**Paid Leave Microsimulation Model – 10/31/2019 Submission Notes**

The purpose of this brief document is to provide a summary of the model files, and future improvements to be made in the final version of the models.

**1. Model File Contents**

Python Model:

background/: Folder with background materials on external data sources used in model.

data/: Folder with input data required to run the model

docs/: Folder with model documentation

output/: Folder where model output is stored

.py files: Python model code

R Model:

background/ : Folder with background materials on external data sources used in model.

cleaning\_functions\_call/ : Code documenting cleaning functions

csv\_inputs/ : Folder with input data required to run the model

R\_datafames/ : Folder with input data required to run the model

docs/ : Folder with model documentation

logs/ : Folder where model logs are stored

output/ : Folder where model output is stored

.R files: R model code

For users wishing to setup and test out the models, we suggest first reading the model user manuals (located in the docs/ subfolder for both models) for instructions on how to do so.

**2. Future Improvements**

***Feature Concordance.*** R and Python’s current versions are generally similar in functionality, but we have a few notes about the minor differences that remain between the two model versions. In the remaining months of the project, we will be working to get the two models as close to identical as possible.

1. GUI implementation. The GUI is currently functional only with the Python version of the model. Both model versions will function from the same GUI on model completion.
2. State ACS data available in the models for simulation:
   1. Python: Due to file SFTP transfer constraints, we have included ACS state PUMS data files for Rhode Island only in this submission.
   2. R: ACS data is more compact in R format, and we have included all states for the R model.
3. Documentation. There are some additional documentation for the Python model that will be produced to mirror the R model’s documentation.
4. Parameters. The R and Python versions currently use similar but not identical parameters. We will ensure they use identical parameters in the final version.

***Simulation Results Reconciliation.*** We are still in the process of reconciling the output from the two models to ensure that the two versions of the model will produce similar results for a given set of parameters. While the current versions produce reasonably similar results in our internal testing, we plan to make further refinements to get the two models as close as possible to one another. Perfectly identical results will likely to be impossible to achieve due to differences in simulation variance and differences in language libraries. However, we expect to be able to minimize the difference between model versions under most reasonable simulation scenarios.

***Simulation Calibration Refinement and Benchmarking.*** We are also still working on model calibration to replicate existing state paid leave program data in New Jersey, Rhode Island, and California. While this version of the model shows improvement on the results submitted in the March 2019 model testing memo, we still are working to improve the model’s calibration. We will present our final calibration in the final version of the model, and the upcoming benchmarking issue brief.