

# One Singular Multivariate Linear Model with Nuisance Parameters

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(Received March 9, 2005)

## Abstract

The multivariate linear model, in which the matrix of the first order parameters is divided into two matrices: to the matrix of the useful parameters and to the matrix of the nuisance parameters, is considered.

**Key words:** Singular multivariate linear model, useful and nuisance parameters, BLUE.

**2000 Mathematics Subject Classification:** 62J05

## 1 Introduction

There are two approaches in the problem of nuisance parameters in the linear models of various structures.

The first one respects the structure of the model and seeks to find classes of linear functionals of useful (main) parameters such that their estimators allow the nuisance parameters to be neglected; the estimators computed under disregarding nuisance parameters remain to be unbiased and efficient. The variance of the estimator belonging to the abovementioned class could behave analogously. The determination of the class having such attributes is of a great importance in practice because the number of nuisance parameters in real situations can be greater than the number of useful parameters.