From: George Athanasopoulos
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To: Michael McCracken
Handling Editor, International Journal of Forecasting

February 7, 2020
Dear Mike,

Please find attached a revised manuscript for "Forecast reconciliation: a geometric view with new insights on bias correction" by Anastasios Panagiotelis, George Athanasopoulos, Puwasala Gamakumara, and Rob Hyndman for your consideration for publication in International Journal of Forecasting. We are very excited to have been given the opportunity to revise and resubmit. We carefully considered the comments offered by the two reviewers. Herein, we briefly summarize the major changes in the revision:

1. We introduce a new result about MinT that explicitly makes the connection between trace minimisation and minimising a loss function based on squared Euclidean distance. We also prove a new result that MinT minimises expected loss for loss functions based on squared generalised Euclidean distance. This result is demonstrated in an expanded empirical application in Section 5.2 that includes a wider range of loss functions.
2. We have greatly expanded the empirical study of Section 5.3 including more measures of forecast accuracy (including one specifically measuring bias). This has led to the insight that reconciliation alone can in fact reduce the bias of an estimator. We also now also report where differences in forecast accuracy are statistically significant.
3. We now reflect on some issues that were not discussed in the previous version of the manuscript including the role of non-negative forecasts, and state-space models.

The comments made by the referees warrant a detailed response which is appended to this letter. Overall, we believe we have now addressed all the concerns raised. We thank the referees for their comments as addressing these has significantly improved our manuscript. We look forward to hearing from you.

With kind regards and best wishes,

George Athanasopoulos