

ERRATUM TO: NECESSARY OPTIMALITY CONDITIONS FOR A FRACTIONAL MULTIOBJECTIVE OPTIMIZATION PROBLEM

NAZIH ABDERRAZZAK GADHI*

Received May 23, 2023. Accepted June 9, 2023.

Erratum to: *RAIRO-Oper. Res.* **55** (2021) S1037–S1049

Dutta *et al.* [2] have recently published a correction of the well-known result of Dutta and Chandra ([1], Thm. 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 [2], Thm. 2.1) under the assumption that the contingent cone to the feasible set at the considered point is convex.

As the conclusion of Theorem 3.5 from [1] was used in the proof of Theorem 3.4 from [3], specifically for transitioning from

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

to

$$0 \in \overline{c\bar{o}(\partial^* \psi(\bar{x})) + [T(C, \bar{x})]^-},$$

we have to correct our results by adding the missing convexity of the contingent cone $T(C, \bar{x})$ to the statement of Theorem 3.4 from [3] and the subsequent outcomes. This additional condition is crucial for the validity of our results.

Disclosure statement. No potential conflict of interest was reported by the author.

REFERENCES

- [1] J. Dutta and S. Chandra, Convexifactors, generalized convexity, and optimality conditions. *J. Optim. Theory Appl.* **113** (2002) 41–64.
- [2] J. Dutta, J. Chandra, S. Rimpi and C.S. Lalitha, Correction to: Convexifactors, generalized convexity, and optimality condition. *J. Optim. Theory App.* (2023). DOI: [10.1007/s10957-023-02190-8](https://doi.org/10.1007/s10957-023-02190-8).

Keywords. Optimality conditions, fractional optimization, multiobjective optimization, convexifactors.

LAMA, FSDM, Sidi Mohamed Ben Abdellah University, Fes, Morocco.

*Corresponding author: ngadhi@hotmail.com

© The authors. Published by EDP Sciences, ROADEF, SMAI 2023

- [3] N. Gadhi, K. Hamdaoui, M. El Idrissi and F. Rahou, Necessary optimality conditions for a fractional multiobjective optimization problem. *RAIRO: Oper. Res.* **55** (2021) S1037–S1049.



Please help to maintain this journal in open access!

This journal is currently published in open access under the Subscribe to Open model (S2O). We are thankful to our subscribers and supporters for making it possible to publish this journal in open access in the current year, free of charge for authors and readers.

Check with your library that it subscribes to the journal, or consider making a personal donation to the S2O programme by contacting subscribers@edpsciences.org.

More information, including a list of supporters and financial transparency reports, is available at <https://edpsciences.org/en/subscribe-to-open-s2o>.