COMMENTARY ON "ANALYSES OF WATER-METER ACCURACIES WITH RESPECT TO METER MANUFACTURERS AND FLOW RATES" BY BARAL, KLITCHMAN, WANG & ZHANG

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ℓ 54 "Determining if it is statistically rigorous" i.e., is calculated technically properly, and in light of methodological assumptions. The "properly" question is affirmed by the similarity of this Report's results to the sponsor's results, where they are available. The "assumptions" question is addressed by several comments further down in the Report, perhaps not explicitly enough, but it seems, affirmatively.

ℓ 57 "Perform more confident analysis" in the sense that bootstrap does not get more information from the same data, but tries to get better variance information from them.

ℓ 64 "Has a certain size much less than n" is a choice, not a requirement. It could equal or exceed n.

ℓ 76 "θ be the mean" —actually it could be any estimate function $\theta(x_1, \ldots, x_n)$.

ℓ 77 X should be θ here.

ℓ 79 The "$\bar{\theta}$" should be a "$\bar{\theta} =$".

ℓ 82 In fact when θ is the sample mean then $\bar{\theta} = \hat{\theta}$.

ℓ 127 The reader should allow that different notations may occur in different sections.

ℓ 135 Note that α and β are not actual errors but relate to error probabilities as explained later.

ℓ 174 Eq. (3.5) should have been explained better.

$\ell\ell$ 190, 233 "Recreate the results" i.e., cf. the sponsor's `R` code.

ℓ 193 "For each sample" i.e., the abscissas in Fig. 5.

ℓ 200 Note that the sum of internal plus external variance-ratio over all j must equal one.

ℓ 236 Note that the extremity of "index 1334, make I" is effective as it is the datum left out of the scale-shape estimate. So perhaps that datum should always be left out.

ℓ 241 It is suspect that the orientation of the distribution appears to be somehow transposed and/or rotated between Figs. 7 & 8.

ℓ 248 "Using this method with smaller sample sizes" is not recommended.

ℓ 264 Since the boxplot markers lie outside the "minimum" and "maximum" values, it means those 2 values are misnamed and are probably actually defined using the 1st and 3rd quartiles and the IQR. See e.g., Wikipedia.

ℓ 269 "Only display 10 decimal places" —Obviously this is too many. Perhaps 3 places are meaningful.

ℓ 277 "The result from one-way ANOVA is not trustable", in an absolute sense. It would have been good to quantify this since probably it is "almost trustable" in some sense.

$\ell\ell$ 285–287 "External variances are comparatively small among different makes, while the majority of variability concentrates within each sub-population" seems to be a clear and significant result.

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