Authors' response to the second referee's report

Paper title: Block-Toeplitz/Hankel Structured Total Least Squares
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We thank the referee for reviewing our manuscript and for giving useful suggestions for its improvement.

We quote in **bold face** a statement from the report and give our replay next.

p. 3: Define the vec operator.

The following sentence is added in the last paragraph of the introduction: "The operator that vectorizes column-wise a matrix is denoted by vec$(\cdot)$, ...".

Theorem 2.3: Is the matrix Gamma always invertible? This must be clarified in the proof.

The positive definiteness of Γ is indeed an issue. In general, $\Gamma(X)$ could be singular for certain $X \in \mathbb{R}^{n\times d}$. In Theorem 2.3, we replaced Γ^{-1} with the pseudo-inverse $\Gamma^{\dagger}$, which makes the theorem correct without the implicit and unnatural assumption "$G(X)$ is full row rank for all $X \in \mathbb{R}^{n\times d}$ that are minima of (2.1)." Restricting to the case of a structure $\mathcal{S}$ given by (2.6), however, a mild additional assumption is needed to ensure $G(X) > 0$ for all $X \in \mathbb{R}^{n\times d}$. The question is studied in [1, Sec. 4] in a statistic setting. We added Corollary 3.6 in the revised version of the manuscript that gives a simpler but more restrictive assumption for $G(X) > 0$ for all $X \in \mathbb{R}^{n\times d}$.

p. 7: Remove the box symbol at the very end of the page.

This box comes from the `\end{proof}` command and is build in the SIMAX LaTeX style file.

p. 11, middle: "... is cheaper than THAT of ...". Remove "about" on the following line.

Corrected.

p.12, last line: "The data ... ARE ..."

Corrected.

References

[1] A. Kukush, I. Markovsky, and S. Van Huffel. Consistency of the structured total least squares estimator in a multivariate errors-in-variables model. Technical Report 02–192, Dept. EE, K.U. Leuven, 2002. Accepted for publication in *J. of Stat. Planning and Inference*. Available from: `ftp://ftp.esat.kuleuven.ac.be/pub/SISTA/markovsky/reports/02-192.ps.gz`