

## ***Interactive comment on “Development and intercity transferability of land-use regression models for predicting ambient PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub> and O<sub>3</sub> concentrations in northern Taiwan” by Zhiyuan Li et al.***

### **Anonymous Referee #2**

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General comment: This study addressed the important research question about air quality modeling for epidemiological studies and established a well-validated LUR model. The authors have provided reasonable responses to my comments in the first round of review. Here are my further comments. I recommend publishing this paper after addressing the following minor comments.

Specific comments: Line 16: “develop” -> “developed” Line 16: “evaluate” -> “evaluated” Line 23: this sentence should be revised for better readability. “with R2 and leave-one-out cross-validation (LOOCV) R2 values of > 0.72 and > 0.53, respectively.”

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-> “with R2 of > 0.72, and leave-one-out cross-validation (LOOCV) R2 values of > 0.53.”  
Line 30: “our study” -> “this study” Line 41: I do not think LUR is a standard modeling approach. It is just a typical approach. So, it is suggested to revise the sentence to be “land-use regression (LUR) is a widely used modeling approach to characterize long-term average air pollutant concentrations” Line 46: “these stations” -> “the stations”  
Line 55: “have been” -> “were” Line 63: “is that the established models are usually only valid during the measurement period” -> “is that the established models only reflect the situation during the measurement period” Line 73: what does the “they” mean? Does it mean the previous two studies cited before the sentence? Line 79: “The remainder of this paper . . .” -> “This paper . . .” Line 119: “require” -> “requires” Line 119: “is” -> “was”  
Line 301: the opposite trend of NO<sub>2</sub> and O<sub>3</sub> is definitely the O<sub>3</sub> titration in urban areas. This should be mentioned here. Table 3: the empty grids should be filled by grey color. Figure 2: Green color is not a good choice for display and should not be used. I suggest the authors to change the green dots to black or blue so as to enhance the readability. The size of the texts in the figure should be enhanced. Figure 4: the size of the texts is too small.

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