*)$. Otherwise, $\lim_{t\to\infty} \|x(t)\| = \infty$ implies that $\lim_{t\to\infty} L(t, x(t), u(t)) = \infty$, which obviously contradicts the integrability of $L(\cdot, x(\cdot), u(\cdot))$ over $[0, \infty)$. Hence, $\sup_{t\in[0,\infty)} \|x(t)\| < \infty$. This implies that for every admissible process $(x(\cdot), u(\cdot))$ for (P), there exists some $\varepsilon > 0$ such that $x(t) \in x_0(t) + \varepsilon B$ for every $t \in [0, \infty)$. By the condition (i) of the corollary, the conditions of Theorem 4.1 are true for $P(t) \equiv 0$. Therefore, we have $J(x_0(\cdot), u_0(\cdot)) \leq J(x(\cdot), u(\cdot))$. □

(i) In the proof of Lemma 5.1. Delete "$\mu(du)$" from the fourth line from the bottom.
(ii) In the second paragraph of Appendix A.3, "$\Omega(t) \times \mathbb{R}^n$" should read "$\mathbb{R}^n \times \mathbb{R}^n$".

The online version of the original article can be found under http://dx.doi.org/10.1007/s11228-009-0132-1.

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