Electronic Journal of Linear Algebra ISSN 1081-3810 A publication of the International Linear Algebra Society Volume 22, pp. 758-766, August 2011



ON CARDINALITY OF PARETO SPECTRA*

ALBERTO SEEGER † AND JOSÉ VICENTE-PÉREZ \ddagger

Abstract. How many Pareto eigenvalues are there in a matrix of a prescribed order? This note provides the best lower bound that it is known up to now for the maximal number of Pareto eigenvalues in a matrix of order n.

Key words. Cone-constrained eigenvalue problem, Pareto eigenvalue, Linear complementarity system.

AMS subject classifications. 15A18, 15A39, 65H17.

^{*}Received by the editors on January 31, 2011. Accepted for publication on July 10, 2011. Handling Editor: Shmuel Friedland.

 $^{^\}dagger Department of Mathematics, University of Avignon, 33 rue Louis Pasteur, 84000 Avignon, France (alberto.seeger@univ-avignon.fr).$

[‡]Departamento de Estadística e Investigación Operativa, Universidad de Alicante, 03080 Alicante, Spain (jose.vicente@ua.es). This author was supported by FPI Program of MICINN of Spain under grant BES-2006-14041.