### Capitalism is Inherently Unstable

Welcome to our first lecture of the new semester. We begin with a slide that you will see several more times throughout this course.

Capitalism is inherently unstable and tends towards less-than-full employment. There are two primary factors driving these dynamics: investment and finance.

The economy is how society organizes to produce and distribute what is necessary for its survival and reproduction. In fact, this is the economic problem.

Modern Society primarily solves the economic problem through the employment relationship. Failing to provide employment to fellow community members represents a serious problem.

The instability exhibited by our capitalist economic system exacerbates the employment problem.

And as you will learn by the end of the semester, the government plays a very important role in addressing these shortcomings.

## Title Slide: Unit 1 The Capitalist Revolution

As you complete all the readings, you will notice that, just like in this unit, they begin with a narrative. One of the aspects that I really enjoy about CORE's approach are these narratives and the purpose they serve. Throughout this semester we want to prioritize observation and empirical phenomena as points of departure. These observations and phenomena should raise questions. Once we have a question, we will then begin to seek out an explanation. This is in fact how economics is done. Start with a question based off observation or an empirical phenomenon and develop a model to answer to it.

### Consider these questions

As you ponder these questions, you should also consider how we measure inequality. What outcomes do we want to measure? How do we evaluate and measure these outcomes?

There were two measures introduced in this unit: GDP per capita and wages.

Both measures are insightful, but with these, and all measures more generally, they do have shortcomings. It is imperative that, when you are given a measure, you know exactly what information is being conveyed. Knowing that information is critical for your ability to assess the relevance to the question at hand.

Let me conclude this slide by returning to inequality.

Inequality and the various patterns of inequality is introduced early and will be recurring theme throughout the semester. For now, it suffices to say that inequality is an outcome of social, economic, and political processes.

### The Context for this unit

This image plots gdp per capita over approximately 1,000 years for 5 different countries.

People obtain their incomes by producing and selling goods and services. GDP (gross domestic product) is the total value of everything produced in a given period such as a year. GDP per capita takes that total value and divides it by the population. GDP per capita corresponds here to average annual income.

For the first 700 years of data presented in the image the world was flat: there was not much inter-country inequality.

What does this graph tell us about economic inequality and divergence?

What role does the technological revolution play in the observed growth?

What about the role of capitalism in economic growth?

We know that the technological revolution and capitalism emerged in Britain around 1700 which is the time their gdp per capita began its rapid and sustained growth. This is a fine example of correlation, but just because these events coincide with rising living standards is not sufficient evidence to conclude causality.

Correlation is not causation.

### How unequal is the world?

We are looking at three separate snapshots which is powerful demonstration for how unequal the world is. This graphic shows inequality both within and across countries.

Each country is ranked according to its Gdp per capita which provides information inter-country inequality. Moreover, each country is assigned a color based off its ranking in 1980; the color-coding allows you to see how much progress a country has made relative to other countries.

The economy is dynamic. Consider the remarkable case of china. In 1980 they were near the bottom of the rankings. By 2014 they moved well into the top half.

Each country has ten bars which correspond to income deciles. The bar closest to the front represents the average income of the poorest 10% of the population, while the bar in the back corresponds to the richest 10% of the population.

Consider again the case of China. In 1980 there was very little intra-country inequality. How has that changed by 2014? Why was there so much less intra-country inequality in 1980?

In this, and previous slides we have focused exclusively on measures of welfare that relate to income. Economists way too often restrict their inquiry to outcomes which can be measured in dollars. Money is a unit of account and outcomes which can be measured in monetary terms are much easier to quantify. However, inequality is much more complex and transcends outcomes that can be measured in monetary terms. Can you think of any other forms of inequality, whether they are social, economic, or political? How would you measure those outcomes?

# Inequality and growth

What does the textbook mean by flat? How does the description the world being flat contrast with the large differences in income that exist today, both within and across countries?

Recall the narrative of this unit; it focuses on a transition from relative stagnation, a time when living conditions only changes due to epidemic or war, to a permanent and sustained growth in living standards...at least in some countries.

For a very long time, living standards did not grow in any sustained way. When sustained growth occurred, it began at different times in different places. The countries that took off economically a century or more ago—UK, Japan, Italy—are now rich. The countries that took off only recently, or not at all, are in the flatlands.

## Measuring income and living standards

Here are two measures presented in his week's readings.

While these measures are insightful, they are far from perfect measures of well-being. The problem lies in what information is being conveyed and what information is omitted. Examples of relevant information not conveyed by these measures include:

- The quality of social and physical environment
- Availability of leisurely activities we don't pay for
- Public goods provided free of charge
- Goods and services provided in the household (predominantly by women)

Let me ask you a few questions:

- what would the GDP per capita be in a country with 10 citizens and each earning an income of \$10? That's right, the GDP per capita would be \$10
- what would the GDP per capita be in a country with 10 citizens, one citizen earns \$91 in income and the other 9 citizens earn \$1 in income? That's right, the gdp per capita is \$10.

One more question:

• The primary way that goods and services are valued is by their market value. What are the implications of traditionally feminine work—caring for family members (young, old, otherwise incapacitated) and household work (cleaning and cooking)— not being sold in the market?

### GDP growth rates

This graphic shows gdp per capita again, but this time as we move up the vertical axis the values double. This ratio scale is convenient for comparing rates of growth. The steeper the line, the faster the rate of growth.

For instance, the first country to take-off, Britain, has a growth rate smaller than that of China and Japan.

The time element is critical for understanding economic progress. In many countries, substantial improvements in people's living standards did not occur until they gained independence from colonial rule or interference by European nations.

### Technology & Industrial Revolution

By reducing the amount of worktime it takes to produce the things we need, technological changes allowed significant increases in living standards.

So you might be wondering, does technology always increase living standards? Well....it depends...it depends on how we measure living standards.

And it may be the case that not all technological advances are implemented? Private property and the profit motive may retard future advances and lead to lower standards. It is not always the case that what is best for an individual is best for society.

Remarkable scientific and technological advances occurred more or less at the same time as the upward kink in the hockey stick in Britain in the middle of the 18th century. Technology has produced a very connected world. Consider the improvements in shipping, train and telegraph, telephone, and internet. has changed.

The next slide has 2 examples of how the internet has changed the world. One has more than 50 million likes and the other has more than 3 billion views (quite a few of which are mine).

#### Environmental consequences

Recall that the economy is how society organizes the production and distribution of its material means of well-being. The economy occurs within a larger social system that is part of the biosphere, all of which exists in the physical environment. Thus, I feel confident in stating that our environment is necessary for our survival.

The image here shows deviation from mean temperature. There is a clear upward trend starting around the same time as the technological revolution. The ensuing changes in technology, particularly from the industrial revolution onwards brought about a dependence on fossil fuels which is when the upward trend accelerates.

I do not mean to imply that since technology has contributed to a changing environment that we should simply return to the woods. It is highly likely that the permanent technological revolution may also be part of the solution. Technological advances can make it possible to use less resources to produce more output.

The effects of both the global and local impact factors result from an expansion of the economy and the way the economy is organized and more specifically what is valued and conserved.

### Capitalism

Throughout the reading this week you were presented with several images which resembled a hockey stick. We saw this upward trend in gdp, productivity of labor, etc... This trend begs the question how to explain the transition from stagnation to growth.

Part of the explanation we will develop will draw on the capitalist revolution which also coincided with this transition. However, be careful with causality: just because capitalism emerges at the same time does not mean capitalism caused the growth.

But before we go there, lets define capitalism which is a very convoluted term. We define capitalism as an economic system characterized a particular set of institutions. The three dominant institutions of capitalism are private property (including most importantly of capital goods- the means of production), markets, firms

Capitalism can and does vary greatly.

### Key concepts (1)

Firms are the first institution of capitalism we will discuss. Firms are where production takes place and also serve as a stage for interaction amongst society's members. The most common organizational structure of a firm is the corporation.

## Key concepts (2)

The last two institutions which define capitalism are private property and markets.

One of the most important features of modern capitalism is the private ownership by firms of the means of production. This is particularly important because of the magnitude of capital goods employed in the production process. Think about what is involved in the production of the computer you are using to complete this lecture or the car you drove to the store to buy steak and bourbon yesterday.

Private property affords the owner the right to withdraw her property from the production process if it's not profitable.

### Capitalist revolution

A few slides back I mentioned the concurrent emergence of capitalism and rising living standards. Let us consider now the impact that capitalism had on living standards.

Capitalism provided incentives for firms to adopt new technologies. The increasing use of technology in production can also be described as increasing the capital intensity or more simply using more machines in production. The increasing capital intensity required large-scale investment which was beyond the reach of many small family enterprises.

The new technologies we a key element in firms emerging as the dominant means of organizing production. Moreover, the new technologies animated the evolution of the firm and drove the expansion of the market.

Larger firms became necessary because of technology. Larger firms employed more workers which allowed specialization. The degree of specialization, as stated by Adam Smith, depends on the extent of the market.

If I only produce bourbon, how can I get a steak to enjoy with that bourbon? Well, I sell my bourbon in the market and use the money to buy steak. If there is no market where I can sell bourbon or buy steak, then I could not specialize in producing bourbon. The division of labor where I produce bourbon and you produce steak would not be possible.

Let me again turn to the words of Adam Smith who wrote in 1776: The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is anywhere directed, or applied, seem to have been the effects of the division of labor.

## Divergence in growth

The data presented here makes me wonder why a country like south Korea has done so well raising its living standards while other countries like Nigeria has not. Both countries have capitalist economies, but for a capitalist economy to be dynamic it needs its economic institutions to operate effectively. The performance of the economy depends on more than just economic conditions, it also depends on political conditions. For example: Has the government provided infrastructure and education and does it effectively enforce contracts?

### What is economics

We conclude here with a definition of economics that is very expansive. This understanding of economics facilitates inquiries into very important matters, including questions like:

How we come to acquire the things that make up our livelihood: Things like food, clothing, shelter, or free time.

How we interact with each other: Either as buyers and sellers in the goods market, employees and employers in the firm, citizens and public officials in the political arena, and as parents, children and other family members in the household.

How we interact with our natural environment: From breathing, to extracting raw materials from the earth.

How each of these changes over time?