

Review of Accent/ PJM (2018) “PR19 Data Triangulation: Report for South Staffs Water”

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Overall remarks: *The report is well-written and details a thoughtful approach to the analytical challenge that it identifies at the report outset. The accompanying spreadsheet is also extremely useful and thorough. In terms of the two key areas which were the “terms of reference” outlined on p1: the index for water resources management plan (WRMP) priorities is a useful contribution; as is, the willingness to pay (WTP) scaling, although here I would prefer a more circumspect approach to how this exercise will be used. This is not a criticism of what is done here and maybe my interpretation of how the information gathered ‘should’ be used is what the project has in mind. Whatever the case, the WTP exercise is an interesting experimentation and the approach and report does what is asked of it. In terms of how to use the findings, my interim view – outlined further below – is based on a feeling that this sort of exercise is more suited for reflecting, and perhaps adjusting, a ranking of investment projects based on standard cost-benefit analysis (CBA) and WTP valuation. This could be done by alighting only on the key messages of the exercise rather than seeking adjusted WTP values across the board. As said, this may be the usage that is in mind for these project outputs: what is said about this in the report could be read in different ways. But it would be useful to clarify this as it will frame wider critical reaction to the approach, I imagine.*

Summary of the report: The report is extremely well written and makes a cogent case for the triangulation approach it takes. In terms of the objectives that the project has, these are fulfilled more than adequately in the report. The approach is complex, involving a wide range of data sources and weighting and rating procedures. But generally the report contents are very well explained and nicely illustrated via a range of tables and figures. There is some rigour exhibited too in how the approach, and the sensitivity analysis, is undertaken. The excel spreadsheet is also a useful accompanying tool to understand what data, and calculations, are underpinning all these analysis. All-in-all, the report shows that the triangulation yields additional interesting information. In what follows, I outline a number of comments which should be viewed in this positive context.

Theory/ conceptual issues: The report does a good job of setting out the rationale for the approach it takes. This derives, in large part, from the Ofwat steer to do bring these broader elements about customer preferences and perspectives into PR19 as well as an initial ICF (2017) report on what this might mean. I would like to have seen, however, a little more in the current report on what “triangulation” is in general as a measurement technique and how it is interpreted in social science research. For example, the use of the method here is a particular variant of this research method, I think. That is, not only does it seek to utilise additional data (i.e. a mix of quantitative and qualitative information from customers) to sense-check the validity of some other (i.e. WTP) data, it also uses that additional perspective to make a large number of adjustments to WTP data when the two approaches are in opposition to one another.

Accent-PJM: We added some text to the report to explain triangulation and our specific approach. Please refer to Section 2.3: Our Approach, 3rd paragraph, Page 7.

The other point here is the underlying theory/ concepts that the different data here reflect. The argument here (I think) seems to be that the standard CBA model is fine, in theory, but the WTP values we might use to populate it in the PR process are incomplete as a descriptor of economic value especially in the way these reflect customer preferences. On this basis, the proposal is to “double up”, in effect, and use non WTP data to inform WTP: i.e. the same explanatory framework underlies all this. Of course, I may have gotten this wrong – but it seems to me this is the rationale. It would be good to have this made more explicit in the text at the front of the report. This might include a bit

more reflection on: what is the problem with the (standard) WTP data, used in previous PR processes; how additional but different data fixes this issue; and the extent to which this augments the same explanatory framework, or is bringing something different to the PR process conceptually.

Accent-PJM: This understanding is correct. We added some text to the report to make it clear that this is intended to augment the existing CBA approach rather than replacing it with an alternative decision support framework. Please refer to Section 2.1: Rationale for Triangulation, 4th paragraph, Page 4.

This last point strikes me as quite important and worth expanding on in the report. For example, if the story here is that the framework for understanding consumer preferences underlying CBA is still the correct one but needs augmenting with further data that says something about the intensity of preferences, quite how to achieve this end could go in a number of directions. What is outlined in this report is one possible approach. And while it has much to commend it, is carefully elaborated including extensive use of sensitivity analysis and so on, there is no “theory” as such which says how this triangulation should be done. My guess is that there is an important role for anticipating critical reaction from the economic community on this. Some of this will be instinctive, but likely reflects a feeling that weighting procedures are either ad hoc in theory terms or that the range of reasonable empirical estimates produce ambiguous interpretations for decision-making. There are a variety of ways to try to deal with this: but it seems to be an important issue of which to be aware.

Accent-PJM: We added some text to the report to expand on this issue in relation to the motivation for sensitivity testing. Please refer to Section 2.3: Our Approach, 3rd paragraph, Page 7.

The remainder of my comments essentially expand on this issue. But in terms of ‘concepts’ still, one thing that could be done though is to make the above point and then elaborate what would be desirable properties for the necessary triangulation to take. The ICF (2017) principles for triangulation are useful but these very, very high level and are not specific enough. Given the approach that is taken in the current report, something is needed on the lines of “principles” for this particular interpretation of triangulation: that is, what properties would be desirable for such a procedure to exhibit?

Interpretation and use of results: As mentioned already, the results in the report are discussed appropriately and a range of sensitivity analysis is undertaken. It is reassuring to see that findings appear to be robust against, for example, different values for the RAG ratings (which presumably is a little arbitrary in terms of how these “traffic light” metrics precisely are translated into numbers).

Certain aspects of the method are likely to be contentious than others. The WRMP triangulation seems less debatable, for example, than the WTP element. I think it is important that the report shows some awareness of these risks. The mechanics of the triangulation is interesting but I would like to know more about the extent to which the additional data brings generally new information: that is, some appears to be WTP data or rankings from valuation surveys while other data sources do seem very different.

Accent-PJM: Please refer to Section 3.1 (WRMP Triangulation: Screen) and Section 4.1 (WTP Triangulation: Screen) in which we included tables that mention in brief what each data source was measuring and the reasons for including or excluding them from triangulation. Also refer to Section 3.2 and Section 4.2 in which we discussed in greater detail what each source measured and the candidate measures of triangulation for each data source.

I think though the main thing I would draw attention to is the emphasis on adjusted WTP values. I think this pushes the possibilities of the approach outlined in the report quite far. There are a number of reasons for this. For example, a strength of the standard approach is conformity with HM Treasury (2018) *Green Book*. It seems important not to lose sight of this. At the very least I would like to see any adjusted number side-by-side always with the core/ base (unadjusted) WTP values. Perhaps referring to scaling factors to core/ base WTP, rather than adjusted WTP values would be better.

Accent-PJM: We did not see any conflict between our approach and Green Book guidance. With respect to the presentation of results, the main tables in the report (e.g. Table 55: Comparison of SSW WTP Triangulated Values and Table 56: Comparison of CAM WTP Triangulated Values, Page 81) were generated such that they presented the adjusted WTP numbers alongside the core choice experiment-based numbers. We disagree with the suggestion to refer to ‘scaling factors’ rather than adjusted WTP numbers. This is because we believe there was a strong case for replacing the core DCE values with the combined values as better measures of true WTP, in which case the current form of presentation is more helpful to the user as it reflects the main results that we intended as the output from this study.

Beyond presentational issues, I do wonder about the way in which adjusted values are to be used. Is it the case that these “triangulated” values will form the CBA case for proposed measures in PR19, *in place* of the core WTP values? I may be running ahead of what is intended but my own view is that the usefulness of the exercise would be providing instead some empirical basis to “pause for thought” on the ranking of investment options based on standard valuation. So what is important here is the broad and key messages that the triangulation conveys rather than the minutiae of each adjusted service level value, for example. As an illustration, perhaps this might suggest a premium to certain types of investment compared to others. The WRMP exercise certainly seems to point this way and so maybe this could be the basis for switching an investment project ranking. For me, this potentially reconciles the usefulness of the additional data without jettisoning economic foundations of CBA.

Accent-PJM: We disagree with the suggestion to continue using the core WTP numbers rather than the adjusted versions. In line with SSC’s own views, we saw this study as a means of deriving better estimates of WTP via a process of triangulation so that the estimates used for ODIs as well as CBA better reflected customers’ true preferences. We certainly do not believe that we were jettisoning the economic foundations of CBA by so doing.

Transparency of approach: The report very carefully sets out the approach. Given all the various sources of additional data that could be used to triangulate the WTP data as well as the large range of service level outputs, the approach is necessarily complex. This exposition is helped enormously by the clarity of the writing. The approach explained here is not a “black box” and so satisfies the criterion on p3 of the report. However, there is a need for a simplified/ stylised elaboration of the approach perhaps at the outset of the report (and following the Exec. Summary). This could be important for a number of reasons. It will broaden the audience for the approach: if the aim here is to engage further with customer views, it would be beneficial to have a portion of this report document the approach in a way that is more easily decipherable for customers or customer groups. It would also help in constructive debate about how the approach works and what key issues and properties lie at its heart.

Accent-PJM: There is already a plan underway to create some visually appealing infographics to explain our methodology and results.

Review processes: For the reasons I outline above, I would urge some market testing of the approach via some of sort of further independent peer review process. It may be, for example, that my own view of using this interesting exercise to draw out a handful of key considerations for reflecting on a standard ranking of investment projects, rather than root and branch changes to how WTP values are calculated is a minority view. But it is just as likely you get even more vociferous reaction in the environmental economics community. It is important to garner a wider range of these views, not necessarily in terms of the current report but in terms of how use of the approach/ data evolves.

Accent-PJM: In principle, we support the idea of having a further wide-ranging peer review process. However, there are likely to be financial and time constraints preventing this from being done before PR19. We note, however, that Ofwat has encouraged companies to be innovative and adopting this approach falls into that category. Following PR19, we feel there would be merit in pursuing an

academic publication of this work, which would have the benefit of garnering peer review at the relevant journal. Alternatively, or additionally, there may be an opportunity for industry sharing of triangulation experience via an UKWIR or club study following PR19.

There is a practical issue here too with the lack of Ofwat leadership. Their steer to utilise a broader range of evidence about customer preference sounds sensible. But it is a real shame that the regulator does not provide more concrete guidance on this and so necessarily leaving it to others to interpret what this challenge means. Given there are a huge variety of approaches and specific weighting procedures that could be adopted, interpreting the resulting variety will not necessarily straightforward for the regulator. There is certainly no reason to think it will be easier than judging CBA applications based on the (standard) type of WTP values used in previous PR processes. And if Ofwat was particularly concerned about the latter then requiring a single national study with which to generate baseline WTP estimates would be a better starting point (with a large enough sample in each company area to generate regional specific estimates from this consistent baseline). Anyhow, that is clearly not the institutional architecture here, for better or worse. But it strikes me as another reason to try to seek a broad array support for a triangulation approach and, if needed, to evolve that approach in the light of this.

SSC response: we would be supportive of a national WTP study to allow better comparisons, with companies also free to conduct their own studies as they see best using methods they feel are appropriate to best suit their plans. There is also evidence that more guidance is needed at an industry wide level to build on the CCWater/ICF July 2017 paper triangulation approach to provide guidelines to water companies around triangulation best practice and approach. We would support an independent review of the all triangulation studies carried out at PR19 to help provide a clearer, more consistent set of guidelines for water companies to take forward.