



UNITED STATES MILITARY ACADEMY
WEST POINT



SS201: Principles of Economics

Lesson 1: Economic Principles

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United States Military Academy

Agenda

- Intros
- Admin
 - Course Schedule
 - Syllabus
 - Section Marcher Expectations
 - Expectations
- **Why is the Army making me take this course?**
 - Economic Leader Principles
- Causal Inference Primer
 - Why No Computers in the Classroom?

Introductions

- Name
- Hometown
- What do you do here other than school?
- Favorite TV Show or Book?
- "Walk-Out" Song?

Admin

Schedule Syllabus Section Marcher Expectations

- 3 Blocks
 - Micro - Consumer
 - Micro - Firms
 - Macro
- Point Breakdown

Pre-Class Assignments	100
Problem Sets x 6	150
Paper	70
WPR x 3	405
TEE	225
Instructor Points	50
TOTAL	1000

Problem Set Suspense:

PS1 - 6/8 SEP

PS2 - 20/22 SEP

PS3 - 6/11 OCT

PS4 - 18/21 OCT

PS5 - 8/10 NOV

PS6 - 22/29NOV

Admin

Schedule Syllabus Section Marcher Expectations

- No computers (typing), digital pens on tablets OK
- No bathroom breaks, leaving forfeits the lesson
- AI, schedule via calendly @ <https://calendly.com/carson-homme/ai>
- Class Slides available @ <https://github.com/chomme3/SS201>

Admin

Schedule Syllabus

Section Marcher

Expectations

Duties Include:

- Attendance and accountability report
- Inspecting the class and enforcing standards
 - Uniforms / Hair
 - Backpacks
 - Food / Drink
- Collecting Assignments
- Dispersing Materials

For ideas about how to make peer corrections check out *How to Win Friends and Influence People* by Dale Carnegie

Admin

Schedule

Syllabus

Section Marcher

Expectations

What you can expect from me:

- Committed to showing you the science as well as the art of economics.
- If I don't know the answer to a question, I'll find it. Try me.
- Plenty of people here to talk Army, but I'm the only one here to talk economics.

This may be the only economics course you ever take, so I will prioritize the conversation accordingly.

The "Three P's" I Expect from You:

- **Proficient** in the basics (uniform, haircut, rolling sleeves, etc.)
- **Prepare** for lessons, tests, and assignments
 - Come to class prepared, with any and all questions
 - I am going to teach above the textbook.
- **Participate** in class

Why is the Army making me take this course?



*What's your sole purpose
in this army?*



*To do whatever you tell
me, Drill Sergeant!*

What is economics?

"If you only like philosophy, then be a philosopher. If you only like history, then be a historian. If you only like mathematics, then be a mathematician. But if you like all of those things, you should be an economist."

Tim S. Fuerst

Economics is the study of decision-making ... a discipline focused on the optimal allocation of scarce resources that have alternate uses.

Leaders face scarcity in each decision – scarcity in time, people, and resources that have different uses. Leaders seek to allocate resources to their highest valued use.

As such, leadership and economics go hand in hand. Great leaders are good economists (even when they don't realize it).

The Economic Leader

Six fundamental economic principles underpin decision-making for any leader striving to achieve optimality in their organization.

-
- (1) (2) (3) (4) (5) (6)
-

There is a trade-off in every decision a leader makes. What we give up constitutes the opportunity cost of a decision.

The Economic Leader

Six fundamental economic principles underpin decision-making for any leader striving to achieve optimality in their organization.

-
- (1)
 - (2)
 - (3)
 - (4)
 - (5)
 - (6)
-

Leaders think and decide on the margin. To optimize, decision-makers ensure the marginal cost of a choice never exceeds its marginal benefit.

The Economic Leader

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- (1)
- (2)
- (3)
- (4)
- (5)
- (6)

Leaders use their influence to solve coordination problems by shaping incentives. Leaders align incentives to influence individual action and create mutually beneficial outcomes for stakeholders. Great leaders anticipate the unintended consequences of their decisions by maintaining a keen understanding of individual motivations and likely responses.

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- (4)
- (5)
- (6)

Trade can make all parties better off by creating a “win-win.” Leaders realize the benefits from trade by facilitating specialization and comparative advantage among the people they lead.

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- (1)
- (2)
- (3)
- (4)
- (5)**
- (6)

Perfect information leads to efficient outcomes, but we often make decisions with imperfect information. Leaders must seek equilibrium in gathering more information and being decisive. Leaders must appropriately identify risk, and balance the tradeoff between risk and reward.

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- (2)
- (3)
- (4)
- (5)
- (6)**

Based on the organization's goals, leaders have a normative responsibility to seek equilibrium between efficiency and equity. The efficient solution may not be equitable, and the equitable solution may not be efficient.

The Economic Leader

End State

Leaders have humility in thought and action. They realize that correlation does not equal causation. They appreciate the assumptions and associated limitations in the models and perspectives that they use to view the world. Leaders are forced to deal with the messy reality, and they recognize that their own biases can influence decision-making.

An Application of the Economic Leader

You say leaders think and decide on the margin?

Sir / Ma'am, we need to expand the officer corps. Where should we commission more officers from?

1. West Point
2. ROTC (with scholarship)
3. ROTC (no scholarship)
4. OCS (college grad)
5. OCS (enlisted soldier)

Causal Inference

As a part of teaching above the textbook, I'm going to show you selected economic research to help guide our modeling process.

In a sense, economists were among the first "data-scientists"

"Machine learning" and "big data" use algorithms and patterns within data to predict out of sample.

Whereas economists are concerned primarily with "causal effects".

I want to test a model or theory and identify relationships, where I am statistically certain that "x caused y."

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Causal Inference

To find these patterns, economists rely on **natural experiments** or **randomized control trials**

Within the natural world, I can only give a person one treatment and see that one outcome.

Thus, assuming that economists can randomly assign treatment (or isolate some random variation of treatment within a sample), they can estimate the effects of different treatments.

Within these experiments, economists apply statistical techniques in the form of "regressions" to estimate specific effects.

Think of these regressions as tools to enhance precision and "take slack" out of coiled rope.

The key challenge within this analysis is to eliminate "selection" and show that the treatment caused the outcome]

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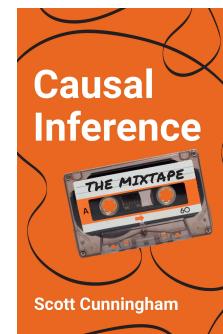
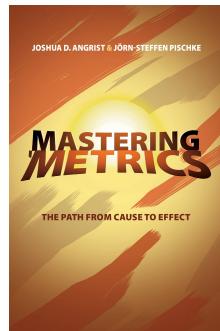
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*If this interests you, check out **Mastering Metrics** by Josh Angrist or **Causal Inference: The Mixtape** by Scott Cunningham*



Why no computers in the classroom?

Everyone cares about education. Economists call this "human capital"

Common belief is more education leads to more income

More efficient education produces more income

Technology improves everything, right?

Why no computers in the classroom?

Carter, Greenberg, and Walker (2017) test this...

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Randomly assigned all cadets taking SS201 to three groups:

1. Unfettered Computer / Tablet Access
2. Computer / Tablet Access if "Face-Up"
3. No tech

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Does technology improve learning and retention?

Why no computers in the classroom?

Table 3

Laptop and modified-tablet classrooms vs. non-computer classrooms.

	(1)	(2)	(3)	(4)
A. Dependent variable: Final exam multiple choice and short answer score				
Laptop/tablet class	-0.21*** (0.08)	-0.20*** (0.07)	-0.19*** (0.06)	-0.18*** (0.06)
GPA at start of course			1.13*** (0.06)	1.00*** (0.06)
Composite ACT				0.06*** (0.01)
Demographic controls		X	X	X
R ²	0.05	0.24	0.52	0.54
Robust SE P-Val	0.010	0.005	0.001	0.002
Wild Bootstrap P-Val	0.000	0.000	0.000	0.000

NOTES:

- Values given in standard deviations.
- Comparison being made between classes that allowed computers versus those that did not.
- Standard deviation is an average of how far scores were from the average.
- EX. The Standard Deviation of WPR 1 was 11.59%. Being in a "computer allowed" classroom would imply that these cadets would have done **2.3% worse** on average.