

UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Exam: **ECON4715 – Labour Economics**

Date of exam: Friday, November 20, 2015

Grades are given: December 11, 2015

Time for exam: 9 a.m. – 12 noon

The problem set covers 4 pages (incl. cover sheet)

Resources allowed:

- No resources allowed (except if you have been granted use of a dictionary from the Faculty of Social Sciences)

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Final Exam ECON4715 – Labour economics

This exam has 4 questions, with in total 13 sub-questions.

All questions are weighted equally.

When answering the questions on the exam you should be brief and to the point!

Make sure to write legibly, difficult to decipher answers will not be counted!

1. In this question you have to indicate whether you think the statement is true or false and explain why. You do not get any points if you only state whether the statement is true or false.
 - (a) The Earned Income Tax Credit will affect labor supply only at the extensive margin.
 - (b) The supply of labor will not change if all prices and wage rates increase by the same percentage.
 - (c) The introduction of a minimum wage can have positive effects on employment.
 - (d) Omitted variable bias in estimates of returns to schooling is always positive.

2. Migration
 - (a) Explain from a theoretical point of view how migration affects the wages of native workers.
 - (b) Analyze the selection of migrants using the Roy model. Show when migrants will be positively selected, and when they will be negatively selected. Can both positive and negative selection occur at the same time? Explain.
 - (c) Empirical research has used spatial research designs to investigate the impact of migration on the labour market outcomes of natives. Explain the main idea behind these approaches, what they tend to find and how to interpret these results.

3. This question is about Aggarwal, R. K. and A. A. Samwick. (1999). The Other Side of the Trade-off: The Impact of Risk on Executive Compensation. *Journal of Political Economy*:

- (a) Explain the source and intuition behind the fundamental trade-off in a principal-agent model.
- (b) Solving a traditional principal-agent model, the authors find the solution for the performance-pay related component of the optimal contract:

$$\alpha_1^* = \frac{1}{1 + rk\sigma_e^2}$$

Explain why the optimal pay-performance is decreasing in r , k and σ_e^2 .

- (c) The article's main results are given in the table below (change in wealth is measured in thousands and performance is measured in millions of dollars). Does column (1) in this table support the principal-agent model? Why or why not?

MEDIAN REGRESSION ESTIMATES OF PAY-PERFORMANCE SENSITIVITIES
FOR MEASURES OF FIRM-SPECIFIC WEALTH, 1993–96

	CHIEF EXECUTIVE OFFICERS		OTHER EXECUTIVES	
	Change in Wealth (1)	Excluding Existing Options (2)	Change in Wealth (3)	Excluding Existing Options (4)
A. DOLLAR RETURNS				
Coefficients from Median Regressions				
γ_1 performance	27.596 (1.983)	12.550 (.766)	6.008 (.140)	2.145 (.091)
γ_2 performance \times CDF of variance	-26.147 (2.093)	-11.920 (.837)	-5.427 (.154)	-1.923 (.101)
γ_3 CDF of variance	2,710 (180)	2,327 (110)	1,134 (26)	1,052 (27)

4. This question is about Arcidiacono, P., P. Bayer, and A. Hizmo. (2010). Beyond Signaling and Human Capital: Education and the Revelation of Ability. *American Economic Journal: Applied Economics*. The authors main results are given in the following table:

TABLE 2—THE EFFECTS OF AFQT ON LOG WAGES FOR HIGH SCHOOL AND COLLEGE GRADUATES

Model	High school		College		Test: College=HS P-values	
	(1)	(2)	(3)	(4)	(5)	(6)
Standard. AFQT	0.0060 (0.0130)	0.0078 (0.0129)	0.1485** (0.0350)	0.1420** (0.0354)	0.000	0.000
AFQT × exper/10	0.1261** (0.0176)	0.1183** (0.0173)	0.0122 (0.0480)	0.0198 (0.0472)	0.026	0.050
Black	-0.0628** (0.0267)	-0.0483* (0.0259)	0.1098* (0.0563)	0.1125** (0.0543)	0.006	0.007
Black × exper/10	-0.0358 (0.0350)	-0.0340 (0.0345)	-0.1304* (0.0694)	-0.1264* (0.0677)	0.223	0.255
R ²	0.1631	0.1874	0.1678	0.1821		
Observations	11,795	11,772	4,112	4,112		
Additional controls	No	Yes	No	Yes	No	Yes
Experience measure: Years since left school for the first time < 13						

Assume the AFQT is a perfect measure of ability.

- Is there evidence of discrimination of black people with a high school degree? What about those with a college degree?
- What type of discrimination is consistent with the results in column (1)?
- Is there support for people signaling ability through a high school diploma? What about a college degree?