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# NEW APPROACH TO THE ESTIMATION OF PARAMETERS IN LINEAR MODELS

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## BSTRACT

In this paper we attempt to forward a new approach for the estimation of parameters in linear models. This approache leads to identifiable parameters which is a problem in some models. Some examples are also provided.

## NTRODUCTION

Suppose that two non-stochastic variables X and Y obey the inear relation

$$= \alpha + \beta X \tag{1}$$

nd we wish to obtain values for the parameters $\alpha$ and $\beta$. If we bserve only the stochastic variables, A and B where

$$= X + C, \text{ and } B = Y + D \tag{2}$$

here C and D are random disturbances then the least squares odel is no longer valid, while if A and B are treated as normal ariates, there is a lack of identifiability among the parame-ers. Various methods have been proposed to deal with this situa-ion. These are reviwed in [1,2].

To make all the parameters in this model identifiable, we ay either restrict the parameter values in some way or else ncrease the amount of available information. In particular, ituation may arise where two readings $A_1$ and $A_2$ are availabe.

## PECIFICATION OF THE MODEL

We have n triads of observations $(A_{1i}, A_{2i}, B_i)$, $i = 1,2,\ldots n$ here