

# Corrigendum to “Transmuted geometric distribution with applications in modelling and regression analysis of count data”

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In our paper “Transmuted geometric distribution with applications in modelling and regression analysis of count data” (Chakraborty and Bhati, 2016) there is a mistake in the expression for the variance  $\mathbb{V}(Y)$ , which induced a wrong expression for the Index of Dispersion (ID) in Table 1, a wrong figure in Figure 2(c) and a wrong sentence in the paragraph just preceding Remark 5. These were noticed only after the article was published. These corrections, as well as few corrections in Table 6 and a correction of one reference, are as follows:

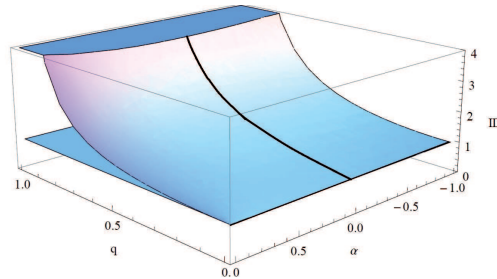
- i. In Table 1 S.No. 2 the correct expression for  $\mathbb{V}(Y)$  should be read as,

$$\frac{q(1 - \alpha + q(2 + q(1 - \alpha) - \alpha^2))}{(1 - q^2)^2}$$

- ii. In Table 1 S.No. 3 the correct expression for Index of Dispersion (ID) should be read as,

$$\frac{1 - \alpha + q(2 + q(1 - \alpha) - \alpha^2)}{(1 - q^2)(1 + q - \alpha)}$$

- iii. Figure 2(c) should be seen as,



**Figure 2(c):**  $q - \alpha$  surface plot of Index of Dispersion of  $\mathcal{TGD}(q, \alpha)$

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- iv. Finally in pages 161-162 the sentence "Further, Figure 2(c) shows that the horizontal  $q$ - $\alpha$  surface cuts the ID surface at 1 indicating under or over-dispersion for  $\alpha \in (1, 0)$  or  $(0, 1)$  respectively (see Remark 3)" should be corrected as "Further, Figure 2(c) shows that the horizontal  $q$ - $\alpha$  surface is always above 1 indicating over-dispersion for all the values of  $\alpha$ ". In Table 6: column 5, row 2,  $-0.983$  should be read as  $0.0$ ; column 6, row 2,  $0.2228$  should be read as  $1.255$ ; column 5, row 9,  $-0.1160$  should be read as  $-0.1559$ .
- v. In the references, page 175, publication year of Sastry et al.'s reference should be read as 2014.

Both authors apologize for these errors.

## References

- Chakraborty, S., and Bhati, D. (2016). Transmuted geometric distribution with applications in modelling and regression analysis of count data. *SORT-Statistics and Operations Research Transactions*, 40(1), 153–176. URL: <http://www.idescat.cat/sort/sort401/40.1.7.chakraborty-bhati.pdf>  
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