Response to Reviewers

Shaila Jamal and Antonio Paez

5/11/2020

We wish to thank two anonymous reviewers for their comments and suggestions for revisions. In this letter we respond to those comments and explain how the paper was revised in response.

Reviewer 1

The paper presents an exploratory analysis of online survey results by 800 respondents on changes to their trip making behaviours by mode during the COVD pandemic. It is a well written paper, and I recommend publication. Some minor edits and adds are suggested below.

Thank you for your positive assessment and comments for improving the paper.

- Figure 1: Please lengthen the y-axes for all figures, at the moment, it is a bit hard to read results off, because the axes are squashed.

Done. Hopefully the aspect of the figure will make it easier to read the results. Please also note that separate figures are generated for publication purposes, and these have better resolution.

- Table 1: Please mark whether the rows are before and columns are during in the cross tabulation. It would be a good idea to use something like a conditional colouring so that each cell value is coloured by the scale of the value, so that the patterns discussed come out visually clear. At the moment, one has to read the numbers carefully.

Rows and columns are now clearly labelled as "Before" and "During", respectively. We have also color-coded the cells by rows, to more easily see the patterns of change from before to during by mode and starting frequency.

- Otherwise, overall the paper is well written and the results are clearly discussed.

Thank you.

- Bangladesh has very high density urban areas, it would be good to include a discussion on whether the online survey responses indicated which cities the respondents are from - what was the geography of the answers? While 800 is a decent number, the volume is still a small number when compared as a sample against full populations, further, different cities have different transit arrangements, and since the shared and transit modes seem most affected - a discussion of geography somewhere (which principal cities and their attributes) will enrich the discussion, and also as mentioned a discussion of the limitations of the sample size being still relatively small.

Thank you for this question, which echoes a question by Reviewer 2. We clarified this in the section 'Methods and Data'. The discussion in the revised paper provides additional information regarding the sample and its characteristics. In particular, the data set is a convenience sample which, while cannot be said to be representative of the population, is more homogeneous for younger, urban respondents. Convenience samples are used to address quickly emerging questions (see Fricker and Schonlau, 2002 in Field Methods, and Jager et al., 2017, in Monographs of the Society for Research in Child Development). Convenience samples have been used in COVID-19 research (for instance by Astroza et al., 2020, in Transport Findings) to generate knowledge in the context of a rapidly evolving public health situation. Bangladesh, in particular, is a challenging country to obtain probabilistic samples, due to a general reticence of the public, and in particular females, to provide information to unknown parties, as discussed in more detail in Jamal et al. (2020) in Transportation Research Part D, among other authors (also see Mitra, 2016). Hopefully the revised version does a better job of explaining the context and limitations of the study.

Thank you again for your feedback, and we hope that the revisions will address your suggestions to your satisfaction.

Mitra, Suman Kumar, 2016. Land Use, Land Value, and Transportation: Essays on Accessibility, Carless Households, and Long-Distance Travel. PhD thesis, University of California, Irvine.

Reviewer 2

The level of reliability of the conclusions critically depends on the reliability of the sample, which is not analysed at all, i.e., there is no analysis of the level of representativeness of the sample relative to the Bangladesh population. A social media sample likely overrepresents high incomes, young age, etc. This must be scrutinized.

This is relevant because in the paper, from the title to the summary in the last paragraph, the authors claim they represent mobility changes in a developing country: Bangladesh, which has 160 million people (very small sample=800)

Thank you for this comment. You are right that this is a convenience sample, something that was not explicitly discussed in the original submission, but that we have clarified in the section 'Methods and Data' of the revised paper.

Convenience samples have the advantage of being quick and cost-efficient and, despite their lower generalizability, when they are homogeneous they are useful to address rapidly emerging questions (see Fricker and Schonlau, 2002 in Field Methods, and Jager et al., 2017, in Monographs of the Society for Research in Child Development). As you suspected, this particular data set has an over-representation of the 16-30 years age group, whereas 37% of the country's population belongs to this group. Also, 66% of the respondents are male and 32% are females compared to country's 49:51 male-female ratio. These characteristics of the sample are expected in terms of online surveys as young adults are more familiar with online platforms, especially in the context of a developing country context. Also, in the case of Bangladesh, collecting a representative sample remains difficult because of overall public reluctance to participate, with women's strong unwillingness to share their information to unknown parties in particular in face-to-face interviews (see Jamal et al., 2020 in Transportation Research Part D). Interestingly, compared to Jamal et al. (2020), who had only 15% of responses from females, the online survey used in the present research achieved greater penetration among women.

Given these characteristics, the sample cannot be said to be a probabilistic random sample, but is rather homogeneous for urban, younger respondents, and has greater representation from females than comparable samples obtained from face-to-face interviews in Bangladesh. We would argue that the benefits of reporting the information while clearly noting the characteristics of the convenience sample outweigh the limitations (also see Astroza et al., 2020, in Transport Findings).

Other comments:

- No information of what contagion containment measures, if any, were in place during the time of the survey (e.g., lockdown, school closures)

Thanks for this comment. In the revised version we provide further information about this, and note that the country was under partial lock-down during the survey period, which meant that only essential services remained open, offices were running on rotation basis, all educational institutes were closed and public transport services were running at 50% capacity.

- Table 1: columns and rows need to indicate which one is pre and during COVID, it has to be added to the table.

Rows and columns are now clearly labelled as "Before" and "During", respectively. Also, we color-coded the cells by rows, after a comment by Reviewer 1.

- Uber is not ridesharing, it is ridesourcing or ride-hailing.

This has been changed throughout the paper.

Thank you again for your feedback, and we hope that the revisions will address your suggestions to your satisfaction. We believe that the paper has been improved as a result.