Erratum to: Optimal unbiased estimation of some population central moments

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The article by Ruiz Espejo, Mariano, Delgado Pineda, Miguel, Nadarajah, Saralees *Optimal unbiased estimation of some population central moments* published in Metron 71 (2013), 39–62, had a mistake in the statement of Theorem 4.1.

The correct result (see below) has already been published as Open Access in Estadística Española by Ruiz Espejo, Mariano (2015). “Sobre estimación insesgada óptima del cuarto momento central poblacional”. Estadística Española 57 (188), 287–290:

Theorem 4.1 For srsr designs of size $n > 3$, an optimal unbiased estimator of the population fourth central moment μ_4 (under distribution-free setting) is

$$\begin{aligned}\hat{\mu}_4 &= \frac{n^2 - 2n + 3}{n^2 - 5n + 6} \left\{ \frac{n(n-14)}{(n-1)(n-2)} \hat{\alpha}_4 - \frac{4n(n+2)}{(n-1)(n-2)} \hat{\alpha}_3 \hat{\alpha}_1 \right. \\ &\quad \left. + \frac{6n^3}{(n-1)(n^2 - 2n + 3)} \hat{\alpha}_2 \hat{\alpha}_1^2 + \frac{3n(-2n^2 + 5n - 7)}{(n-1)^2(n^2 - 2n + 3)} \hat{\alpha}_2^2 - \frac{3n^3(n-4)}{(n-1)^2(n^2 - 2n + 3)} \hat{\alpha}_1^4 \right\} \\ &= \frac{n}{(n-1)(n-2)(n-3)} \left\{ \frac{(n-14)(n^2 - 2n + 3)}{(n-2)} \hat{\alpha}_4 \right. \\ &\quad \left. - \frac{4(n+2)(n^2 - 2n + 3)}{n-2} \hat{\alpha}_3 \hat{\alpha}_1 + 6n^2 \hat{\alpha}_2 \hat{\alpha}_1^2 + \frac{3(-2n^2 + 5n - 7)}{n-1} \hat{\alpha}_2^2 - \frac{3n^2(n-4)}{n-1} \hat{\alpha}_1^4 \right\},\end{aligned}$$

where $\hat{\alpha}_k = (1/n) \sum_{i=1}^n x_i^k$ ($k = 1, 2, 3, 4$) is the sample noncentral moment of order k .

The online version of the original article can be found under doi:10.1007/s40300-013-0006-z.

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