

Econometrics Applications in Banking (CMSE11315)

2020/21 assignment

General information:

Individual assignment

Deadline: 26 April 2021, 2pm UK time (cut-off for questions: 19 April 2021)

Submissions: online (Learn/MyEd)

Marks: 100% of the overall course mark.

Make sure that you are familiar with the University marking criteria

1) Introduction

Use the data (file “EAB_data_assignment_2020_21.xlsx”) uploaded on the course’s webpage on Learn (folder Assessment) to investigate the relationship between bank capital and banks’ probability of default (or any information closely related to this probability) as described below.

Note: Additional data may be added to the file, which includes the transformation of existing variables.

2) Report structure

Part A (40 marks)

Use one approach seen on the Econometrics Applications in Banking course (except for the approach discussed in Lecture 3, Instrumental Variables) to study the association mentioned above (item 1).

Section A.1 – Model presentation

State the approach chosen, present the equation regarding the regression run, and explain why that particular approach was chosen. References may be cited (see item 3 ‘Length limit’ below).

Section A.2 – Empirical results

Present and interpret the results of your analyses based on the method described in the previous section. See item 3 ‘Length limit’ below.

There is no need to report the controls’ coefficients. If you list control variables in the previous section, it will be understood that they were included in the regressions.

Part B (60 marks)

Use at least one instrumental variable (IV) to check if the relationship found in Part A can be claimed to be causal.

Section B.1 – Rationale behind your instrumental variable(s)

Introduce your instrumental variable(s) and explain why they comply with the conditions for valid IVs in this particular case. Necessary assumptions should also be discussed in this section. References may be cited (see item 3 ‘Length limit’ below).

Section B.2 – Empirical tests

Present the equations regarding your two-stage regressions.

Then, report the following results of your empirical analyses:

- IV coefficient and its p-value in the first stage
- coefficient and p-value regarding the main independent variable in the second stage

This information can be reported in a single table (one row for each stage). There is no need to report the controls’ coefficients. If you list control variables at the beginning of this section (i.e. when the equations are presented), it will be understood that they were included in the regressions.

Next, present the values of statistics providing evidence in favour or against the validity of your IV(s). Describe and explain your conclusion about the IV validation. That is, is (are) your IV(s) valid? Why (based on the statistics)?

To conclude, describe the relationship between the main variables cited in item 1 above (“Introduction”) in accordance with your empirical (2SLS) results and your IV validity.

3) Length limit

Section A.1: Maximum one page following the editorial guidance below (item 4).

Section A.2: Maximum one page following the editorial guidance below (item 4).

Section B.1: Maximum one page (see item 4) explaining the rationale of each instrumental variable proposed (i.e. up to one page per each instrumental variable).

Section B.2: Maximum one page (see item 4) presenting the empirical results (regardless of the number of instrumental variables tested) and the respective interpretations.

For all the sections above, if references are cited, they should be listed together on a separate page just after Section B.2.

4) Editorial guidance

Reports must be typed in a text editor (font size 12, space between lines 1.5, margins 2.54cm = 1 inch).

Tables can have smaller font and single-spaced lines, if necessary.

Add page numbers.

Note: the title of the file submitted should be your exam number (starting with B), e.g. B123456.pdf. A penalty of 5 marks will be imposed if this requirement is not met.

5) Assessment criteria

- Innovations compared to existing works in the area
- Consistency of the method used
- Interpretation of results
- Independent thinking
- Presentation (e.g. compliance with the editorial specifications, writing and tables, if any).