**Transport Reviews – Table of Changes**

 Population Synthesis: a problem-based review

**Paper Title:**

***Reviewer 1***

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|  | **Reviewer’s comments** | **Author’s response** |
| 1.1 | Page 3 Line 42: It seems this review is focused on those PopSyn in the field of transportation. However, other fields, such as urban studies and social science, are also using such population synthesis methods. I am not sure if the review needs to well define the scope, and reviewed the methods in transportation studies only? |  |
| 1.2 | When I started the reading the paper, I did not know exactly what the term " a problem-based review" means. A clear definition or explanation would be helpful, so as to distinguish this work and the other existing review papers. Also, strong justifications are needed for this problem-based review. Personally, I do not think such a review paper is more helpful than the other existing review papers. |  |
| 1.3 | Page 7 Line 39: not sure how the authors identified the four major issues in PopSyn? |  |
| 1.4 | Page 16 Line 47 &48. Not sure if the review would like to include social network modelling? Obviously, there are a large number of papers working on connecting individuals through their social networks. |  |
| 1.5 | Section 4.4.1 Time complexity. Would it be better to say computational cost for the section title? Similarly, maybe a better title is needed for Section 4.4.2? |  |

***Reviewer 2***

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|  | **Reviewer’s comments** | **Author’s response** |
| 2.1 | First, I raise this issue because I have noticed a similar approach in recent systematic literature reviews. The search in Web of Science is limited to the title, abstract, and keywords. While this may not pose a problem when focusing on a specific topic (e.g., travel behavior, mode choice, safety), it can become problematic when exploring methodologies. This is because studies often employ a method rather than develop it and may not discuss the method explicitly in their abstract. My concern about the database selection for this study stems from the significant number of articles retrieved through snowballing. If 34 articles were identified through the systematic search, but 21 were extracted from references, this suggests that something went wrong in the systematic search, whether it was the choice of database or the selection of key phrases. This raises questions about the validity of the analysis. |  |
| 2.2 | Second, the choice of certain keywords appears arbitrary. This includes terms such as artificial and microsimulation. There is no explanation for why these keywords were included in the search strategy, while similar phrases were excluded. |  |
| 2.3 | Third, the authors state that the search was conducted in two major databases, Web of Science and Scopus, on June 24, 2024. I was invited to review this manuscript on August 7, 2024. This implies that, at best, the authors spent 43 days on screening, eligibility assessment, inclusion, synthesis, writing, and proofing the manuscript. This raises concerns about the thoroughness of the process. |  |
| 2.4 | Fourth, the role of each author in the screening and inclusion process should be clearly explained in the methodology. How many authors were involved in title and abstract screening? How many participated in full-text screening? How were conflicts resolved? |  |

***Futher comments***

Extra works have been done to include more paper