

Assessment #2: Reproducible Analysis

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1 Overview

- Deadline: Tuesday, 16 December 2025 at 10:00
- Weighting:
 - Reproducibility: 25% of module grade;
 - Content: 35% of module grade.
- Format: your submission will have two parts, a PDF (.pdf) and a QMD (.qmd) file submitted to Moodle in *separate* submission areas.
- You are being assessed both on **what** you find (your reasoning and policy argument) and on **how** you produce it (your reproducible workflow).

2 Briefing Rubric

You are advising the Mayor on how to respond to a political scandal involving Airbnb and housing. You will work in an information-poor environment, meaning that you'll need to make assumptions, justify them, and use creative reasoning to produce an evidence-informed and persuasive briefing.

Your task is to provide a short, well-evidenced briefing that answers the five set questions. You'll be assessed not on finding the right answer (there isn't one), but on how well you reason, justify, visualise, and communicate your analysis.

2.1 Marking Criteria

Criterion	Weight	What we will look for
Analytical reasoning & use of data	25%	How effectively, creatively, and defensibly you use data and assumptions to address the questions. Show that your analysis is logical and evidence-based, and that you understand the limits of your data.

Criterion	Weight	What we will look for
Clarity and persuasiveness of argument	25%	How clearly and convincingly you answer the five questions. Structure your argument logically, back up your points with evidence or reasoning, and show that you can weigh different perspectives. The goal is to brief a decision-maker, not write a long academic essay.
Visualisation and communication	20%	How effectively you use charts, tables, or visuals to tell the story. Visuals should be clear, relevant, and easy to read. The writing should be concise, professional, and appropriate for the Mayor and a policy audience.
Policy and ethical insight	20%	How well you understand the bigger picture — the political, ethical, and social dimensions of the issue. Who wins or loses from the proposal? What are the trade-offs or unintended consequences? Show awareness of housing and data justice issues.
Transparency and reflexivity	10%	How openly and thoughtfully you discuss your assumptions, uncertainties, and limitations. Explain how confident you are in your findings and how your assumptions might shape your conclusions.

2.2 Tips for Success

- Be creative, but stay realistic and justify the assumptions that you make, clearly explaining your reasoning.
- Your briefing feels professional and policy-reading, with visuals helping to simplify and strengthen your message. It looks like something the Mayor could actually use!
- Remember your audience: write for the Mayor, this is not a technical report.
- You show critical awareness of data gaps, politics, and ethics, and reflect honestly on uncertainty and what could be done better with more time or information.
- Think critically about ‘control’, ‘professional landlord’, and ‘social mobility’ because these are political ideas as much as analytical categories.

3 Reproducibility Rubric

To underpin the briefing document (the PDF), and to ensure that your advice can be updated as new information emerges, you will provide a QMD file that demonstrates your ability to produce a transparent, reproducible, and well-documented analytical workflow. It should run from start to finish with minimal intervention and clearly show how your narrative, evidence, and visuals were generated.

Markers will assess the structure, clarity, and reproducibility of your analysis, not the persuasiveness of your argument (which is evaluated in the PDF briefing).

3.1 Marking Rubric

You'll be marked on how well your code runs, how clearly it's written, and how easy it is for someone else to reproduce your results.

We'll open your `.qmd` file and test it in the `sds2025` container to see if it runs 'end-to-end'.

Criterion	Weight	What we will look for
Reproducibility & environment	35%	Can your file run smoothly in the provided container? Are dependencies and data handled properly?
Code quality & documentation	30%	Is your code clean, commented, and easy to follow?
Analytical soundness	25%	Are your methods appropriate and correctly implemented?
Sustainable Practices	10%	Does your workflow make effective use of the relevant tools taught this term and their embeddedness in an open source/data context?

3.2 Tips for Success

- Test your `.qmd` in a fresh container before submitting.
- Use relative paths and include code to download data automatically.
- Use comments, functions, and other 'tricks' so that we can follow your workflow.
- Commit regularly if using version control and make use of GitHub's collaboration and sharing features.
- Give thought to different aspects of sustainability, including data access/persistence.