

## Convergence of Primal-Dual Solutions for the Nonconvex Log-Barrier Method without LICQ

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*Abstract:* This paper characterizes completely the behavior of the logarithmic barrier method under a standard second order condition, strict (multivalued) complementarity and MFCQ at a local minimizer. We present direct proofs, based on certain key estimates and few well-known facts on linear and parametric programming, in order to verify existence and Lipschitzian convergence of local primal-dual solutions without applying additionally technical tools arising from Newton-techniques.

*Keywords:* log-barrier method; Mangasarian-Fromovitz constraint qualification; convergence of primal-dual solutions; locally linearized problems; Lipschitz estimates;

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