1145-VT-2231   **Dawud Adebayo Agunbiade*** (`bayoagunbiade@gmail.com`), Department of Mathematical Sciences, Faculty of Science, Olabisi Onabanjo University, Ago-Iwoye, Ogun State 234, Nigeria.
Asymptotic analysis of the least squares as estimator of the linear regression model.

Least squares are natural approach to estimation which makes explicit use of the structure of the model as laid out in the assumptions of the classical linear regression model. Its usage and recognition ascribed to it cannot be over emphasized. The main thrust of this work is therefore to examine the asymptotic behaviour of the least square estimator θ as the sample size goes to infinity. The task is complicated by the fact that θ depends on the design . Thus, emphasis is laid on the existence of a limiting distribution only when the design is governed by some regularity conditions. The study emphasized on both the regular deterministic design and regular random design. The asymptotic analysis was particularly done on a collinear regression variable of a linear regression model (LRM). The findings revealed that the parametric least-squares estimator is unbiased, and its typical rate of convergence under various norms and under regular designs is equal to 0 $1 \to \infty$.

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