

Written Exam for the B.Sc. or M.Sc. in Economics winter 2015-16

Economics of Education

Final Exam

December 17, 2015

(3-hour closed book exam)

Please note that the language used in your exam paper must be English.

This exam question consists of 4 pages in total (3 plus this title page).

This is the final exam for Economics of Education, Winter 2015/2016. You have three hours to answer the following six questions. Link the problems at hand to Economics of Education. Your responses should draw on concepts, theories, models, and empirical findings that were covered in class. Apply them where appropriate, and tell the reader why they are relevant, or which parts are not so easily applied. You are free to make any reasonable assumptions that help you in answering, as long as you are specific and explicit. Also draft your responses with an eye to clarity of exposition and structure.

Read all questions before you begin your work. Make sure to *pace yourself*. Also, you may choose to work on the questions in a different order (just state clearly which question you are answering).

Financing of Higher Education

This exam explores the financing of higher education, or universities. Take as a point of departure the case of Denmark. In the fall of 2015, the liberal government in Denmark has decided to restrict public spending, which will also affect spending on education.

1. Universities will have to reduce their budgets by 2% annually for the next 4 years. At the moment, it is not yet clear how the savings will be achieved. But one possible way will be to ask professors to teach more. One could interpret this increase in the teaching load for professors as lowering the quality of universities (larger classrooms, professor spend less time preparing lectures, fewer hours for direct supervision, less personal feedback, etc.). Indeed, this is how the chairman of the Danish students union Yasmin Davali sees it, “the cuts will almost certainly lead to lower quality in an already pressured education system.”¹
 - (a) What impact would this reduction in teaching resources have on the individual demand for human capital in general? Explain how the aggregate acquisition of human capital would be affected - argue both in terms of a model of human capital as well as in terms of intuition in plain language.
 - (b) Which type of student would be affected more by the change in teaching resources, high ability students or low ability students? Is inequality worsened by reduced expenditures on schooling?
(Follow the assumptions of the basic human capital models we have seen, which model educational expenditures (teaching resources) and individual ability to be imperfect substitutes and to enter multiplicatively in the human capital production function.)
 - (c) On the basis of empirical evidence for schooling quality (not necessarily at the tertiary level), would you expect a significant change in academic outcomes following the reduction in university resources? (Make a link to the literature we covered, and evaluate which findings are most plausible on the basis of their methods, for example.)

¹Cited in this article <http://universitypost.dk/article/danish-government-billions-be-cut-university-budgets> of August 31, 2015.

2. Now imagine (hypothetically) that the government, instead of asking universities to reduce their budgets, lowered the amount paid to students in form of grants (Danish acronym: SU).

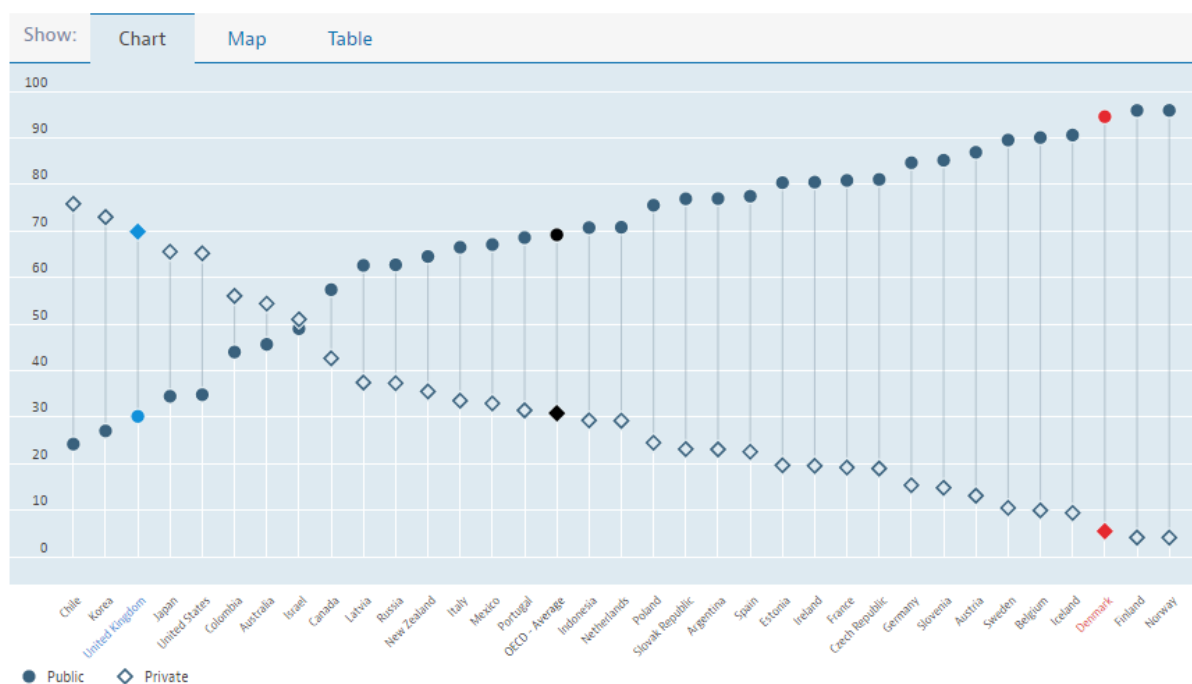
(Note: If you do not know anything about the SU, you may read the footnote for a basic overview,² even though these details are not necessary to answer the question. If you are uncertain about the institutional set-up, clearly state your assumption and how it influences your answer. Use Economics of Education in your answer.)

- (a) Would we expect the reduction in financing to lead to a fall in educational attainment because of credit constraints? Remember what we know from the empirical literature.
3. Consider why most governments subsidize university education.
- (a) What assumptions must governments be making to justify the public subsidization of tertiary education?
- (b) Follow-up question: Can you use your answer to part 3.a) to comment on why you think the public in Denmark subsidizes tertiary education more heavily than in the United Kingdom or the USA? The graph below illustrates.

²The SU grants provide help with living expenses while studying, and are not awarded on the basis of merit or need (they are not limited to high-ability students or children of poor parents). You can assume that in practice, all students at Danish universities qualify for the grant. The length of time for which students can receive it depends on the type of study, with a strict upper limit. The level of grants is reduced if student's own additional income exceeds certain thresholds. If students live with parents, the grant is lower and parents' income has a further influence on the amount received. Details from <http://ufm.dk/en/education-and-institutions/grants-and-loans/su-2013-the-danish-student-s-grants-and-loans-scheme>.

Spending on tertiary education Public / Private, % of education spending, 2011

Source: Education Database



Note: This graph shows the division of spending on tertiary education into its private and public constituent parts. The OECD includes the following definition/explanation: “Spending on tertiary education is defined as the total expenditure on the highest level of education, covering private expenditure on schools, universities, and other private institutions delivering or supporting educational services. [...] Expenditure by private companies on the work-based training of apprentices and students is also taken into account, together with spending on research and development by educational institutions.”