On optimal stopping with incomplete data

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The problem of optimal stopping with incomplete data are reduce to the problem with complete data and the convergence of payoffs is proved. The modification of Kalman-Bucy's continuous model of partially observable random processes $(\theta_t, \xi_t^\varepsilon)$, $0 \leq t \leq T$, is considered. Let s^0 and s^ε are payoffs for linear gain function [1]. We have

$$\lim_{\varepsilon \to 0} s^\varepsilon = s^0,$$

where $\varepsilon \to 0$ is small small perturbation parameter of the observable random process ξ^ε.

Reference

[1] P. Babilua, I. Bokuchava, B. Dochviri, M. Shashiashvili. Convergence of costs in an optimal stopping problem for a partially observable model. AMIM, vol. 11, N 1, 2006, pp. 6-11.