

Economics 496/895 Midterm Answer Key

Prof. Bryan Caplan

Fall 2017

Part 1: All-Level Questions (20 points each for undergrads, 15 points each for graduate students)

Answers should be 4-6 sentences long. Use diagrams if helpful.

1. What is “firing aversion,” and what role does it play in Caplan’s argument? Give details.

“Firing aversion” is firms’ reluctance to fire workers after they realize their wage exceeds their (perceived) productivity. This could stem from harm to co-workers’ morale, or might simply reflect managers’ pity. Caplan argues that as firing aversion increases, so does the importance of educational signaling. Why? Because it raises the expected cost of giving less-credentialed workers a chance. If employers are uncomfortable firing disappointing workers, they want workers to be certified in advance, rather than “learning as they go.”

2. Explain how a typical “Transfer of Learning” experiment works, and one major limitation of this approach.

In a Transfer of Learning experiment, researchers randomly assign subjects to two treatments. The experimental group is taught how to solve problem A. Then BOTH the experimental and control groups receive problem B, which is structurally but not superficially similar to problem A. Researchers do not tell the experimental group to “Use problem A to solve problem B”; they wait to see if subjects will do so spontaneously. If the experimental group scores better on problem B than the control group, then there is at least some Transfer of Learning. One major limitation of this approach is that it plausibly lacks external validity. Years of school might yield far more transfer than a brief experiment. But on the other hand, transfer could be even worse in the real world because problems A and B are so tightly paired in the treatment condition.

3. Suppose observed success in business sharply increases with businesspeople’s skill in golf. What is the most plausible way to argue that this pattern reflects (a) human capital, (b) signaling, and (c) ability bias? Separately discuss all three potential mechanisms.

a. Human capital: Playing golf *teaches* dedication, discipline, patience, and elite social skills, all of which enhance business success.

b. Signaling: Playing golf credibly *signals* all of the aforementioned character traits and skills, convincing employers and customers to treat you better even if a great golfer happen to lack this desirable package.

c. Ability bias: People who are good at business also coincidentally enjoy golf. If two people have the same business ability but unequal golf skills, golf skills have no payoff.

4. If IQ testing were fully legal, how much – and how quickly – would the measured education premium fall? Justify your conclusion.

I'd expect roughly a 10% fall over the course of 10 years, driven primarily by large corporations. My reasoning: While IQ testing does have some legal risks, the risks are quite small compared to the education premium. So if IQ testing were really a great alternative to hiring-by-credential, it would already be widespread. These risks are probably larger, however, for high-profile employers; in today's legal climate, they're unusually likely to be prosecuted for IQ-based hiring. Explicit legalization would initially encourage 15% of top firms to experiment with IQ testing. Over time the practice would slowly spread laterally and vertically throughout the business world – but would normally supplement rather than replace education as the top hiring criterion.

5. How would Hanushek respond to Caplan's discussion of the personal versus the national education premia?

Hanushek would object that Caplan – like most researchers - measures education by inputs rather than outputs. Sure, if we focus on a measure of educational inputs like “years of school,” we'll discover that education has little effect on growth. But if we focus on good measures of educational *outputs* – such as math and science test scores – we get a dramatically different result. Not only do math and science scores strongly predict economic success; they matter much more for nations than for individuals. Indeed, Hanushek would argue that better math and science scores will actually increase the long-run rate of growth.

Part 2: Graduate Level Question (40 points for graduate students)

Answers should be one page long. Use diagrams if helpful.

1. Carefully explain how (a) David Card would react to Caplan's conclusions on ability bias, (b) how Caplan would reply, and (c) who's right. Your answer should discuss at least TWO specific research literatures.

David Card would criticize Caplan for relying on outdated econometric approaches to ability bias. Sure, early researchers simply measured ability, then added it as a control variable to standard return-to-education regressions. But this approach has not been publishable in top journals for decades. Modern researchers attack the problem using sophisticated quasi-experimental methods. For example, you could use distance to the nearest college as an exogenous shifter of college attendance. Or, as in numerous high-profile papers in the latest 15 years, you could use state-level compulsory attendance laws to determine education's causal effect.

Caplan would acknowledge that quasi-experimental approaches to the return to education dominate top journals. But he would deny that this represents genuine intellectual progress. Simply measuring ability, then using it as a control variable, is a fine way to measure education's causal effect. In fact, it is usually a *better* method than the prestigious quasi-experimental approach, because (a) it is far from obvious that the top “quasi-experiments” deserve the name, and (b) most of the top quasi-experimental approaches have been subject to specific damaging criticisms. Compulsory attendance IVs, for example, have been convincingly debunked by Stevens and Yang (2014).

Caplan is right. The quasi-experimental approach has won out because (a) earlier methods gave the “wrong” answer (namely, that “Education is overrated”), and (b) because academic social science - including economics – partly runs on a Labor Theory of Value – the more intellectually challenging the econometric approach, the better.