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General Editor

Journal of Transport and Land Use

500 Pillsbury Drive SE

Minneapolis, MN 55414

Dear Prof Levinson,

I am pleased to submit a final revised paper entitled: “Land Use-Transport Interaction Modelling: A Review of the Literature and Future Research Directions” co-authored by Ransford Antwi Acheampong and Elisabete A. Silva, for consideration for publication in the Journal of Transport and Land Use. We very much appreciate the editorial comments and suggestions of the reviewers for the second submission of this article. We have revised the paper accordingly for resubmission and publication.

Many thanks for your consideration.

Yours sincerely



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**RESPONSE TO REVIEWERS’ COMMENTS**

Track changes of the revisions are shown in a separate document attached to this submission. Below, we detail the changes made in the final paper in response to the second reviewer’s editorial comments and suggestions.

1. *“Page 10, Paragraph 2, and Line 1: It is not correct that random utility theory is grounded in unrealistic assumptions of rationality and perfect information in choice decisions. As it is correctly explained earlier on the same page, models based on random utility theory explicitly consider uncertainty, incomplete information and individual characteristics of decision makers”.*

The above statement has been revised to read “Classical utility theory also assumes rationality and perfect information in choice decisions”. This is then followed with a statement indicating how these drawbacks are being addressed by incorporating theories of decision-making under uncertainty.

1. *“Page 15, Table 1 and explanation in the text: The application of time-geography theory, heuristic/bounded rationality and systems/complexity theory is not restricted to micro approaches. The old Table 1 was more informative”.*

In the revised Table1, *time-geography theory, heuristic/bounded rationality and systems & complexity* theoryare indicated as theories that are applied at the macro/aggregate level of modelling, and revised accordingly in the text that follows. We are grateful to the reviewer for pointing this out.

1. *“Page 17, Figure 2: The impact of the transport submodel, e.g. of congestion, on accessibility is not shown in the diagram”.*

A feedback link showing congestion and commuting costs (in time and money) has been incorporated in the revised figure 2 to show the impact of the transport travel demand sub-component on accessibility and vice versa, over time.

1. *“Pages 18-19, Section 3.1: It is somewhat surprising that in this new section on residential-job location the two books on residential and employment location in urban models edited by Pagliara et al. (2010 and 2013) were not considered”.*

Relevant chapters of the above recommended material have been reviewed and included in the revised paper, and contributors included in the list of references.

1. *Page 18, Paragraph 2, Line 6: Even in the Lowry model only basic employment is exogenous, while service employment is endogenous. In many urban models all employment is endogenous.*

We have included the reviewers comment. The paragraph now reads *“Although in many urban models all employment is endogenous, the residential location component of some operational LUTI models are based on the classical exogenous workplace assumption (e.g. DRAM/EMPAL, CATLAS METROSIM, TRANUS, MEPLAN and UrbanSim)”.*

1. *“Page 23, Paragraph 3, Line 2: The distinction between utility-based and microsimulation activity-based travel models has not become clear. All models in Table 1 are disaggregate and use some utility measurement or other rule to model individual decisions. What then is the difference: how they treat time?”*

We have further explained the main difference between microsimulation modelling approach and other approaches including utility-based highlighting the dynamic nature of the former. This is reflected in the statement… *“Micro-simulation models also derive their strength from their dynamic nature, which makes it possible to trace model components (e.g. Individuals, households, jobs and dwellings) over time in order to observe the modelled processes of change at a level of detail that is not possible in other types of models (Pagliara and Wilson, 2010)”.*

1. *“Page 26, Paragraph 1, Line 3 and Page 31, Paragraph 3, Line 2: The term "stochastic variation" and its consequence, that the results of disaggregate models using random numbers need to be averaged over multiple runs, are not explained”*

This has been explained in the revised paper as follows *“Stochasticity implies that model outputs after each run or iteration lacks any predictable order”*. We are very grateful to the reviewer for pointing this out.

1. *Page 27, Figure 3: In the box representing the land-use submodel the most important item is missing: location of households and firms.*

*‘Location of households and firms’* has been included under the land-use submodel in the revised Figure 3.

1. *“Page 28, Paragraph 1, and Line 8: Aren't there more recent references to the IRPUD model than one of 1982?”*

Two recent references to the IRPUD model; Wegener (1996; 2004) have been identified and included in the revised paper.

1. *“Page 29, Table 2: The second column should be labelled "Aggregate Utility-based Models"*

The second column of Table 2 has been labelled *"Aggregate Utility-based Models".* We are grateful to the reviewer for this suggestion.

1. *“Page 30, Paragraph 1, Line 6: "disaggregate" should be "aggregate; Page 30, Paragraph 3, Line 4: MEPLAN and MUSSA do not originate from the US”*

These change have been effected in the revised paper. We are once again grateful to the reviewer for these very useful suggestions.

1. *“Page 34, Paragraph 2, Last two lines: This has not been the only attempt to integrate land-use models with activity-based travel models; examples are Ramblas, ILUMASS, UrbanSim, TLUMIP and maybe others”*

Record of attempts to integrate land-use models with activity-based travel models has been expanded to include Ramblas, ILUMASS, UrbanSim, and TLUMIP. We are thankful to the reviewer for this contribution.

1. *Pages 38-47, missing references*

All in-text references that were missing in the list of references have been included in the revised paper. Many thanks to the reviewer for taking the time to identify all the missing references. "Barra" has been replaced with "de la Barra" in the text.