Referee 2 Report on “Design-based random permutation models with auxiliary information” By Li & Stanek

The approach proposed makes the problem of regression estimates of the sample mean in simple random samples with auxiliary information much more complicated than necessary. The results are just that, with their model, a BLUE estimate coincides with the classic regression estimate from Cochran's (1963) book. It does not refer to this and claims that other work has not produced design based estimates like theirs.

By randomly order the population, and by taking the first n observation, we are indeed implementing the simple random sampling design. There are several methods to implement this sampling design, and the randomly ordering is just one of them. By assuming a correlation between y and x, it is natural to obtain the regression estimator, as the simple random sampling design is a non informative sampling design. It seems that the author proposed alternative proof of this standard result.

The paper seem disconnected from a real application. The motivation is also not clear.

I could not recommend publication. It is possible that a very short version making the association with BLUE could be of interest?