Vollveien 7, 1433, Ås NORWAY

July 19, 2019

Romà Tauler, Editor in Chief Chemometrics and Intelligent Laboratory Systems

Dear Mr. Tauler,

I am pleased to submit an original research article entitled "Comparison of Multi-response Estimation Methods" on behalf of the authors. This manuscript has made an extensive comparison of different multivariate multi-response methods including Principal Component Regression, Partial Least Squares Regression and Envelopes based on their estimation performance. The data are simulated based on a factorial design of various properties of data that includes the predictor components relevant to the response and levels of multicollinearity in the predictors. The manuscript is the second part of the previous paper¹ published in Chemometrics and Intelligent Laboratory System and have used the same simulated design, data and methods but for assessing estimation behavior.

Many research activities are more interested in the effect of predictor variables than actual prediction performance. Understanding the estimative strength of these methods and their interaction with the various nature of data is vital for these research activities. Here we have compared well-established methods such as Principal Components Regression and Partial Least Square Regression with methods based on Envelopes which is relatively new and claimed to have better performance. Since all comparisons in this paper correspond to the prediction paper as discussed previously, these papers, together, provide a panoramic picture of the study.

This manuscript not only gives an overview of the performance of these prediction methods but also encourages researchers to explore, use and implement newly developed methods based on the properties of their data. We believe that this manuscript is appropriate for publication in *Research Paper* section in Chemometrics and Intelligent Laboratory System.

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflict of interest to disclose.

Thank you for your consideration.

Sincerely,

Raju Rimal

¹R. Rimal, T. Almøy, and S. Sæbø. "Comparison of Multi-response Prediction Methods". In: *arXiv e-prints* (Mar. 2019), p. arXiv:1903.08426. arXiv: 1903.08426 [stat.AP].