



Correction to: Optimality conditions for pessimistic bilevel problems using convexificator

S. Dempe¹ · N. Gadhi² · L. Lafhim²

Received: 23 May 2023 / Accepted: 4 September 2023 / Published online: 16 December 2023
© Springer Nature Switzerland AG 2023

Correction to: Positivity (2020) 24:1399–1417
<https://doi.org/10.1007/s11117-020-00737-x>

Dutta et al. [3] have recently published a correction of the well-known result of Dutta and Chandra [2, Theorem 3.5]. Using a counterexample, they proved that Dutta and Chandra's result is not correct and then provided a true statement of it (see [3, Theorem 2.1]) under the assumption that the contingent cone to the feasible set at the considered point is convex.

As the conclusion of [2, Theorem 3.5] was used in the proof of [1, Theorem 10], specifically for transitioning from

$$\sup_{\eta \in \partial^* h(\bar{x})} \langle \eta, d \rangle \geq 0, \quad \text{for all } d \in T(E, \bar{x})$$

to

$$0 \in \overline{co}(\partial^* h(\bar{x}) + [T(E, \bar{x})^\circ]),$$

we have to correct our results by adding the missing convexity of the contingent cone $T(E, \bar{x})$ to the statement of [1, Theorem 10] and the subsequent outcomes. This additional condition is crucial for the validity of our results.

The original article can be found online at <https://doi.org/10.1007/s11117-020-00737-x>.

✉ N. Gadhi
ngadhi@hotmail.com

S. Dempe
dempe@tu-freiberg.de

L. Lafhim
lafhim68@gmail.com

¹ Department of Mathematics and Computer Science, Technical University Bergakademie Freiberg, Freiberg, Germany

² LAMA, Department of Mathematics, Sidi Mohamed Ben Abdellah University, Dhar El Mahraz, Fez, Morocco

Declarations

Conflict of interest No potential conflict of interest was reported by the author(s).

References

1. Dempe, S., Gadhi, N., Lafhim, L.: Optimality conditions for pessimistic bilevel problems using convexificator. *Positivity* **24**, 1399–1417 (2020)
2. Dutta, J., Chandra, S.: Convexifactors, generalized convexity, and optimality conditions. *J. Optim. Theory Appl.* **113**, 41–64 (2002)
3. Dutta, J., Chandra, J., Rimpi, S., Lalitha, C.S.: Correction to: Convexifactors, generalized convexity, and optimality condition. *J. Optim. Theory Appl.* (2023). <https://doi.org/10.1007/s10957-023-02190-8>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.