Elements of

Macroeconomics

(180.101)

Robert J. Barbera

Lecture 1   *August 30, 2019*

Lectures

- Dr. Barbera will give the lectures

- W & F at 9 AM, Room Remsen 1.

- Lectures are the centerpiece of the course

- Purpose of the Lectures:
  - ➢ Teach principles of macroeconomics
  - ➢ Discuss current developments and policy issues

Section Meetings

- Taught by Teaching Assistants (TA's) who are graduate students in the Economics Department

- See the Course Website for Times, Instructors, and Room Assignments

- Purpose of the section meetings:
  - ➢ Review lecture material
  - ➢ Go over problem sets
  - ➢ Teach new material
  - ➢ Answer questions

Academic Help in Three Flavors

- Organized by Office of Academic Support

- Options:

    Math Tutoring

    Learning Den

    Pilot Program

- Contact information:

    http://academicsupport.jhu.edu/

Math Tutorial for Elements of Macro and Micro

This website, first off, introduces you to the math skills you will need for JHUs Elements of Economics courses. If you determine that a bit of brushing up is in order, the website becomes your roadmap for sharpening those skills.

Start by looking at the diagnostic test. If you can tell at a glance that everything in the test is easy for you, then your math fluency is fully adequate for JHU's elements classes and you can skip everything else on this website.

If instead you look at the diagnostic test and scratch your head a bit, then we recommend that you attempt the questions in the diagnostic, do your best, and then look at the Answer Key to Diagnostic Questions.

If your performance causes you concern, we recommend that you sign up for our 3-week set of tutorials. The tutors are JHU students who have completed JHU's introductory economics courses. To sign up for the tutorial, go to

https://www.signupgenius.com/go/60b0948acac2babfa7-math

The Learning Den sessions run **Sunday - Thursday** and will begin on **September 9th**! We offer FREE, small group, tailored tutoring with our tutors focusing on some of the following:

- Review and strengthening of content material knowledge
- Help with homework-like problems
- Exam preparation
- Strengthening study skills

The final schedule will be posted next week on [The Learning Den website](). Students can begin making appointments on Monday, September 9th!

Student Appointments:

Students are able to make appointments through their MY.JHU Portal under the Education icon. This will make the process easier on the students when making their appointments.

*Students are still able to walk-in to appointments in The HUT (Gilman Hall) but seats are not guaranteed.

Please feel free to refer students to Hope Fisher for questions or concerns.

Happy First Day of Class from the PILOT Learning Team!

PILOT Registration will open this evening at 9pm. You may access registration by selecting the link below or by visiting our website: https://academicsupport.jhu.edu/pilot/register/ Please note, the link will not be live until 9pm tonight. Please read this entire email to ensure a successful registration.

PILOT Registration: https://pilot.semester.ly

Step #1: Create An Account:
When you visit the registration page you will be prompted to create an account. The information that you will need to create an account is as follows:
- Hopkins Student ID # (combination of letters and numbers)
- JHU Email Address
- JHED
- Major
- Graduation Year
- Username & Password

Step #2: Choose Course(s)
Once you login a list of PILOT-supported courses will appear. Choose the course(s) in which you would like to register for.

Step #3: Choose Session Time(s)
Choose the meeting time you would like for each course. If a session is full and you are unable to make any other session time, you will have the option to register for a waitlist.

Step #4: Register
Confirm your choices to register for a session.

Step #5: Be Patient
A placement email will be sent to you with your session information including location and PILOT Leader by Friday, September 6, 2019. Sessions start the following week.

A few tips to ensure a successful registration:
- Check out our list of supported courses here: https://academicsupport.jhu.edu/pilot/register/
- Have your calendar open so you can verify when you are available for a session

Exams and Grading Policy

- First Exam– Oct. 1st 20%

- Second Exam—Nov. 5th 30%

- Final Exam—Dec. 18th 40%

- Problem Sets and
    Section Participation   10%

Illness or Family Emergency & Exams
Very Important Steps

- **Pre-Notification**: If you are sick or have a family emergency and cannot take an exam, you **must contact** Dr. Barbera by phone or e-mail **before** the exam

- **Written Verification**: Illness or family emergency must be subsequently **verified in writing** by a physician, the Student Health & Wellness Center or Academic Advising.

- If **both** steps are not followed, you will **not be excused** from the exam

Make-Up Exams

- A student properly excused from a term exam will not be given a make-up exam

- Instead, final grade will be based on the other exams with revised weights

  (If you miss exam #1? 39% exam #2, 51% final exam)

  (If you miss exam #2? 30% exam #1, 60% final exam)

- Make-up exams will be given to students properly excused from the Final Exam

Grading Appeals

- Grading of exam questions may be appealed

- Appeal must be given in writing to your TA within one week

- CHEATING: IF YOU ARE CAUGHT CHEATING, YOU FLUNK THE COURSE.

Course Website

- The course website is:
  www.econ2.jhu.edu/courses/101/index.html
- This course does not use Blackboard
- Announcements of important information
  - ➢ Slides
  - ➢ Review Sessions before exams
  - ➢ Answers to Problem Sets
  - ➢ Reading assignments
  - ➢ Recommended Readings
  - ➢ Etc.

Bob Barbera Office Hours

- Wednesday   1:30PM-3:30PM

- Location: Wyman Bldg., Room 557

E-Mail Procedures

- **First Step**: Check the course website

- **Second Step**: Send an e-mail message to your TA

- **Third Step**: If your TA cannot answer the question or provide the requested information, the TA will forward the message to Dr. Barbera

Lecture 1: Formal Lecture

- **Economic Principles/Macroeconomic Issues**

- **Historical Trajectories for Key Barometers**

- **Skill Sets For Successful Economists**

Economics

- We live in a world of limitless desires but limited resources.

- Economics is the study of the choices we must make as we confront scarcity—the mismatch between limitless wants and limited means.

- How do we choose? Economists are in the business of analyzing that question.

Why Study Economics?

- Become an economist?

- Make big bucks on Wall Street?

- Be better equipped for other businesses?

- Make better personal financial decisions—home buying, investing…

- Process political narratives, as you **exercise your civic duty and vote**.

Micro vs. Macroeconomics

- Microeconomics provides theories for consumer and company decision making.

- Macro focuses on economy wide economic issues: growth, inflation and employment.

What is Macroeconomics?

- **Macroeconomics**

  ➢ The study of the economy as a whole

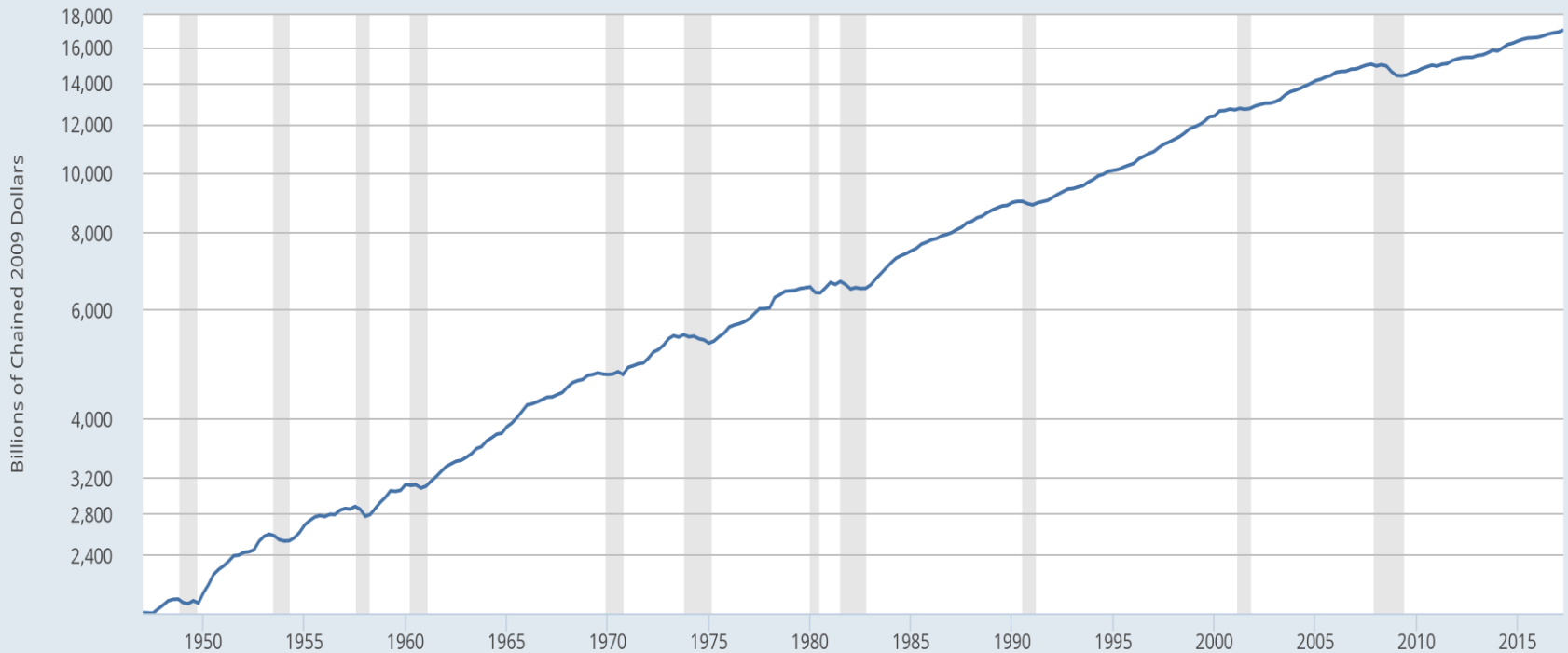 ➢ Focus is on the over-all levels of income, output, prices, employment, etc.

- **Microeconomics**

  ➢ The study of individual units

  ➢ Focus is on an analysis of individual consumers, individual firms, or individual markets

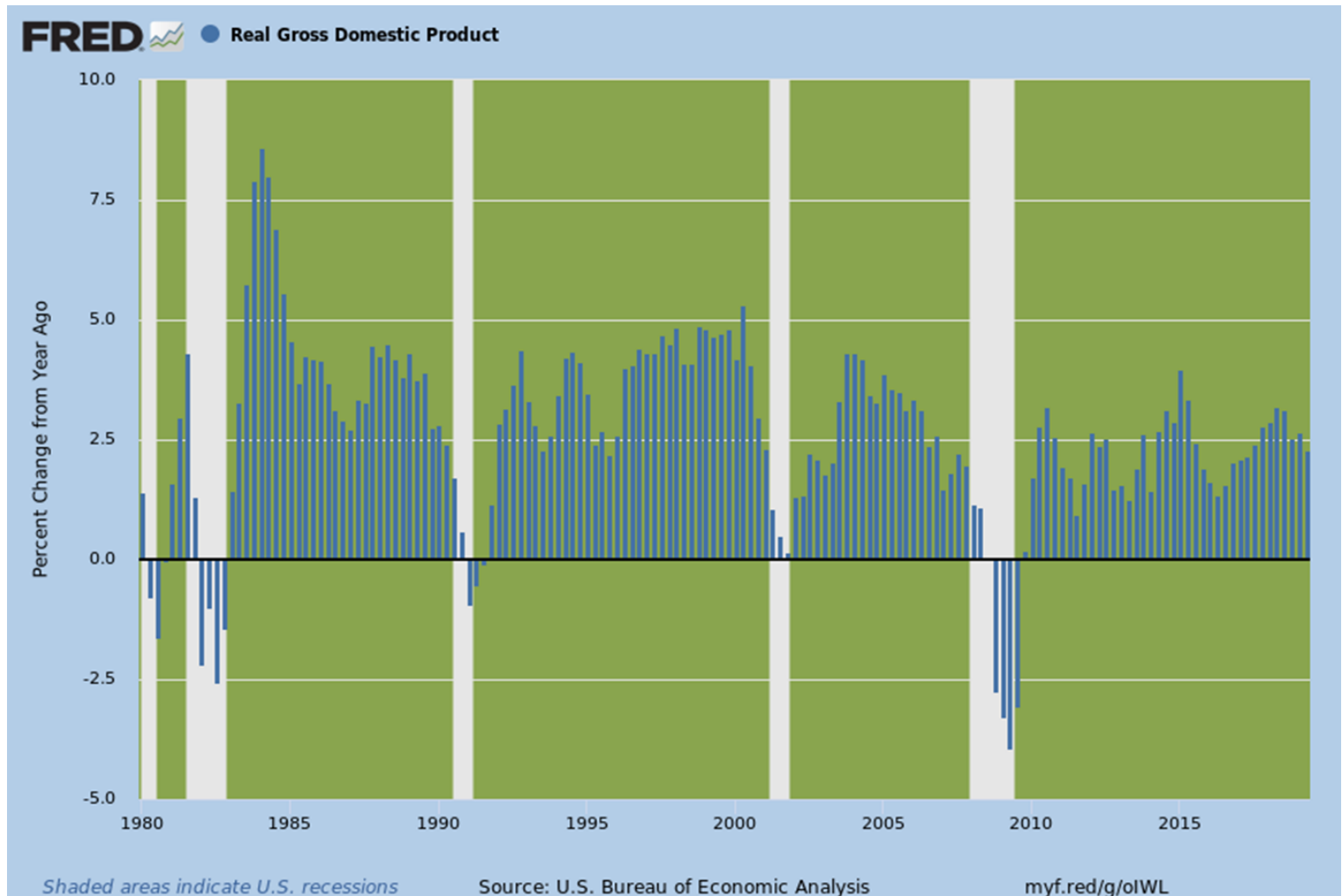# Macroeconomists care about long run growth…

FRED

— Real Gross Domestic Product, 3 Decimal

Billions of Chained 2009 Dollars

18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
3,200
2,800
2,400

1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015

Source: U.S. Bureau of Economic Analysis

fred.stlouisfed.org

myf.red/g/eUUf

...and short-term boom and bust cycles

Macro Statistics Provide
A GPA for the USA—But its Incomplete

- Economic debate centers on how to improve the economy's performance.

- Macro variables provide an economic report card. Presidents are judged to be successes or failures, to a large extent based on this economic report card.

- Knowing the what's and how's of barometers is key to making judgments about policies.

- Appreciating Barometer Shortcomings is just as important

What is GDP?

GDP is Gross Domestic Product

– Product: all final goods and services produced
  - (cars are included // steel is excluded)

– Domestic: produced on U.S. soil
  - (Honda made in US, Yes // Ford made in Peru, No)

– Gross: Investment Goods are included, without attention to wear and tear
  - Includes computer purchases, but ignores company junking old computers

What is **Missing**?
External to the metric: **Externalities**

- Fossil fuels propel cars and planes
- Suppose Battery Operated Cars Cost More
- If we force the use of battery cars, we need more resources for transportation, and this lessens are total output.
- **Suppose, however, that climate change is real**
- Fossil Fueled GDP may be higher but it will fail to account for future risks tied to climate change

The Unemployment Rate

U_t = Unemployment Rate

$$= \frac{\text{Number of Workers Unemployed}}{\text{Labor Force}}$$

The Inflation Rate

$P_t =$ Average Level of Prices

$\quad =$ Implicit Price Deflator for GDP

$\Delta P_t = P_t - P_{t-1} =$ Change in the Price Level

$\dfrac{\Delta P_t}{P_{t-1}} = \pi_t =$ Rate of Inflation

Economists' Key Assumptions

- People make rational economic decisions.

AND

- People respond to economic incentives.

A sleeve of 3 Nike golf balls for $10

A box of 6 Nike golf balls for $25

They buy two sleeves, not one box.

- Optimal decisions are made at the margin.

I prefer a slice of pizza to a can of coke.

But I prefer two slices and coke to three pizza slices.

The marginal—last—pizza slice is less gratifying than the coke.

Microeconomics: Confronting Tradeoffs

- Societies have limited numbers of workers, machines and finite natural resource levels.

- More of one good means less of another.

- These tradeoffs involve OPPORTUNITY COSTS

- The opportunity cost of activity A is what you gave up to permit you to perform activity A.

Market Economies and Adam Smith's Invisible Hand

- **Adam Smith**, 1776; markets, run by **SELF-INTERESTED PEOPLE,** push Society toward desirable ends.

- This 'invisible hand' takes market signals and delivers outcomes that match peoples' desires.

- What is the magic of the invisible hand? Prices!

- Most economists agree that free markets—where buyers and sellers meet and prices appear—resolve many microeconomic questions.

Free market Failures and Command Based Economies

- Enthusiasm for market wisdom/invisible hand swooned, amid the Great Depression

- John Maynard Keynes: the market system sometimes fails. Governments may, temporarily, need to take steps to remedy things.

- In Russia, China and elsewhere, governments did much more. They took over the job of running the economy.

The Soviet Gosplan: It Never Did Work

- Centrally Planned Economies Are Run By Gov't Bureaucrats—Usually Quite Badly.

- 'From each, according to his ability. To each according to his need.' (Karl Marx)

- 'We pretend to work, they pretend to pay us.' (Soviet workers, circa 1985)

Modern Day Mixed Economies

- The Soviet Union collapsed in 1991
- Chinese Premiere Deng Xiaoping declared 'to get rich is glorious', in the 1980s, allowed free markets and China soared.

- In Europe and the USA, governments' role expanded, and they now provide many services: health care, education, pensions, defense.

- In effect, today's economies are 'mixed'.

Mixed Economy Public Policy Challenges

What strategies can policy-makers pursue to achieve the macroeconomic goals of society?

Put differently, what can governments do to promote strong growth, rising per capita incomes, equitable income distribution, low unemployment, low inflation?

How much will your generation have to share,
when you are all retiring?
Appreciate the power of compounding! (Einstein!)

	2020	2070
3.4%/Yr. Real GDP Growth	100	540
1%/Yr. Population Growth	10	16
Real GDP/Person	10	34
2%/Yr. Real GDP Growth	100	269
1%/Yr. Population Growth	10	16
Real GDP/Person	10	17

Major Macroeconomic Policy Issues

- Monetary Policy:
  - ➤ What principles should guide interest rate policy?
- Government tax and spending policies:
  - ➤ Size and composition of Government?
  - ➤ Size and type of Taxes?
  - ➤ Size of balance, and accumulated debt?
  - ➤ Use taxes or spending to stimulate or slow the economy?

- Government currency policy?

  peg your currency to gold?

  peg your currency to another currency?
  allow financial markets to set your currency value?

- These are key macroeconomic questions!

Macroeconomics focuses both on short term swings and long run trends

- Long Run Performance is a Critical Issue

- *Why Do Some Countries, over Half-Century Periods, do Much Better than others?*

- *Economists look at income/capita, to give nation/states long run performance assessments*

- *income/capita:* A useful, but far from perfect measure

Country	Period	Real GDP per Person at Beginning of Period[a]	Real GDP per Person at End of Period[a]	Growth Rate (per year)
Japan	1890–2003	$1,280	$28,620	2.79%
Brazil	1900–2003	663	7,480	2.38
Mexico	1900–2003	987	8,950	2.16
China	1900–2003	610	4,990	2.06
Germany	1870–2003	1,859	27,460	2.05
Canada	1870–2003	2,022	29,740	2.04
United States	1870–2003	3,412	37,500	1.82
Argentina	1900–2003	1,952	10,920	1.69
India	1900–2003	575	2,880	1.58
United Kingdom	1870–2003	4,094	27,650	1.45
Indonesia	1900–2003	759	3,210	1.41
Pakistan	1900–2003	628	2,060	1.16
Bangladesh	1900–2003	531	1,870	1.16

[a]Real GDP is measured in 2003 dollars.
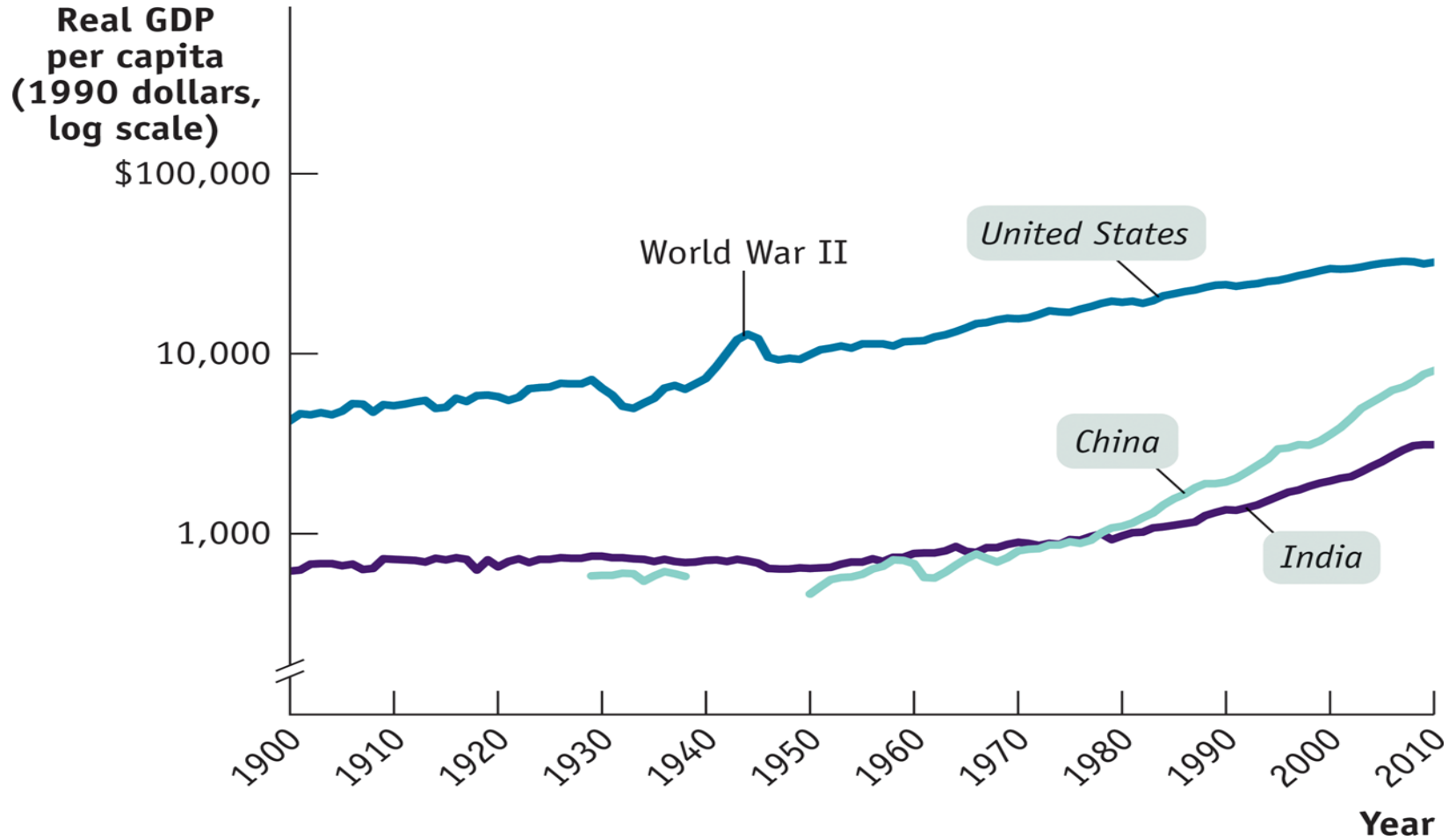
T A B L E 1

The Variety of Growth Experiences

Source: Robert J. Barro and Xavier Sala-i-Martin, *Economic Growth* (New York: McGraw-Hill, 1995), tables 10.2 and 10.3; *World Development Report 2005*, Table 1; and author's calculations.

Comparing Economies

What It Takes To Be a Good Economist:

- The master-economist must possess a rare combination of gifts:

- Mathematician

- Historian

- Statesman

- Philosopher

(John Maynard Keynes)

Keynes Goes on:

- You must study the **present**

- in the light of the **past**

- for the purposes of the **future**.

What Does One Need To Succeed in this Class?

- You must understand some symbols:

  Be ready to manipulate algebraic formulas.

  Be prepared to work with graphs.

- You must learn to connect symbols to words:

  Learning to determine what model best applies to a given set of circumstances is the 'ART' part of economics.

Economists and Models

- There are **329 MILLION** people in the USA,
- Roughly 7.7 billion people inhabit the planet.
- All make thousands of economic decisions every year—we can't possibly follow each.
- How can we think about economic trends?
- We create stylized models.

U.S. consumers: What drives their spending decisions?

- C = all spending by U.S. consumers.
- Y_d = all income, after tax, available to consumers
- W = the wealth of all consumers.
- **C = (0.9 x Y_d) + (0.002 x W)**
- Parameters '0.9' and '0.002' were statistically derived.

The Math is Necessary. But the Art Part of Economics is What Makes it Fun!

- Think logically
- Separate signal from noise
- Think outside the box
- Stay humble

- There are only two kinds of economists in the world. Those who know they don't know. And those who don't know they don't know. (J.K. Galbraith)