Report

- This is a [redacted] item. **No generative AI such as ChatGPT permitted.**
- This is an individual assessment item — **group work is not permitted**.
- You have until 13.00h AEST on May 19, 2023 to 1) download and 2) work on the assessment item and to 3) upload your report. You are required to upload your report as a **single, legible pdf file** to the relevant TurnitIn folder. **Please type your report with the possible exception of graphs.**
- Please keep your **pdf file reasonably small** (say $\leq$ 5MB).
- You may email your pdf file to `c.mueller@uq.edu.au` as proof of your time of submission if you experience technical difficulties with uploading it. You then still have to upload the same pdf file to TurnitIn as soon as possible.
- File formats other than pdf are not permitted. You may not submit multiple files.
- Where an extension has not been approved, the following penalties apply to late or non-submission: A penalty of 10% of the maximum possible mark of the problem set will be deducted per day for up to 7 calendar days, at which point any submission will not receive any marks unless an extension has been approved. Each 24 hour block is recorded from the time the submission is due.
- By undertaking this assignment you will be deemed to have made the following declaration: "I certify that
  - my submission is entirely my own original work, and no part of my answers has been copied from any other source or person except where due acknowledgement is made,
  - no part of the work has been previously submitted for assessment in this or any other institution,
  - I have neither given nor received any unauthorized assistance on this assessment item, and
  - I am familiar with and understand the implications of UQ's policies relating to academic integrity and student conduct."

In Lecture [illegible]elation between fiscal deficits and current account imbalances. I[illegible]ssumed that the representative household has the utility function

$$[illegible](C_1) + \ln(C_2). \quad (1)$$

Consider now t[illegible]household is better modeled by a utility function of the form

$$[illegible]\alpha G_1) + \ln(C_2 + \alpha G_2), \quad (2)$$

where $\alpha \in [0, 1]$ is a parameter and G_1 and G_2 are government expenditures in period 1 and 2, respectively. The household takes government expenditures as exogenously given.

Write a report of up to approximately 1,000 words that answers the following questions.

(a) In the baseline model of Lecture 5, the Ricardian equivalence holds. Does the Ricardian equivalence continue to hold even if the representative household is modeled by a utility function of the form (2)?

(b) Consider that the government changes the timing of some government expenditures. In particular, assume that the government changes G_1 by $\Delta G_1 = \Delta G \neq 0$ and G_2 by $\Delta G_2 = -(1 + r_1)\Delta G$, where r_1 denotes the interest rate on assets held between periods 1 and 2. For example, if $\Delta G < 0$ then the government effectively postpones some spending by one period. Discuss how such a change in the government expenditure stream affects the consumption and current account balance. How does it affect your answer that (2) rather than (1) models the representative household?

In your report:

- Develop an appropriate model to answer above questions.
- Name a real-world country to which your model might apply. Explain in one sentence why your model is appropriate for the country.
- Derive the equilibrium of your model.
- Include appropriate mathematical equations.
- Provide economic intuition for your results.
- Consider including appropriate figure(s).
- Include a word count of your report (excluding equations, figures and references).

Marking. Th will be based on the **thoughtfulness** and **clarity of logics** in your nts that go beyond the lecture notes are viewed as an important w ughtfulness (i.e. it is generally a good idea to leave more space/wo . Providing a concise and clear intuition for a result also demonstra e following mark-breakdown is anticipated:

- Example (5%).
- Economic model (25%).
- Derivation and discussion of equilibrium (30%).
- Ricardian Equivalence (15%).
- Policy analysis of effects of changes in timing of government expenditures (25%).