

Principles of Economics

Lecture 1

Monday Sept 25. 2023

If you've found mainstream economics tedious and uninformative, you are not alone

Most intelligent people struggle to make sense of their economics university courses

The problem is not that economics is too difficult and sophisticated to understand, the problem is university economics

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University textbooks today are steeped in Keynesians' high time preference and ignorance

It is impossible to teach anything useful with these textbooks as a base

These textbooks teach you some irrelevant models and thought exercises with little relevance to the real world, and predictable conclusions

Austrian economics is a much more useful approach, which provides students with value

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The Austrian tradition does not have an easily-accessible comprehensive textbook

Rothbard's *Man, Economy, and State*, and Mises' *Human Action*, are not easily readable by the modern reader

More geared toward arguing with economists than explaining to readers

What we need is a simple explanation of economics from the Austrian perspective, aimed at the learner, not the academic

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This is the book I wanted to teach

This is the book I would have liked to learn at age 18

A clear, concise, and readable treatment of the main economic ideas in the Austrian tradition, culminating in an understanding of the civilizational importance of the extended monetary market order.

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This book forms an introduction to the principles of economics, and the economic way of thinking—a powerful tool of mental planning useful for everyone to understand.

It uses the plain written word to explain what many economists throughout history have found to be the most powerful methods of understanding economic phenomena.

This online course is the equivalent of two university courses

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- I. Fundamentals
- II. Economy
- III. The Market Order
- IV. Monetary Economics
- V. Civilization

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I. Fundamentals

Human action

Value

Time

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II. Economy

Labor

Property

Capital

Technology

Energy and Power

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III. The Market Order

Trade

Money

Markets

Capitalism

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IV. Monetary Economics

Time Preference

Credit and Banking

Monetary Expansion

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V. Civilization

Violence

Defense

Civilization

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Chapter 1: Human Action

Mises' Human Action offered an explicit redefinition of the field of economics as the study of **human action and choice under scarcity**.

Mises: analyze human action, rather than analyzing material objects and their properties, or aggregate and abstract units

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Most intellectuals analyzed humanity as a whole or analyzed collectivist concepts like nation, race, or church, and sought to find laws to explain the behavior of such entities and their consequences, as if history had ironclad laws to be discovered, akin to the natural sciences.

Austrians focus on individual human choice and action

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What is "Action"?

Purposeful behavior

"Action is will put into operation and transformed into an agency, is aiming at ends and goals, is the ego's meaningful response to stimuli and to the conditions of its environment, is a person's conscious adjustment to the state of the universe that determines his life."

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Rothbard: "“purposeful behavior toward the attainment of ends in some future period which will involve the fulfillment of wants otherwise remaining unsatisfied.”"

Humans act purposefully because we are endowed with reason and are able to direct it to the meeting of our ends.

Animals yield to their instincts, but human reason supersedes it

Action is rational, in the sense of being the product of reason, not in the sense of being correct

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Economic Analysis

If economics studies human action, we can define economic terminology in relation to human needs and how humans treat them

An economic theory consists of:

- 1- An understanding of the meaning of action
- 2- a situation described in terms of action categories
- 3- a logical deduction of the consequences

The goal is **understanding**

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Logical deduction, thought experiments, and common sense familiarity with reality are employed to understand the implications of economic processes.

Quantitative analysis is meaningless and mute without logical deduction and conclusions to motivate it and understand its results

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Quantitative Analysis

1. No constants
2. No replicable experimentation
3. Conflating factors that can be measured with the causal factors
4. Conflating accounting identities for causality

After a century of aping physics, economics has failed to produce one quantitative law or formula that can be independently tested and replicated.

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1. Economics has no constants

Without a constant, there can be no measurement, and therefore there can be no quantitative relationships established

Since value is subjective, it cannot be measured

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Appendix 1 compares quantitative approaches in natural science to economics

$$PV = nRT$$

P is pressure in bars

V is volume in liters

n is the number of moles (where each mole is $6.02214076 \times 10^{23}$ atoms)

T is temperature in kelvin

R is the Regnault constant of 0.083145 L.bar/mol.K.

This relationship is possible because all units are measured using constants defined by the seven base units of the International System of Units (SI):

second, meter, kilogram, ampere, kelvin, mole, candela

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These reliable physical units for measurement makes it possible to engage in systematic, reproducible, and quantifiable scientific experimentation.

These constants and measurements make it possible to conduct systematic experimentation with gasses at different volumes, temperatures, and degrees of pressure.

The reliability of these units is reflected in the number of workers and technicians who use the same tools and equipment with commonly agreed-upon standards.

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There are no equivalent constants in economics

Economic value can only be measured ordinally, in a way that compares the value of one good to another, and not cardinally, by assigning a mathematical value to each good.

Value is experienced psychologically, it is not physically defined

So quantitative analysis of economics breaks down.

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2. No replicable experimentation

In natural science, you study physical objects, and you can perform experiments on them to establish relationships

In economics, we study the action of humans in the real world. Laboratories cannot approximate that

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3. Focusing on what can be measured, not what matters

The driving force is individual action and subjective valuation, but that can't be measured

Economic aggregates can be measured, so we focus on that

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4. Mistaking accounting identities for causality

Macroeconomics assumes relationships based on accounting identities must mean causality

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After a century of aping physics, economics has failed to produce one quantitative law or formula that can be independently tested and replicated.

The poster-child for quantitative economics' failure is the mythical trade-off between unemployment and inflation

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According to modern economic pseudoscience, based largely on the work of English child rapist John Maynard Keynes, there is a trade-off between unemployment and inflation

But reality stubbornly refuses to abide by this fiction

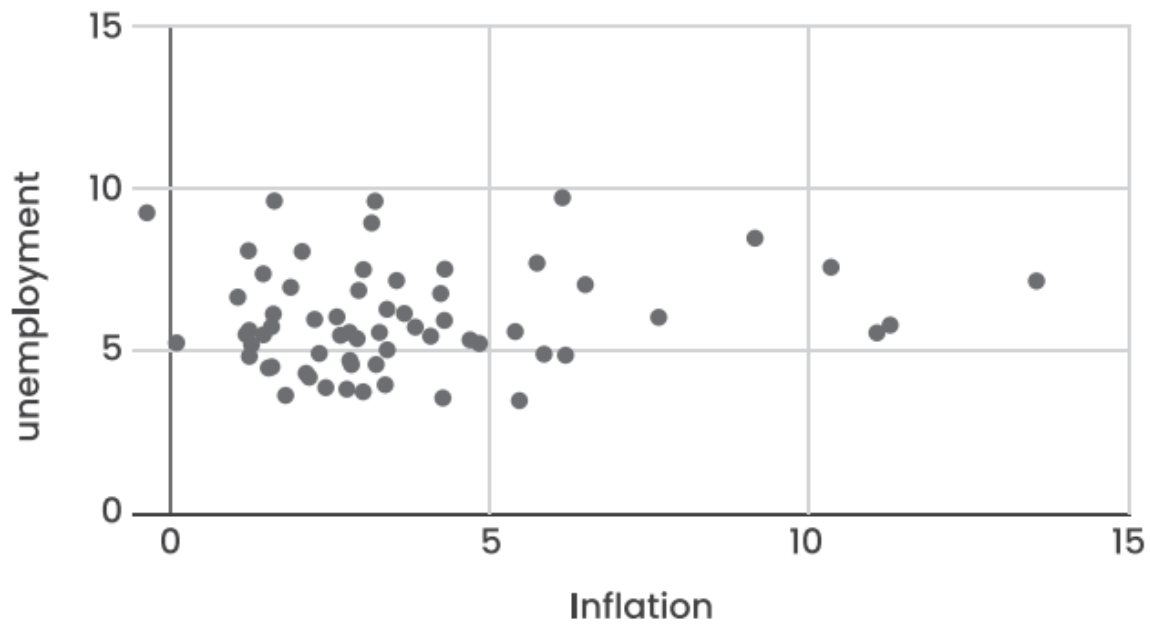


Figure 1. Unemployment and inflation¹¹

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No studies or experiments are possible, but Keynesians nonetheless assume they can establish this as an economic law.

And when reality fails to conform, they simply redefine terminology to try to keep their theory alive. This is the quintessential pseudoscientific method.

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A contrast of approaches

How does the approach of mainstream quantitative economics differ from that of Austrian praxeological economics?

Take minimum wage as an example

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Mainstream quantitative economist has a quantitative model:

20% of all workers, supporting 35% of all the population, currently earn less than \$10 per hour.

\$10 minimum wage would lead to a rise in wages equal to \$10 billion per year

This results in \$8 billion increase in spending

Creates 40,000 new jobs, 12% increase in industrial output, \$16 billion increase in GDP

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Austrian economist analyzes things through human action

Two people need to agree to create a job: Worker and employer

Employer will only employ the worker if return from employment exceeds wage

If worker has a lower productivity than the mandated minimum wage, the employer will not hire the worker

Minimum wage law makes it illegal for employers to hire anyone whose marginal productivity is less than \$10 per hour

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Minimum wage law criminalizes employment for the youngest, poorest, and least experienced, making it very difficult for them to gain experience and break out of poverty

Businesses would raise prices or lower quality

Businesses could increase automation

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Empirical observation concurs far more with human action analysis than with quantitative approaches

See: *Forty Centuries of Wage and Price Controls*

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Collectivists look at the world of economic transactions as an inhuman process they can alter to suit their needs.

They mandate that the observable epiphenomena associated with markets fall within acceptable ranges. They assume humans will just adjust their actions to ensure these laws are upheld.

In reality, humans adjust their actions to optimize for their own well-being, not to satisfy bureaucrats.

The merchant would rather not sell at all than sell at a loss. You will either see the free-market price or you will see no market price at all.

In the latter economy, real prices are expressed in underground markets.

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Almost all modern economics textbook approach economics from the pseudoscientific quantitative approach

This course and book will be different

Lecture 2: Value

October 9, 2023

Subjective valuation is the fundamental premise of Austrian economics, and what sets it apart from other schools of economics

Marginal analysis is the foundational concept of modern economics

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Definitions:

Good: something useful that we can direct to the satisfaction of human needs.

For something to become a good, it first requires that a human need exists; second, that the properties of the good can cause the satisfaction of that need; third, that humans have knowledge of this causal connection; and, finally, that commanding the good would be sufficient to direct it to the satisfaction of the human need.

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Utility: the capacity of a good to satisfy human needs

Only if something can offer utility can it be viewed as a good by humans.

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Economic goods: Demand is greater than the quantity supplied.

Non-economic goods: Demand is less than the quantity supplied.

Scarcity is the condition in which demand for a good is greater than supply

Scarcity forces us to economize: make choices between alternatives

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Economize:

Try to maximize the quantity of goods that satisfy our needs

To conserve the useful functions of these goods

To prioritize most pressing needs over less pressing ones

To obtain greatest satisfaction from a good's quantity

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Economics

The study of human choices under scarcity

It focuses on analyzing how humans attempt to find solutions to the problem of disparity between what they have and what they want, and the consequences of their choices

Scarcity is a permanent condition, because it is a lot easier to want something than to produce it.

So humans are constantly making choices between different choices of action

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To make these choices, we need to juxtapose the utility of different courses of actions

We *value*

Value is our subjective assessment of the satisfaction we derive, or expect to derive from a good

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Subjective value

Value is a result of our economizing: we attribute value to things as we seek to economize between them

Menger: "Value is thus nothing inherent in goods, no property of them, nor an independent thing existing by itself. It is a judgment economizing men make about the importance of the goods at their disposal for the maintenance of their lives and well-being."

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There is nothing inherent in goods that makes them valuable, or determines their value

Value isn't a physical or chemical property; it is a psychic property they attain only when humans assess them

"Value does not exist outside the consciousness of men."

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The value of oil as an example of subjective value

Before the 1800s, oil was the scum of the Earth, you had to pay to get it removed

After engines were invented, it became a highly valuable commodity

The same chemical went from having a negative value to a positive value

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In 2020, oil again had a negative price during lockdowns

Menger: "The value of goods arises from their relationship to our needs, and is not inherent in the goods themselves. With changes in this relationship, value arises and disappears."

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Ordinal and Cardinal Valuation

Value being subjective means we can only think of value ordinally, not cardinally

Ordinal: arrange in terms of preference: $A > B > C$

Cardinal: assign precise numerical values: $A=3.5$, $B=2.3$, $C=1.2$

Value cannot be expressed cardinally, because we have no units with which to express it, as discussed in Lecture 1

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You can measure length because you have the meter or inch. You can measure temperature because you have degrees C or F. You can measure weight because you have the kg or pound. But how do you measure value?

You cannot measure value, you can only compare it.

And value is constantly changing

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There is a more and a less in the removal of uneasiness felt; but how much one satisfaction surpasses another one can only be felt; it cannot be established and determined in an objective way. A judgment of value does not measure, it arranges in a scale of degrees, it grades. It is expressive of an order of preference and sequence, but not expressive of measure and weight. Only the ordinal numbers can be applied to it, but not the cardinal numbers.

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Value is not the same as price

The price tells us an upper and lower bound of valuations, at the particular moment in time when that particular exchange happened, but it doesn't measure the value

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Free exchange

Any time two people freely choose to engage in the exchange of economic goods, it must necessarily be true that they both believe they will benefit from the exchange; otherwise they would not perform it.

This is because their valuations are subjective, not objective. If value was objective, then one party would be the loser in each exchange.

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Objective vs Subjective valuation

Austrians believe in subjective valuation, everyone else ties themselves into mental knots trying to argue value is objective

Mathematical economists measure value with something called util, which is a made up unit that serves no purpose but to create work for mathematical economists and test questions for university students

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Others measure value using price, which would fail to explain why anyone ever trades

Marxists think value is a function of labor input: A mud pie that takes 3 hours to prepare is valued as much as an apple pie that takes three hours to prepare

But even though labor is needed to make anything a good; goods are only valued to the extent they meet our needs

Labor seeks to create things of value, and often succeeds, but it can fail

Labor goes to the production of things that are valuable, but it doesn't create the value

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In Austrian economics, value is subjective and depends on the time and place at which the valuation happens. Value is derived from human choice, which is necessitated by scarcity. Value is assigned by individuals to each unit at the time and place in which they make decisions, but it is not a universal property of the good.

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Marginalism

Since value is subjective, it depends on the time and place at which valuation takes place, Menger analyzed how valuation declines for different units of the same good

The same good has different value to the same person depending on what needs it satisfies

The first unit meets the most pressing needs. The second unit meets the less pressing needs. And so on...

As the quantity of a good increases, each marginal unit is less valuable than the previous one

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We make economic decisions at the margin, about the next unit, not in the abstract or the aggregate, about all units

You are never required to choose between all the money in the world and all the water in the world.

You are always required to choose between the marginal unit of water and the marginal unit of money

This helps us understand all economic decision making

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Marginal Utility

Value is not inherent to goods, it is dependent on the needs they satisfy, which are dependent on their relative scarcity and abundance

The first meal is the difference between starving and surviving: extremely valuable

The second meal is the difference between surviving and thriving: less valuable than the first

Extra meals are progressively less valuable

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Law of Diminishing Marginal Utility

As the quantity increases, the marginal utility declines

The total utility increases the quantity increases, but the marginal utility declines

5 apples are more valuable than 4 apples, but the 5th apple is less valuable than the 4th apple

Novelty wears off, and the more we use something, the less we enjoy each progressive use

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Valuation by the least valuable use

Counter-intuitive: when you purchase something you are valuing according to the least important satisfaction it meets

At the margin, you are only making a decision about the least valuable marginal use, not all the uses

When buying food, you are not paying for food in the abstract. You are paying for the next meal

You never have to pay for food in the abstract, or for all the food you will eat in your life

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This helps us understand why extremely important things can be very cheap, like water

Even though water is essential for survival, you are always making choices about the next marginal unit of water

You are usually in a place where water is plentiful, so water is never a matter of survival when you buy it, so it's valued cheaply

On a desert island, water is very valuable

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Most our modern infrastructure depends on iron, so it is arguably more important to us than gold, yet gold is far more expensive

Because nobody ever has to choose between iron and gold

But we have to choose between the least valuable existing use of iron and gold, the marginal use

The marginal unit of iron is an extra metal bar in a building, which is not very valuable

The marginal unit of gold is an extra piece of jewelry, which is very valuable

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Water-Diamond Paradox

Ask anyone if they would rather have water or diamonds, and they'd say water

Yet water is very cheap and diamonds are very expensive

Before Menger, economists had no way of explaining why diamonds are so much more expensive than water

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But with marginal analysis, we can understand why water is cheaper than diamonds.

Wherever humans live in a society, it is around plentiful water: rivers, springs, wells

In these places, water is plentiful and we have it in abundance to meet our most pressing needs. At any particular point, you are buying water to meet low marginal value needs

Diamonds are very scarce in these settings so they are usually going to meet the first highest use cases: wedding rings

In a desert island where water is extremely scarce, it would be more valuable and expensive than diamonds

Lecture 3
Time
October 23, 2023

Time: The Ultimate Resource

Human action happens across time.
All economic decisions take place across time
Production requires time.

Humans are mortal, so time is scarce

Scarcity makes time an economic good

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Time is unique as an economic good, because it is irreversible
You can't buy back time and you can't increase it indefinitely

Julian Simon explained that time is the ultimate resource, from which all other resources can be made

There are no natural or physical constraints on the production of any physical good, as more can always be made. There is only a constraint on the time needed to make them

Economic scarcity is a manifestation and consequence of the scarcity of human time

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Man gets one shot at life, and he never knows how long it will last

Humans soon realize it will not last forever

Time just runs out, so humans learn to economize it

Economizing time is the ultimate economizing act

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Physical resources just keep getting more abundant, but time just gets scarcer

Simon calls time The Ultimate Resource because it can be used to make all economic goods.

The term 'resource' is inaccurate for material objects, as they are products of applying our time, the real resource, into transforming infinite materials into useful economic goods

We don't have resources ready made for us to utilize to meet our needs. We need to make the resources using our time

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Material goods are not limited because earth is finite, they are infinite compared to our need

They are far more abundant than our ability to exploit

The binding constraint on our ability to consume things is the time we have, not their absolute quantity on Earth

Economic scarcity is a function of the scarcity of human time

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Opportunity cost: The cost of an act in terms of the forgone value of a different act you could have done instead

Scarcity of time is what gives everything an opportunity cost

Everything needs time and time is finite, so everything has an opportunity cost

There's always another use of scarce time possible

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Material Abundance

All matter is highly abundant and the limit on how much we have is purely the time we spend getting it

Known or proven reserves is the common measure for abundance of goods

It constantly grows

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	1950	1990
	2.5 billion people	5.3 billion people
	\$9.25 trillion GDP	\$47.04 trillion GDP
	Growth multiple	
Population	2.1	
GDP	5	

Lead	3
Zinc	4.2
Copper	5.7
Iron	8.3
Oil	13.1
Phosphate	14
Bauxite	16.6

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Proven reserves is not a measure of the total metals in Earth.

It's a measure of what we have discovered without extracting

Proven reserves are the tip of the iceberg

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Earth is enormous, beyond our comprehension

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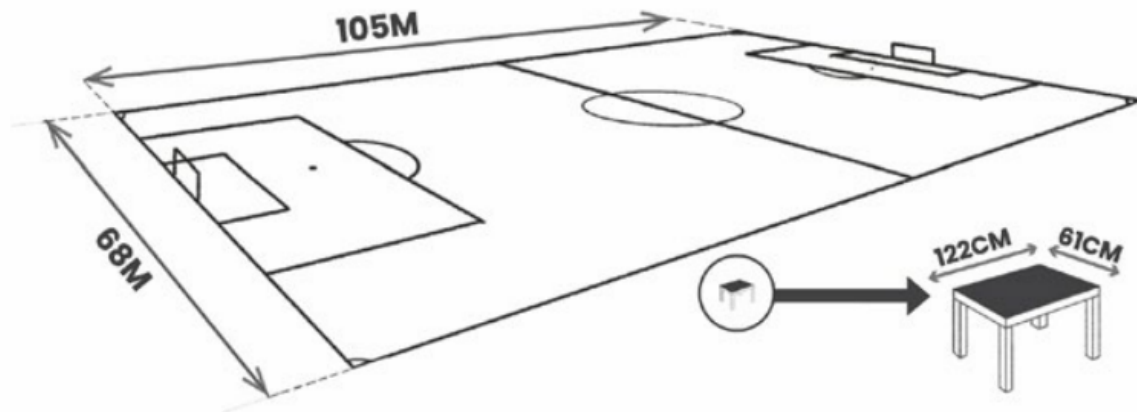


Figure 2. If Earth was a football field, all mines would be a small desk

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We've barely scratched the surface of Earth

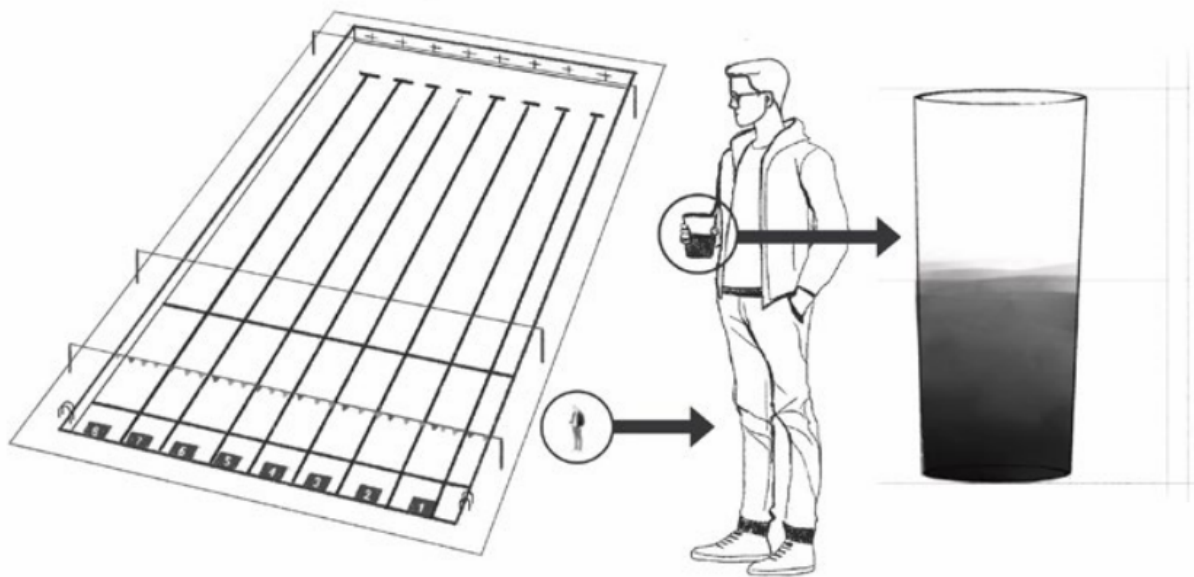


Figure 3. If Earth was an Olympic swimming pool, all our mines would be half a cup

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Decades of environmental hysteria have all been about consuming half a cup of a swimming pool

The total size of the swimming pool is irrelevant to all practical considerations.

What matters is how much time we have to extract the tiny drops that constitute the half cup we drink.

Our economic decisions are made **at the margin**, about the next plot of land to be mined, and never pertain to the total aggregate

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Does a homebuilder ever concern himself with the total amount of rocks on Earth?

That's why:

Quantity of proven reserves always goes up

Real price of material goods always declines

Real price of human time (wages) always rises

(Nominal prices are rising because of inflation and the decline of the value of fiat money)

Raw material is plentiful around us; the economic goods produced from that material are scarce because the time to produce them is scarce

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Simon Abundance Index: 50 basic commodities from 1980 to 2000

Measured in terms of wages, the price of these commodities dropped 75.2% in 40 years

Human population increased by 75% during that time

Humans are not leeches on Earth; they produce these resources

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Basic 50 Commodities 1980–2020	Percentage Change in Time Price	Abundance Multiplier	Basic 50 Commodities 1980–2020	Percentage Change in Time Price	Abundance Multiplier
Sugar	-86.2%	7.25	Sorghum	-74.0%	3.85
Hides	-86.2%	7.23	Soybeans	-72.4%	3.62
Pork	-86.1%	7.20	LNG, Japan	-71.6%	3.52
Coffee	-85.9%	7.11	Fertilizer	-71.6%	3.52
Salmon	-85.1%	6.72	Coconut Oil	-70.8%	3.42
Natural Gas, EU	-85.0%	6.68	Orange	-70.8%	3.42
Cotton	-85.0%	6.65	Coal	-70.5%	3.39
Groundnuts etc.	-83.0%	5.89	Logs	-70.4%	3.38
Cocoa	-82.2%	5.63	Rapeseed	-69.9%	3.32
Uranium	-82.0%	5.54	Wool	-69.7%	3.30
Aluminum	-81.3%	5.34	Tea	-68.3%	3.15
Lamb	-81.1%	5.30	Sawnwood	-67.6%	3.09
Silver	-80.7%	5.19	Beef	-67.0%	3.03
Tin	-80.1%	5.03	Plywood	-63.6%	2.75
Crude Oil	-78.2%	4.58	Sunflower Oil	-63.0%	2.70
Rice	-76.4%	4.24	Tobacco	-62.5%	2.67
Rubber	-76.3%	4.21	Lead	-60.7%	2.55
Wheat	-76.1%	4.18	Nickel	-58.8%	2.43
Barley	-75.7%	4.11	Chicken	-58.2%	2.39
Shrimp	-75.6%	4.11	Copper	-44.8%	1.81
Natural Gas, U.S.	-75.2%	4.04	Fish Meal	-44.6%	1.81
AVERAGE	-75.2%	4.03	Gold	-43.2%	1.81
Palm Oil	-74.8%	4.04	Zinc	-42.0%	1.72
Platinum	-74.6%	4.05	Banana	-37.5%	1.60
Pulpwood	-74.5%	4.06	Iron Ore	-24.4%	1.32
Corn	-74.2%	3.88			

Figure 4. Changes in time prices and abundance of basic 50 commodities (1980 to 2020)

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The only real scarcity is human time

Resources just become more abundant with time

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We can see that with oil reserves, which continuously rise more than consumption

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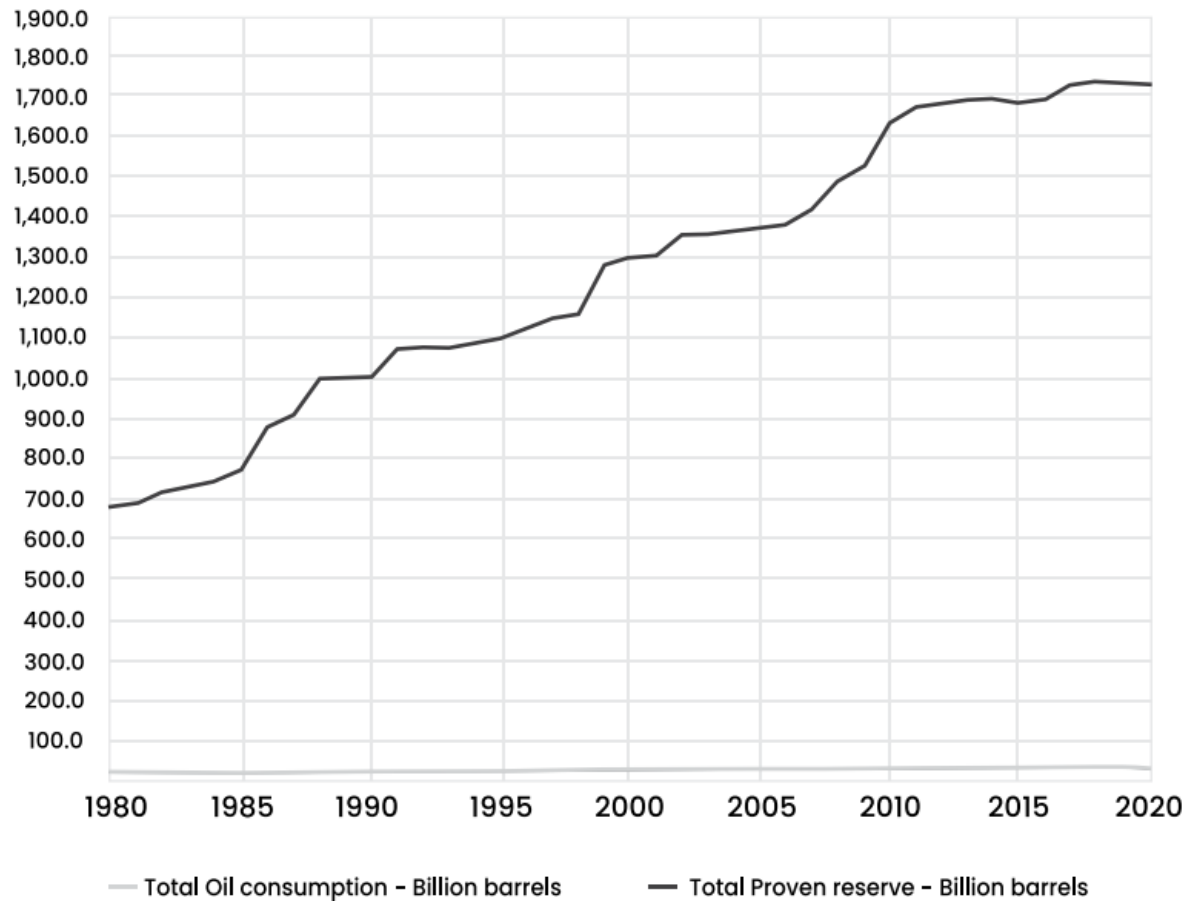


Figure 5. Oil consumption and proven reserves³⁴

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Simon's bet

After the suspension of dollar convertibility to gold, prices rose

People thought this was caused by things become scarce: industrialization had exhausted Earth's resources

Paul Ehrlich, a geologist was a leading hysteric, predicting doom rfrom this

Julian Simon offered to bet him that things would become more abundant

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Ehrlich picked the metals and the timeframe.

Simon won the bet on them all

The geologist thought Earth was a static bucket we are consuming from

The economist understood resources are created by *humans acting*

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Time Preference

A universal preference for earlier over later satisfaction.

The future is uncertain; you might die before it comes

And in the case of durable goods, the earlier you have it, the longer you are likely to have it

Time preference is always positive: a good now is always preferred to an identical good in the future

The degree of discounting of the future is the rate of time preference: it varies between individuals and depending on situations

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Economizing Time

Economic scarcity is the scarcity of time

Economizing is the economizing of time

Humans seek to increase the quantity and the subjective value of our time on Earth

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Time can be spent in two broad ways: Leisure and labor

Leisure is the time you spend doing things you enjoy, for their own sake

Labor is the time you spend doing things for the sake of their output

We'd like to spend all our time in leisure, but to do so would cause an early death

Reason also allows us to imagine ways in which we can improve the quality of our leisure

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The economic question is:

How we trade off present utility against longer survival and future utility

The most important trade an individual conducts is with his future self

This starting point can help us make sense of all economic action

Labor sacrifices present leisure in favor of future rewards

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Economizing Action

Everyone alive engages in economizing action every day

Learning economics helps us understand these actions consciously, and optimize them

The following 9 chapters explain the 9 ways human economize:

- | | |
|---------------|----------------------|
| 4. Labor | 9. Trade |
| 5. Property | 10. Money |
| 6. Capital | 11. The Market Order |
| 7. Technology | 12. Capitalism |
| 8. Power | |

The first five chapters discuss individual economizing acts, while the next 4 discuss economizing in a societal context

Lecture 4: Labor

November 6, 2023

Humans can spend their time in two ways:

Leisure: Activities you do for their own sake

Labor: Activities you do for the sake of their output

What you want to do vs what you have to do

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Labor is when you employ your body as a means to an end

Labor has negative utility, you would rather be doing something else

As children, we can only think of immediate gratification: I WANT IT NOW!

As we mature we think more about the future, and we realize we can have a better future by sacrificing the present

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Economizing for the future takes two forms:

Economizing to live longer

Economizing to increase the value of future periods of time

Reason allows us to see how we can improve our future state, no matter how good or bad the present is

Not working means death, sooner or later

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Primary way that humans provide for the future is **work**, via **production**

Production is defined by Mises as the “alteration of the given according to the designs of reason.”

“These designs—the recipes, the formulas, the ideologies—are the primary thing; they transform the original factors—both human and nonhuman—into means. Man produces by dint of his reason; he chooses ends and employs means for their attainment. The popular saying

according to which economics deals with the material conditions of human life is entirely mistaken. Human action is a manifestation of the mind.”

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Labor is “the employment of the physiological functions and manifestations of human life as a means.”

Consumer goods, final goods, or first-order goods satisfy human wants directly, independent of other goods. This is the end goal sought from the production process and the reason the process is undertaken.

Producer goods, intermediate goods, factors of production, or higher-order goods are goods that satisfy human wants indirectly when used to produce consumer goods. Human labor can be viewed as a producer good, but this term is usually used to refer to capital.

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A **capital good** is any good that is acquired not to be consumed, but to produce other goods.

The existence of a capital good requires the sacrifice of consumer goods.

Productivity is understood as the quantity of output produced by one unit of input in a specific period of time.

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Exchange or trade: Willfully induced substitution of a more satisfactory state of affairs for a less satisfactory one. Production itself can be understood as an exchange of leisure time and capital inputs for the outputs of labor production.

Price: The thing that is given up in an exchange.

Cost: The value of the price; the value of the satisfaction one must forego in order to attain the desired end.

Profit, gain, or net yield: The difference between the value of the price paid (the cost incurred) and that of the goal attained. Profit in this primary sense is purely subjective; it is an increase in the acting man’s happiness, a psychic phenomenon that can be neither measured nor weighed.

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Productivity of Labor

Wage labor is compensated, unlike gifts

Wage labor is consensual, unlike slavery

Both the worker and employer need to agree for the employment to happen

Employer values the labor based on its productivity

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Employer will hire worker if wage is lower than marginal revenue product

Marginal revenue product = marginal product of hiring worker x price of product

If wage < MRP → hire

If wage > MRP → do not hire

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Example:

Hiring a new worker at a restaurant allows you to make 20 extra sandwiches a day, and each sandwich sells for \$5. The extra raw ingredients cost \$2 per sandwich.

The marginal product of the worker = 20

The marginal revenue product = $20 \times (\$5 - \$3) = \$40$

If the worker costs less than \$40 per day, you would hire him

If the worker costs more than \$40 per day, you would not hire him

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Labor has a nonspecific character: it can be repurposed into various production processes

Demand for human time continues to always grow

Marginal productivity of labor continues to increase over time, especially after the industrial revolution

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Unemployment

In the 20th century, the concept of unemployment became highly intertwined with labor

Many think it's an unavoidable and inevitable part of a market economy

But that's baseless

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Unemployment is as normal a part of the labor market as burning crops is a normal part of the food market

Inflation and minimum wage laws create unemployment

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Inflation causes prices to rise, making workers demand higher wages, but their productivity does not rise

Inflation reduces the resources available to workers and employers, as they are appropriated by the holders of new money

So employers cannot offer workers higher wages, and they inevitably have to fire some, and/or go out of business

==

Credit inflation causes the business cycle

Inflationary boom results in the financing of unsustainable investments

When credit tightens, entire sectors witness bankruptcies and mass layoffs

The result is that plenty of workers with the same skillset are jobless

==

As inflation causes unemployment, minimum wage policies are proposed to fix this

Rather than magically making employers able to pay higher wages to more workers, they instead make it illegal to hire the lowest productivity workers

==

Before the 20th century, the concept of unemployment didn't really exist

You got employed at the best rate you could secure, or you chose to not work

Involuntary unemployment did not really exist

==

Switzerland, the last country on the gold standard, illustrates this

They had practically no unemployment before they went off the gold standard in the 1970s

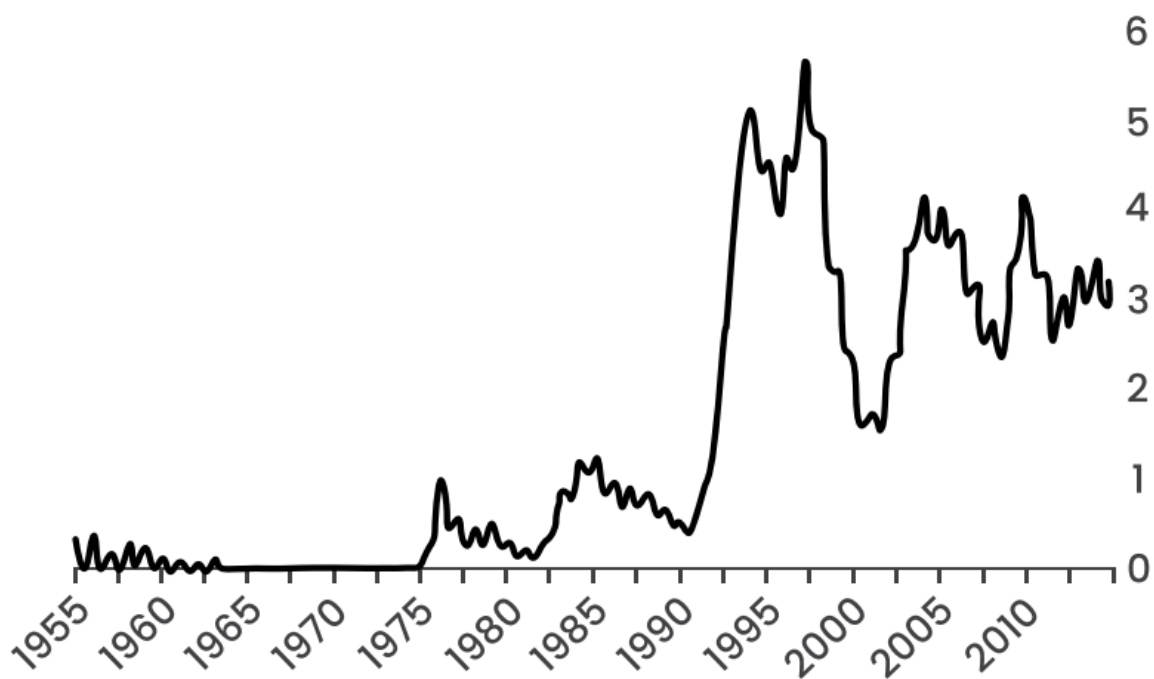


Figure 7. Unemployment rate in Switzerland

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In a free market, there would be no inflation, and savings would appreciate

It would be common for people to forgo work as they can live off their savings and it wouldn't be a disaster

Without business cycles, there would be no systematic bankruptcies destroying the jobs of many

==

Will work ever end?

Time being scarce means that the supply of labor has an opportunity cost: leisure

As productivity and wages rise, workers are able to afford more leisure, so they might supply less labor

Can we get to a point where we don't need to work anymore?

==

Keynes speculated that productivity will continue to increase so much that by 2030, humans would only need to work a fifteen-hour work week to produce what they need

We would run out of things to do

"Mankind is solving its economic problem"

==

in reality, the economic problem is a permanent part of the human condition, as we are constantly facing choices between scarce objects

because that scarcity comes from our scarce and extremely valuable time.

So long as humans are alive and need to decide what to do with their time, the economic problem exists

There can be no final solution to the economic problem, only the replacement of bad choices with better choices.

==

No matter how many material objects we have, we will always have a choice to make at the margin between immediate and future satisfaction.

We can always forsake present satisfaction for more future satisfaction. There will never be complete satisfaction because human reason will always foresee a better possibility and work toward it.

==

is nonsensical to imagine, as Keynes does, that work could ever end, or the need for work could ever go away, or that abundance will reach a point where labor will not be needed. We are always economizing, and we always have to make choices between alternatives. As our living standards improve, our choices improve, but the act of choosing must remain, at least for as long as humans are mortal.

==

Is Labor Exploitation?

People who don't and can't work keep saying this, mainly Marxists

Labor Theory of Value: Value is created by labor, so anything earned by capitalists is unjust exploitation

The (very stupid) rationale:

- All economic goods require labor to produce them, so labor creates value
- Value is a function of how much labor goes into production
- But capitalists make money from selling the output, even though they didn't contribute to the value
- Any money made by the capitalist is exploitation of the worker

==

This is wrong because value is created by labor, but not only labor

Capital also contributes to value creation.

Try to work without capital and see how productive you are

Why would workers choose to work for capitalists if the capitalists don't provide value?

The capitalist forgoes consumption to provide capital goods: All the world's capital is foregone consumption. Every single machine could be sold and turned into an amazing consumption good for the capitalist.

==

Without compensation for the capitalist's decision to forgo consumption, there would be no incentive to provide capital goods for workers, which would destroy their productivity

The trade between the capitalist and worker has existed forever: natural trade between someone who wants to work but lacks the capital to increase his productivity, and someone who has the capital but no ability or interest in working with it

Both benefit from this relationship

Any time this relationship has been outlawed, massive devastation ensued

Lecture 5: Property

Monday November 20, 2023

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Property, according to Menger: “the entire sum of goods at an economizing individual’s command for the satisfaction of his needs”

Property, according to Yiannopolous: “Property may be defined as an exclusive right to control an economic good”

==

Property is the only possible way of dealing with scarcity

No scarcity, no economic problem

Menger: “Property, therefore, like human economy, is not an arbitrary invention but rather the only practically possible solution of the problem that is, in the nature of things, imposed upon us by the disparity between requirements for, and available quantities of, all economic goods.”

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When demanded quantities exceed available quantities, we value goods

We take care of them

Try to maintain them in a good condition

Protect them from being taken by others

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The economic rationale for property: Reusing durable goods is cheaper than acquiring new ones every time

It’s cheaper to reuse the same house, spear, or car every day than it is to acquire a new one every time you need it

Farming a plot of land is more economical than having to forage the whole world

Also, property is the only way we can live with clear rules that minimize conflict

==

The only alternative property is conflict

Kinsella: "There is always the possibility of conflict over contestable (scarce) resources. This is in the very nature of scarce, or rivalrous, resources. By assigning an owner to each resource, the legal or property rights system establishes objective, publicly visible or discernible boundaries or borders that nonowners can avoid."

==

Types of property

Consumer goods: the ultimate ends

Durable consumer goods: ultimate ends that last long and are used repeatedly

Capital goods: goods that are not consumed, but produce consumer goods

Monetary goods: goods that are not consumed, and are not productive, but are purchased to be exchanged for other goods

==

In a social system conducive to individuals economizing and seeking to eliminate conflict as much as possible, property claims can be established based on "the existence of an objective, intersubjectively ascertainable link between the owner and the resource claimed,"

==

In a social order free from coercion, there are three ways for individuals to obtain legitimate property, as explained by Rothbard:

1- Homestead objects that were previously unowned

2- Products derived from these objects

3- Objects obtained from rightful owners willingly, either as part of a trade or a gift.

==

Self-ownership

Humans are scarce

This is awkward, but someone has to own humans

There are only three options:

1- Self-ownership: a person owns himself completely, and others have no ownership claims over his body and time.

2- Communal ownership: all members of society jointly own all their bodies and decide jointly what each body does.

3- Slavery: a person is owned by someone else, and his owners get to dictate what they can do with the body and time of the slave

==

Communal ownership is not practically workable. Who decides when people disagree?

Slavery fails because it is:

Inconsistent: Why does someone own himself and others while someone else doesn't own himself or others?

Unethical: Why should anyone own anyone else?

Consequence: We'll all be fighting forever

==

Self-ownership is the only logical and ethical solution

Once one accepts the premise of self-ownership, a coherent framework for understanding rights, justice, and non-aggression emerges.

Extends to what may be produced as a consequence of these choices

==

The only workable solution to human society is property rights

Arguing against property rights is arguing to return to being animals

It's an admission that you do not belong in civilized human society

==

Although economic theory does not dictate political ideology, understanding economic scarcity and subjectively valuing peace and civilization will incline a person to adopt a

libertarian outlook. There are no alternatives to self-ownership that do not result in propagating conflict and engendering enmity and resentment between individuals and groups.

Only libertarianism applies self-ownership completely and consistently

Every other ideology believes in some degree of other-ownership, or slavery

Taxation, conscription, drug prohibition, or medical mandates all contradict self-ownership.

==

Importance of property rights

They are a method of economizing: increase the value and quantity of time we have on Earth

Durable goods increase productivity

Security of property incentivizes investment and future-orientation

Acceptance of property rights allows trade to take place, which increases productivity

==

Property rights are how society scales

Mises: "Private ownership of the means of production is the fundamental institution of the market economy. It is the institution the presence of which characterizes the market economy as such. Where it is absent, there is no question of a market economy."

==

The market economy ensures that resources are only owned by those who can put them to good use in the service of others

Because if they don't they will lose them

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==

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Because if they don't they will lose them

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Lecture 6: Capital

Monday, December 4, 2023

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Capital is a type of property

It is property used for the production of consumption goods

Capital does not have utility for its own sake, only for the sake of what it produces

The same good can be capital or a consumption good depending on whether it is

==

Lengthening Structure of Production

The basic premise of capital is that it causes the structure of production to lengthen

This might sound counter-intuitive

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A car makes a trip quicker than walking, but only if you don't count the production of the car

So why would we engage in longer processes?

Why build a fishing rod when you can just catch fish?

Because the fishing rod is more productive! It makes the marginal fish arrive faster.

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Fishing at different levels of capital:

By hand: 2 hours to catch a fish

By fishing spear: 4 hours to make the spear & catch the fish

By boat: 1 week to make the boat & catch the fish

But after the first fish is caught, the marginal time for an extra fish is much shorter

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Saving

Saving is the mother of capital; only by deferring consumption can capital goods exist.

The fisherman can't build a fishing rod without sacrificing leisure time or eating fewer fish.

He needs to eat during the period of production, which requires that he save

A farmer has to produce enough grain to feed himself during the period when the grains he plants mature into more grains

==

This is true in the most sophisticated production processes

It took almost 9 years for the Boeing 787 to go from announcement to commercial flight

For 9 years, Boeing was paying for engineers and materials without its 787 earning a cent

Someone had to save up capital to pay for the workers and material

Someone had to give up on consumption in order to allow production to happen

==

To lengthen the production process, someone somewhere must forego the consumption of resources in order to provide them to the producers.

The fisherman gave up on food for a day, or spread one day's food over two days

Investors gave up money they could have consumed to give it to Boeing

The only reason to do that is that it will offer a better return

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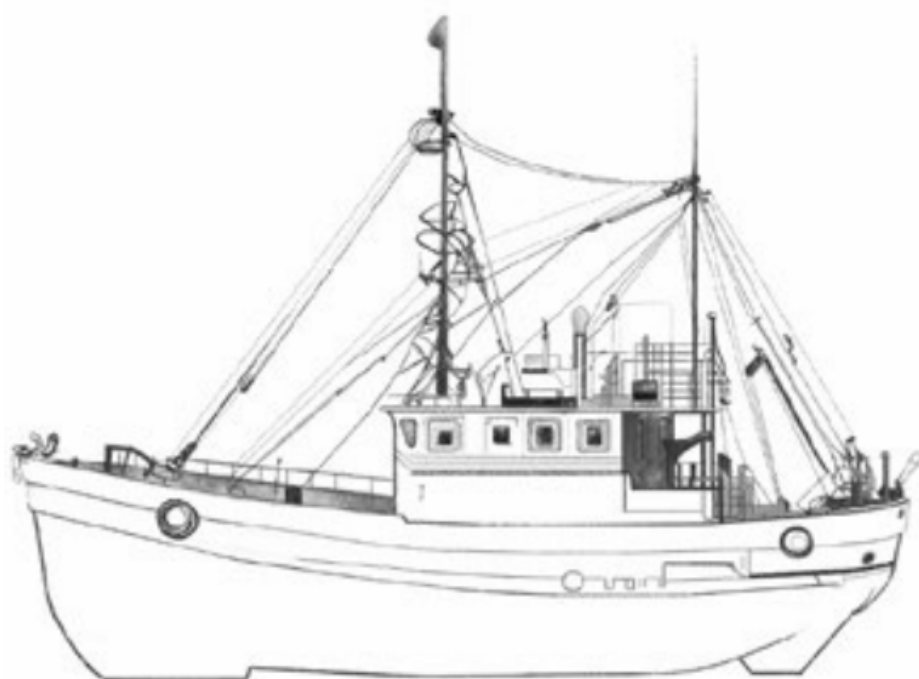
Higher Productivity

Capital is labor, nature, and time stored to allow higher productivity

Production with capital requires less marginal time per unit of output

The more capital, the longer the production process, but the shorter the marginal production

==




5
TONS




100-300




10-30




0-3

==

The same person can go from producing one fish in a day to 5 tons of fish, simply by having capital

This is the main explanation for the disparity in living standards worldwide

Imagine your life without capital goods

What happens to your job without capital?

Capital also allows for goods that were not possible

==

The longer the production process, the more capital is deployed successfully, the higher the productivity of labor, the less of a day's labor needs to be dedicated to securing basic survival, and the larger the margin of safety separating man from starvation.

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Without modern capital, the output of a day's work would be in the rough range of what an individual needs to survive for a day, making existence precarious and uncertain.

Extreme poverty today exists only where capital is scarce, and people need to work daily to survive.

Many things are made cheap by owning the capital, and capitallessness is a prime reason why poverty can appear insurmountable.

==

The High Cost of Capital

Capital isn't a gift from heaven which some have and others don't

Capital is costly, and the cost is constantly paid by its owners: it has to be earned, its consumption has to be forgone, it has to be deployed successfully to be maintained

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Costs of capital:

1- Delayed gratification

Capital is only possible by sacrificing certain present consumption for uncertain future resources

All the world's capital can be converted to consumption at any point in time; every fishing rod and every trawler

Just like a worker has to forgo leisure to work, a capital owner has to forgo consumption

If you think there is no cost to capital, you will end up with no capital

==

2- Destruction

Capital can be easily destroyed and ruined

Like a living organism needs to eat and excrete to survive, capital needs to be employed to produce output and generate returns to maintain it

It takes years to build a boat, but only seconds to destroy it

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3- Depreciation

Capital is constantly degrading. It takes continuous effort to maintain it

4- Risk

Countless risks threaten capital, beyond just destruction and depreciation

It can become unprofitable

It can become obsolete

==

In order to become a capitalist, one needs to first produce something of value for which others can pay him. He then needs to abstain from using that payment to satisfy his own needs, and instead deploy it into a business whose goal is to serve others, by producing outputs, which they subjectively value higher than the market price of the inputs into the production process. At any point in time, failure to provide customers with this value will result in a collapse in revenue and profitability, inevitably leading to bankruptcy and the loss of capital. The causes of such failure are endless: laziness, disinterest, bad luck, better competitors, but the outcome is always the same: the loss of capital.

==

If you don't think capital is valuable and expensive, why do you think workers choose to work for capital owners? Why don't they just work without it?

Capital is a responsibility, not a privilege

You can only keep your capital by deploying it in the service of others

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Economics as human action helps us understand what is needed to own capital successfully

Fiat economics makes capital appear as a heavenly privilege

Victims of Keynesian, Marxist and Fiat pseudoscience economics waste their lives hating on capital and its owners instead of learning how to acquire and keep it

Societies captured by these death cults destroy capital by ruining the incentive for owning it

And they try to replace capital with fiat credit, with calamitous consequences

==

Capital and Time Preference

Cost of capital is sacrifice of present goods in anticipation of future goods

The price of capital is a reflection of time preference

The decision to invest is the balancing of the utility of present goods against future goods discounted for time preference and uncertainty

The constraint on capital formation is time preference

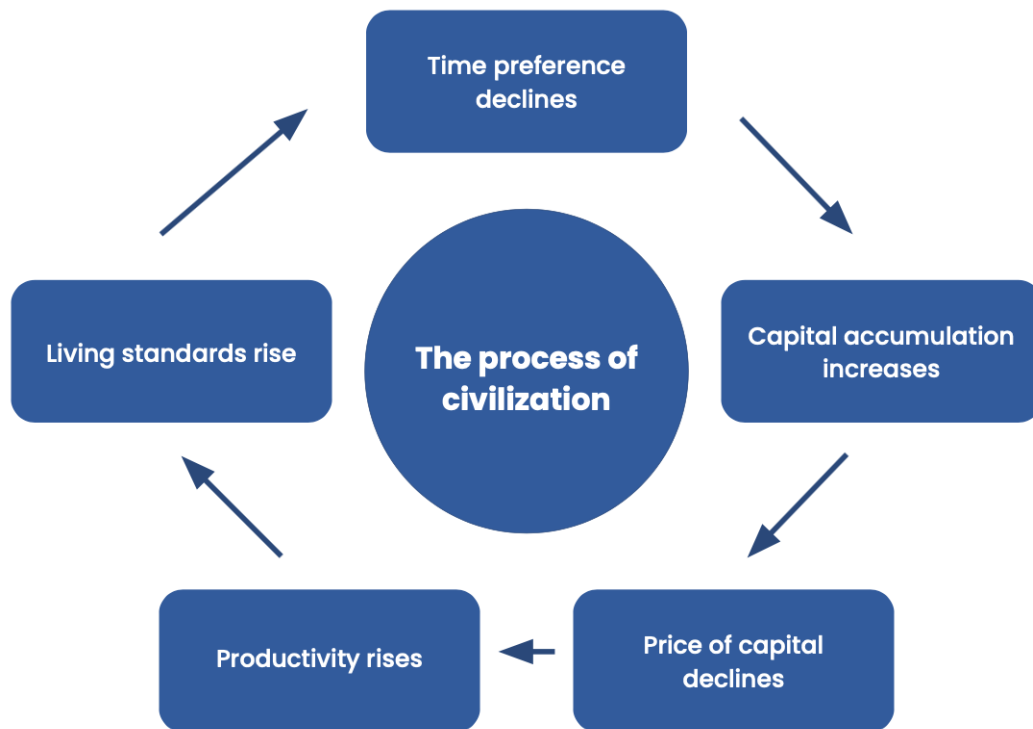
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Time preference is the control knob of capital formation:

The lower your time preference, the more likely you are to sacrifice present goods for future goods

The higher your time preference, the less likely you are to sacrifice present goods for future goods

==



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Savings Fallacies

Most modern economics textbooks emphasize trade rather than capital accumulation

Development organizations in particular, rarely ever mention savings and capital accumulation

When they mention capital, it's to promote borrowing, the diametrical opposite of saving

Development economics can best be understood as marketing brochures for IMF & World Bank debt slavery, as discussed in The Fiat Standard

==

Keynesian clowns portray saving as anti-social

They start by assuming society's income will be divided into saving and consumption according to a predetermined formula. No human agency or action; just a preordained split

Investment = purchasing new capital

Saving = buying stocks, bonds, or bank accounts

Equilibrium is when savings = investments

If savings are too high, unemployment and recession follow

With this brain damage, savings become the cause of economic problems, rather than economic progress

==

Savings cause lower spending, which results in firing of workers and unemployment, resulting in more saving and less spending, in a worsening spiral

Only government can fix this by destroying savings to increase government spending, consumption, and borrowing for investment

And that is why savings as a concept are destroyed

==

Limits to Capital

Can we have enough capital?

No, because we always keep finding more productive ways of using capital, technology keeps advancing

More capital just allows us to devise more advanced ways of doing things

The only limits are our time preference and the opportunity cost of consumption

Lecture 7
Technology
Monday December 18. 2023

Technology is a form of capital, because it increases productivity, but it is not physical

It is non-material, which means it isn't scarce

==

Before economic production takes place in the real world, it takes place in the mind of acting man

Technology is the plan for economic action, and the mechanism by which man achieves his ends

Like a meal's recipe: not a physical part of the meal, but without it, there would be no meal; it is the knowledge that brings it together

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Physical capital runs into diminishing returns without technological improvement

There is no point in continuing to accumulate fishing rods after a certain point

New technology allows the fisherman to invest in new forms of capital

New technology avoids diminishing returns

==

Technology and Labor

The most common misconception of technology is that it takes away jobs: "technological unemployment"

This has been a very common hysteria since industrialization

Marxists have been hysterical about machines from the days of Marx

The Luddites used to organize pogroms against machines

In reality, it increases labor productivity

==

After two centuries of industrialization, and Luddite and Marxist hysteria, the vast majority of British people are employed, with a much higher productivity

Nobody is doing the menial jobs that were obsoleted by machines, but they are doing much more productive jobs

==

Labor is not a consumer good; it is not employed for its utility

It is employed for its productivity, like capital

It is the scarcest of resource, since it is human time

But whereas capital is usually specialized and specific to tasks, human labor is the least specific factor, and can be redirected to new tasks

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Technological progress makes labor more productive, thus more valuable

It just frees time for other tasks

It alleviates scarcity but cannot eliminate it, since scarcity is the scarcity of human time itself

==

Think of transportation, something humans have always wanted

Humans carrying things was the only mode of transportation; very few could afford to hire someone to carry things

The wheel made transportation more productive: a carriage could be pushed by a human and carry a lot more than he could carry

Adding the horse increased productivity even more

The train, car, truck & shipping container all increased productivity

One truck driver can move 50,000kg at 100km/h for 16 hours/day

Airbus A380 can carry 300 tons at 903km/h with a handful of crew members

HMM Algeciras carries 672,000 tons at 28km/h with a few dozen crew members

==

Has employment in transportation been eliminated?

No. In fact, more people work in transportation today than ever before. They are not slaves lifting things on their backs, they are far more productive: engineers, truck drivers, pilots, logistic planners, etc...

Technological advancement is what allows transportation to go from slavery to free labor

==

Nobody has demand for a slave to carry him; people have demand for transportation.

Technology eliminates certain ways of doing transportation, by introducing new, better, more productive ways

Exercise: think of a job in terms of its essence and goal, rather than its mechanics, and see how its productivity has increased

Examples: Waste disposal, farming, teaching

==

Luddites and Marxists are not up against greedy capitalists; they are up against the full force of humanity acting according to economic incentives, seeking to economize by increasing its productivity

They may break a few looms, but they cannot stop automation from making everyone's lives better, even theirs!

Even if you lost your job in a typewriter factory, you are better off living in a world where computers replaced typewriters

==

Their movement died and their ideas became the butt of jokes, while technological advancement continued to make life better for everyone.

They were utterly powerless to stop the ingenuity of billions of human beings from making life better for all of us.

Once a wheel, loom, car, airplane, or software code is invented, people recognize the value it provides in terms of increased productivity.

Violent restrictions may succeed in delaying these technologies, but they also serve to increase the returns for those who manage to get around them. The individuals, businesses, or regions that utilize a productive technology not utilized elsewhere can produce at lower prices.

==

Technology and Slavery

Technology does not eliminate jobs, it eliminates slavery

Higher productivity makes labor more valuable, able to command a higher price

High productivity means the value of labor is not in power, but intellectual ability & honesty

Heavy menial work is outsourced to machines

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Work becomes more about brains than brawns

An angry slave can destroy a machine worth 100 years of his labor. A paid worker has no incentive to do so

The more capital we accumulate, the more valuable workers are, and the more important their consent for production

==

When everyone has hundreds of slaves' labor at his disposal through modern fuels, the value of adding another slave declines

Without modern capital, a slave ~doubles the amount of power you have to meet your needs

With modern capital, a slave raises the amount of power you have to meet your needs by ~0.5%

Higher productivity raises the marginal product of a willing worker, while lowering the value of the marginal product of a slave

==

Labor, property, capital, trade, and energy are scarce, ideas are not

There are no costs to copying ideas: copying the wheel doesn't take it away from its inventor

This makes technology the fundamental driver of long-term growth

==

Labor comes at the cost of leisure, which makes it more expensive as our income increases

Capital comes at the cost of consumption and runs into diminishing returns

Trade is limited by the extent of specialization, which is limited by technological realities

==

We can see that innovation is the long-term driver of economic growth because larger populations witness faster economic growth than smaller populations

If availability of economic resources was what matters, smaller populations would be richer than larger populations

Ideas are harder to destroy than physical capital

Ideas don't suffer from depreciation like physical capital

==

Technology and Entrepreneurial Innovation

Most universities teach that technology is the product of scientific advances:

Scientists make discoveries, engineers apply them to produce innovation

Reality is different: markets are the drivers of innovation

Technological innovations are only innovations if they pass the market test and increase productivity, commanding enough of a market price to compensate the producer for deploying them.

==

See Terence Kealey's *The Economic Laws of Scientific Research*

Most innovations of the industrial revolution came from engineers, workers, craftsmen working with their hands, not scientists

It was usually illiterate, semi-literate, or uneducated workers coming across practical solutions for problems

It isn't thermodynamics that gave us the steam engine; the steam engine gave us thermodynamics

==

It will be seen, therefore, that the development of the steam engine, the one artefact that more than any other embodies the Industrial Revolution, owed nothing to science; it emerged from pre-existing technology, and it was created by uneducated, often isolated, men who applied practical common sense and intuition to address the mechanical problems that beset them, and whose solutions would yield obvious economic reward.

Looking back at the Industrial Revolution generally, it is hard to see how science might have offered very much at all to technology, because science itself was so rudimentary. Chemists who subscribed to the phlogiston theory, or to the view that heat was a substance, or who tried to build perpetual motion machines, were not likely to be of much use to engineers. Indeed, during much of the nineteenth century, the reverse was true; scientists scrambled to catch up with engineers. Carnot's descriptions of the laws of thermodynamics, for example, emerged from his frustration with Watt's improved steam engine, because that steam engine broke all the rules of contemporary physics. Watt's engine was more efficient than theory stated it could be, so Carnot had to change the theory

==

Software

As operating machines became increasingly repetitive and predictable, humans began to devise ways to automate the instructions machines needed.

In 1950s, computer instructions were specified in abstract languages independent of the computer's hardware

This created a new kind of economic good: codified pure information, purest technological good

No physical form, but increases productivity enormously

Non-rival and non-scarce

Just like automation invaded all production processes, software is following

Lecture 8
Energy and Power
January 1, 2023

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Using energy is an economic act that increases productivity, like capital or trade or technology

We can't understand a modern economy without understanding energy

"Although everybody has a feeling of what energy is, it is difficult to give a precise definition for it. Energy can be viewed as the ability to cause changes."

"In physics, energy is the quantitative property that must be transferred to an object in order to perform work on, or to heat, the object."

==

Work: force or heat

Force:

Can be expressed and measured using the standard international units from Chapter 1

Force acting on 1 kg of mass to produce acceleration of $1 \text{ m/s}^2 = 1 \text{ newton}$

A force of 1 newton acting over a distance of 1 meter produces 1 *joule* of work

Heat:

1 calorie is the heat needed to raise the temperature of 1 cm^3 of water by 1 degree Celsius

1 calorie = 4184 joules

==

Power: Energy over time :: joule/s = *watt*

Human bodies need to consume energy to survive and to act

Humans also wield energy to economize

==

Power in transportation

Transporting 500 kg for a certain distance

Human will need 20 hours

A horse and carriage needs 2 hours (~10x the power of a human)

A car needs minutes (100-500x the power of a horse)

==

Energy in Human History

Nomadic hunter-gatherer societies: Raw energy of nature: sunshine, running rivers

Sedentary agricultural civilization: domesticated animals, watermills, windmills, logging

Industrialization: coal, oil, gas, nuclear

Progress is increasing energy per mass:

Wood:	16 MJ/kg
Coal:	24 MJ/kg
Oil:	44 MJ/kg
Gas:	55 MJ/kg
Uranium:	3,900,000 MJ/kg
Batteries:	0.5 MJ/kg

==

Energy Abundance

Energy is not scarce, it is infinite

Beyond our ability to even quantify

Sun hitting Earth is hundreds of times larger than our consumption

Wind, geothermal, and rivers are enormous

Hydrocarbon & uranium reserves are practically infinite

We never run out of these resources; the more we consume, the more we look, the more we find

==

If energy is not scarce, then it is not an economic good (Chapter 2)

Energy does not meet human needs; *power* does

Solar, wind, hydrocarbon, nuclear, or hydroelectric energy that is not directed to satisfying human needs is not a good any more than the energy of a distant star is.

==

Total quantities of energy do not matter; energy per second directed to meet your needs does

Humans cannot value energy resources in the aggregate, only at the margin.

They value the next unit of energy directed to meeting their need, over time: *humans value power*

Only when directed to the satisfaction of our needs can energy sources be considered goods, and only when directed to the satisfaction of our needs does energy indeed become scarce, and thus, an economic good.

Energy, then, is not an economic good, but power is.

==

Power Scarcity

Energy, as the capacity to do work, is irrelevant to our needs

Power, as the capacity to do work over time, is what meets our needs

Power is how energy meets our needs

Mises explained nobody has to choose between all the gold and iron in the world. People only choose between the next marginal unit of iron or gold.

Given the relative scarcity of gold to iron under normal market conditions, people usually value the marginal unit of gold more than iron

==

Similarly, people don't buy energy in total. They buy definite quantities of energy over units of time; they buy power.

Energy as an economic good, cannot be divorced from the time in which it performs the work required for it to satisfy human needs

Channeling the energy to meet needs is what makes it a good

==

Energy in its raw form is not an economic good because it is highly abundant, and because it has very little utility in its naturally occurring levels without being channeled into productive uses, at the margin, as power. In order to operate a car, airplane, computer, phone, loudspeaker, ventilator, or any of the many critical and ubiquitous technological devices of the modern world, a specific amount of energy needs to be directed at the device per second of operation. The economic value that accrues from operating these devices is dependent on this continuous stream of energy entering the machine at the required rate—i.e., the power supply. To the extent that energy provides utility to humans, it does so at the margin, in the form of power.

==

Just like humans value goods at the margin, humans value energy in the form of power

This helps us understand why humans value hydrocarbons so much, and spend so much to make them work

Hydrocarbons can deliver large amounts of energy per unit of time: high power

They are highly mobile, chemically stable, easy to transport, and can operate anywhere anytime

Wind and sunshine are free, and we've had them forever; yet we continue to spend trillions on hydrocarbon infrastructure

Because it's worth it!

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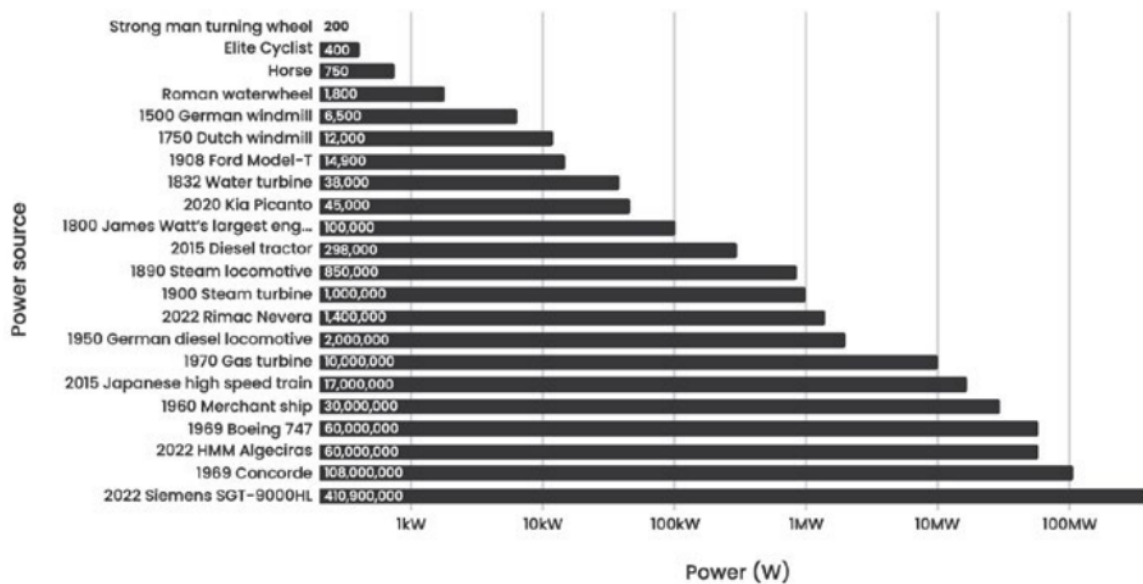


Figure 9. Maximum power over the past 3,000 years

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Smil also compares the maximum power in field work across time. Whereas a peasant hoeing a cabbage field would produce 50W, a farmer plowing with two small horses would have 1,000W at his disposal. With a small tractor, in 1950, a farmer could harvest with 50kW of power at his disposal. And in 2015, with a large diesel tractor, a farmer could have 298kW of power at his disposal. In three centuries of technological progress, the amount of power at the disposal of a farmer has increased 6,000-fold.

==

Before hydrocarbons, humanity was only able to access limited amounts of usable power, and only near waterwheels and windmills. With hydrocarbons, large amounts of power can be conjured anywhere at any time, allowing for growing population centers, growing trade links between these population centers, and higher productivity.

By having hydrocarbons deliver power on demand, humanity massively increased its living standard.

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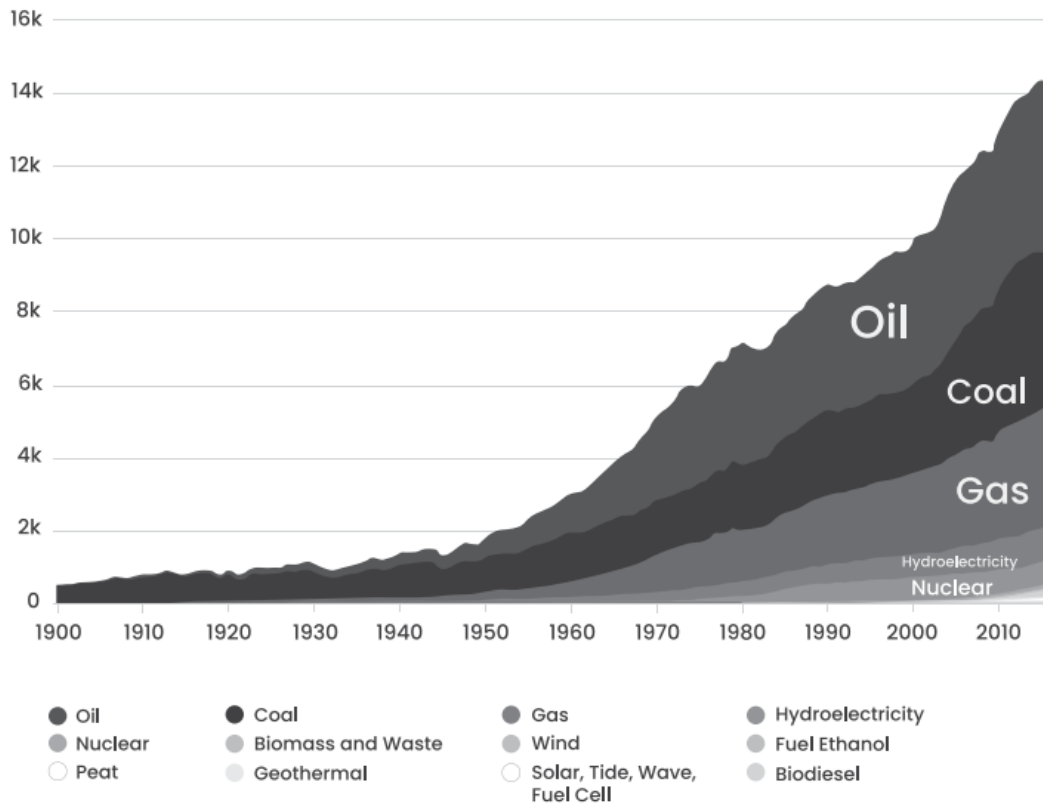


Figure 10. Global primary energy consumption⁹⁸

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The Industrial Revolution really as the hydrocarbon revolution: the deployment of coal, then oil and gas

80% of modern primary energy consumption comes from hydrocarbons. The other 20% is practically not possible without hydrocarbons. You can't make steel, windmills, water turbines, or nuclear reactors without hydrocarbons.

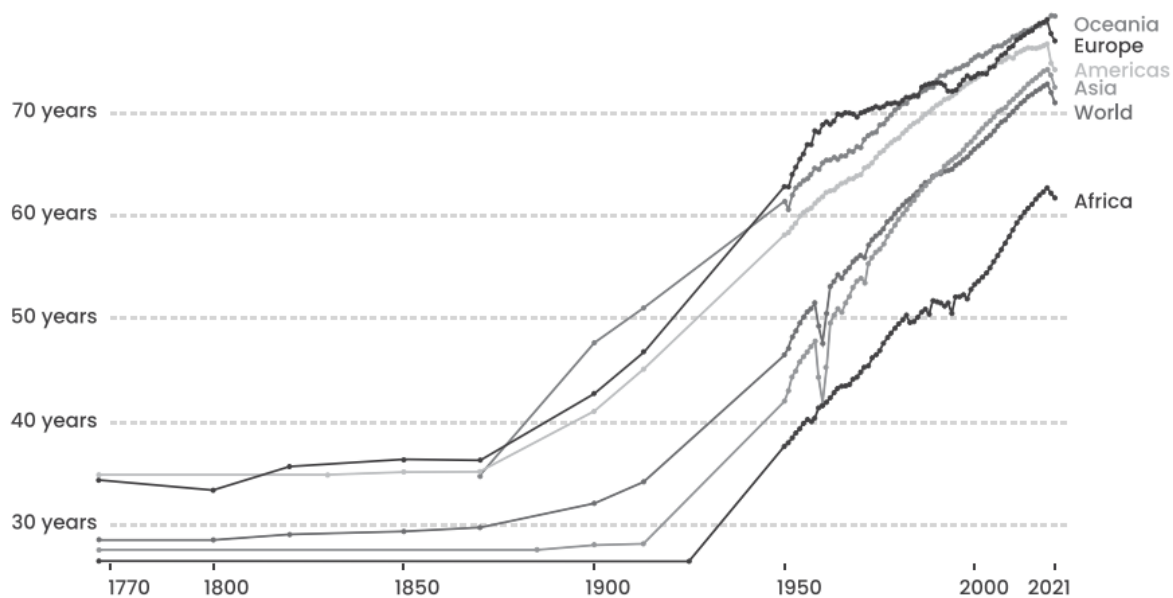
Modern transportation came from hydrocarbons

Modern capitalism & division of labor are only possible thanks to hydrocarbons

Without hydrocarbons, most workers would be stuck in subsistence production, with very little surplus available for trade

Our modern living standards are a product of hydrocarbons

==



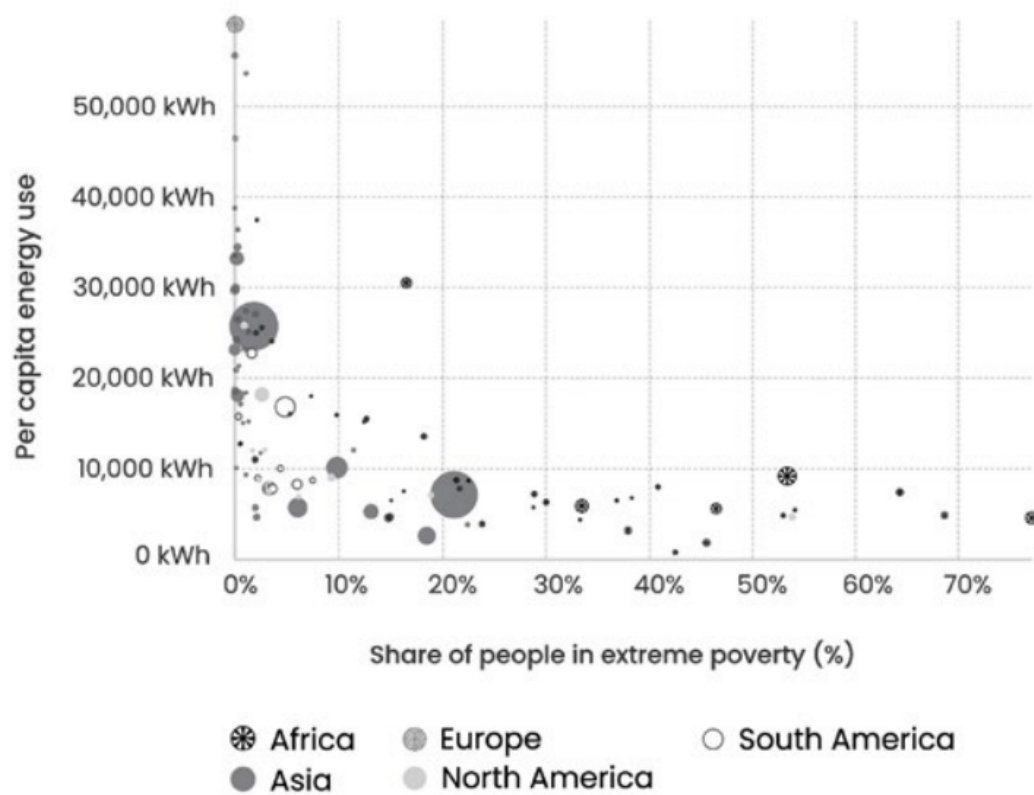
Source: UN WPP (2022); Zijdemann et al. (2015); Riley (2005)

OurWorldInData.org/life-expectancy · CC BY

Note: Shown is the 'period life expectancy'. This is the average number of years a newborn would live if age-specific mortality rates in the current year were to stay the same throughout its life.

Figure 12. Global life expectancy, 1770-2021

==



Source: International Energy Agency (IEA) via The World Bank
 OurWorldInData.org/energy-production-and-changing-energy-sources/ • CC BY-SA

Figure 14. Energy use per capita vs. share of population in extreme poverty¹⁰²

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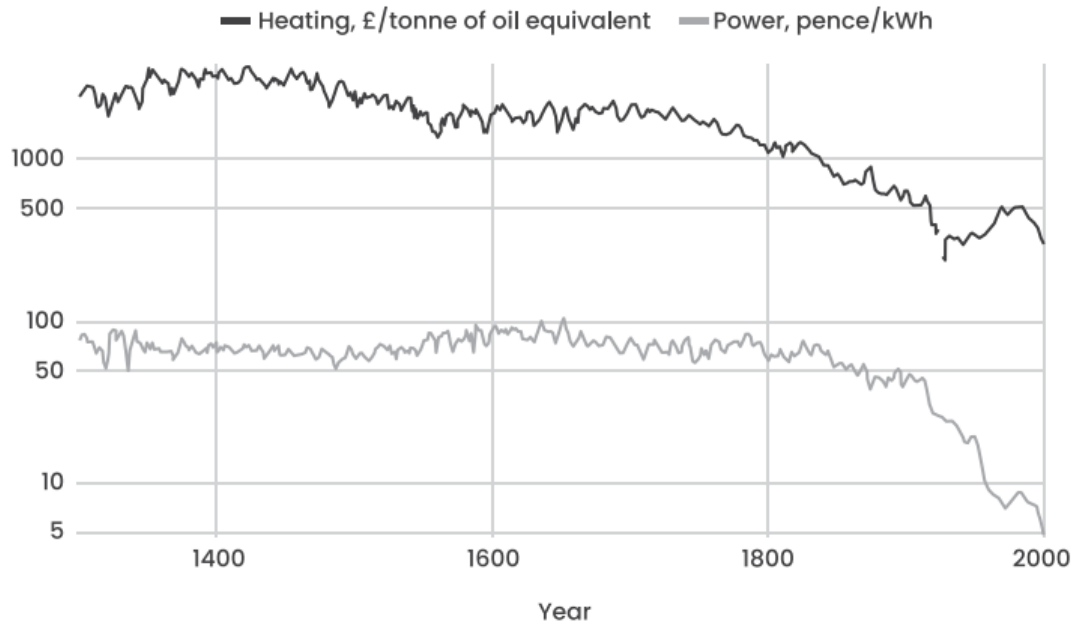


Figure 15. Cost of heating and power in UK, 1300–2000

==

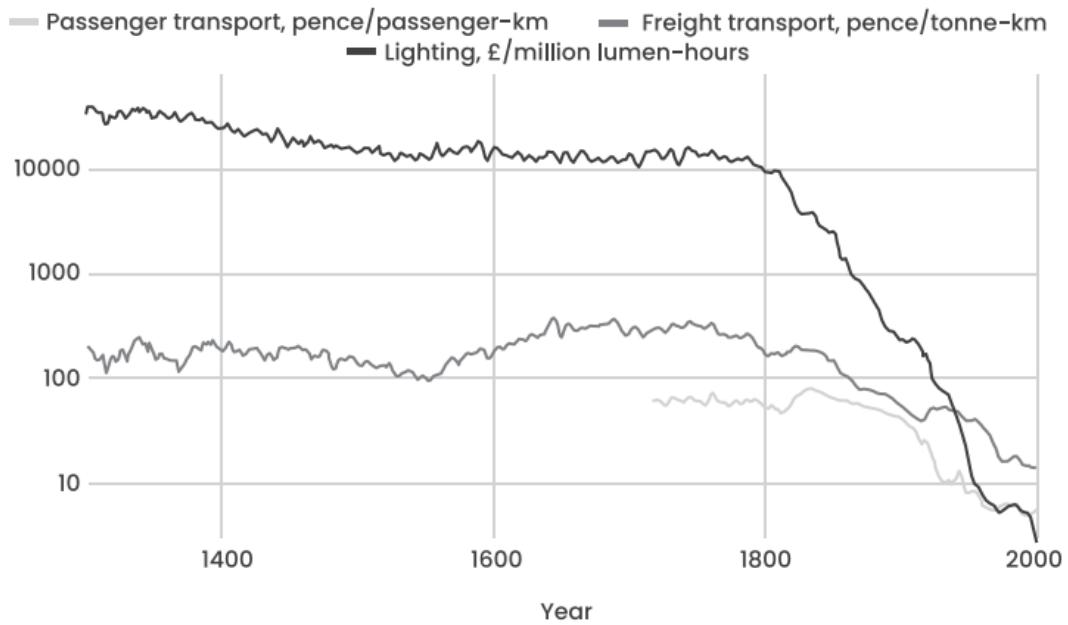


Figure 16. Cost of lighting and transport in UK, 1300–2000

==

Power of hydrocarbon alternatives

It seems common knowledge that hydrocarbons can and will be replaced by superior alternatives: wind, solar, biofuels, and other technology

This started in the 1970s inflation: We are running out of fuels

But then inflation subsided & our consumption went up enormously: fuels will burn Earth

This is all inflation cope. See *The Fiat Standard*

==

Sunshine and wind are free, biofuel waste is close to free

Why wouldn't they be cheaper than hydrocarbon fuels that require very expensive infrastructure to produce them?

The answer is in marginal analysis!

==

Energy is not purchased in the aggregate; it is purchased at the margin

Nobody has to choose between all the world's oil and sunshine

People purchase power, not energy

People purchase power at the time and place they need to meet their needs

==

Sunshine and wind are nice, but they cannot be made available anytime anywhere

Modern technology needs power on demand

High productivity machinery needs a low marginal cost of power at all times

Sunshine and wind are free when they're available, but their cost is infinite when they are not available

After significant investment in infrastructure, hydrocarbons can be made available on demand at a very low marginal cost

If you want the essential technologies of the modern world: cars, electronics, incubators, refrigerators, etc... you need hydrocarbons

==

This is why electric grids relying on wind and solar is purely a government-subsidy phenomenon

Since they're not available 24/7/365, they need reliable sources to provide power at 24/7/365, making solar & wind infrastructure superfluous

As humans economize, they seek higher energy density. To make solar and wind reliable, we need to use batteries, which have abysmal energy density ~0.5 MJ/kg, ~1% of the density of oil or gas

==

Energy and freedom

High energy consumption frees humans, eliminates slavery and empowers women

With humans consuming a quantity of power similar to what they produce, there was little scale for producing surplus and trading it with others; little division of labor

Trade wasn't very useful, but slavery was

Acquiring another person to work for you massively increased the energy & power at your disposal

==

With high energy consumption, many of our needs can be met with machines instead of other humans

When you have a large amount of energy at your disposal, you have a surplus you can trade with others

And acquiring the energy of another human being as a slave makes a small difference to the energy at your disposal

==

The value of labor became a lot more cognitive than physical. You needed workers to manage machines, not just do grunt work.

Grunt work is suitable for slaves, but managing machines is for free humans

With expensive machinery providing capital, the consent of the worker using the machinery became more valuable. A disgruntled slave could ruin very expensive machinery

==

That's why the spread of industrialization coincided with the abolition of slavery

Wherever the engine went, slaves were freed

The economics of machinery make slavery far less workable economically. It makes the hard labor slavery provided available at a very low cost, and increases the productivity and value of a worker's time to the point where his voluntary cooperation is more valuable than any slave labor they may perform.

==

High energy consumption, tech advance & capital accumulation also liberated women

Before, productivity was largely a function of physical strength, making women highly dependent on men, who are physically stronger

When machines do the physical work, productivity becomes a function of cognitive ability, where women are far more similar to men

Independence becomes available to men and women

Lecture 9: Trade

Monday January 15, 2024

Part II discussed economizing in the individual context.

Part III discusses economizing in the social and interpersonal context.

There are only two modes of interaction between people: consent and coercion

Consent: Everyone agrees, no violence or threat of violence

Coercion: One party acts out of fear of violence

==

Trade is a prime example of consensual interaction

If both parties engage willingly, we can deduce they both expect to benefit

Trade is positive sum: both parties are better off

With coercion, we can deduce one party is made worse off, or else they would not need to be coerced

==

Coercion is zero sum: at least one party loses, but more likely it's negative sum: the losses are greater than the gains

Value is subjective and the thief could value something less than the owner

The threat of violence implies violence is a possibility, and the cost is usually high, and could be higher than the loot.

And violence brings the threat of retaliation

==

No matter the spoils of violence, they pale in comparison to the benefits of civilized cooperation

Robinson Crusoe and Friday discover each other and have two choices: coercion or consent; fight or cooperate.

Crusoe can steal Friday's things, enslave him, or murder him. There is a benefit from doing those things, but there is also the cost of fighting Friday, which could be fatal

Whatever the gains, they will be less than the gains from cooperating with Friday peacefully

Everything Friday has is a tiny fraction of the gains from future of cooperation forgone through coercion

You can only rob him once, but you can benefit from exchange forever

==

Subjective valuation

If value were objective, what would people gain from engaging in trade? Why would they want to exchange something for something else when they value both goods equally? Marginal utilities of exchanged goods must increase for both parties. Each party gains higher satisfaction from the thing they acquire than from the thing they give up.

==

Valuation is subjective and depends on many factors, including abundance

If Crusoe has an apple but prefers oranges, and Friday has an orange but prefers apples, they can both benefit

Also, diminishing marginal utility:

If Crusoe has a lot of apples while Friday has a lot of oranges, they would both benefit from exchanging

==

Absolute Advantage

Difference in the cost of production also explains trade

If Crusoe is better at catching fish while Friday is better at hunting rabbits, they both give up something that's cheap for them to secure in exchange for something expensive

Imagine that in a day's work, Friday can catch 8 rabbits or 2 fish, while Crusoe can catch 2 rabbits or 10 fish.

==

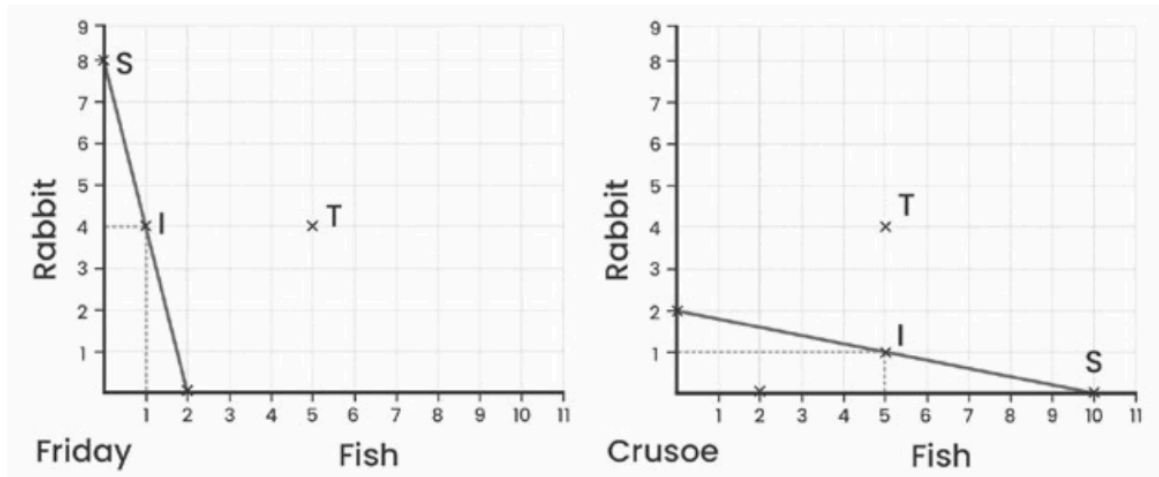


Figure 17. Production possibilities in isolation and trade

==

By simply specializing in the production of the cheaper good, they have both produced more fish and rabbits than if they had each split their time and effort between producing both.

This result almost seems like a magic trick: both work the same number of hours, and yet they both end up with more rabbits and fish to eat, and are both better off

Cooperation is a gift that keeps giving. Every day they can now specialize and have more.

If they had fought, one of them would at most have a one-off loot

==

Comparative Advantage

Even differences in opportunity costs create opportunities for specialization and trade

Even if one party can produce both goods more cheaply

Because time is the ultimate scarce resource, cooperation is beneficial to both because it allows them to dedicate their time to what is more productive

Imagine if, in the example above, Crusoe were more productive at both fishing and hunting, and he could produce 6 rabbits or 12 fish per day, while Friday could only produce 4 rabbits or 2 fish.

==

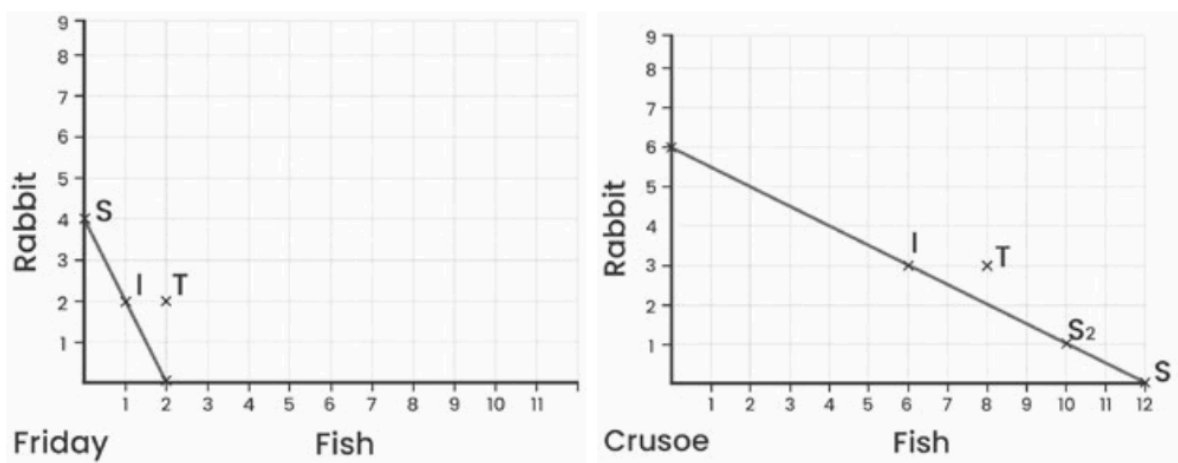


Figure 18. Production possibilities in isolation and comparative advantage trade

==

The difference in opportunity cost is the advertisement for the trading opportunity

Crusoe has two options for securing an extra rabbit: 1) Reduce the time spent fishing and give up 2 fish in order to have enough time to hunt 1 rabbit, or 2) give Friday anything more than half a fish to get him to part with one of his rabbits. The first method costs Crusoe 2 fish, whereas the second costs him a sum larger than half a fish.

==

The mathematical examples are helpful in this regard, but they have been overemphasized in modern economic education

The profound insights into the benefits of trade are usually covered only briefly in the early chapters of most textbooks, while the needlessly complex mathematical models take center stage. The mathematical sophistry makes for easier standardized testing, and also transforms these textbooks into a series of elaborate half-baked rationales for government intervention in trade.

==

Specialization and the Division of Labor

The motivations for trade can be derived from differences in taste and valuation, as mentioned above, but in an extended market order, they are driven ultimately by differences in the cost of production and intensified by specialization.

Whereas in isolation, man produces what he needs, in a social system, man produces based on what he expects others to need.

By specializing in producing a good for a market, rather than producing for your own consumption, it becomes possible to dedicate labor toward the place where it is most productive, not where it is merely necessary.

==

Beyond just an increase in productivity, trade leads to social cooperation and civilized behavior, as the benefits of being able to engage with society peacefully in a division of labor are very high.

Other people are your path to meeting your own needs effectively: BEHAVE!

==

Rothbard argues that specialization is driven by

- (a) differences in suitability and yield of the nature-given factors
- (b) differences in given capital and durable consumer goods
- (c) differences in skill and in the desirability of different types of labor.

In the modern world, differences in capital stock are the most important

The more capital intensive the world, the more specialization depends on capital stock

==

Extent of the Market

The example of two people living on an island illustrates the benefits, but extrapolating to larger societies amplifies them

As they specialize and increase productivity, they can accumulate more specialized capital and increase productivity further

If more people join, they can each specialize further and increase productivity further, creating more goods, which allows them to move beyond basic survival

==

In a world divided into isolated economies of 1,000 people each, there can be no cars, computers, or smartphones.

As the number of people in an economy increases, more products become possible

Leonard Read's I, Pencil

==

As the market with which an individual is able to trade increases in size, the individual is able to select from a growing number of producers and sell to a growing number of consumers.

That's why people move from rural areas to cities

That's why the wealthiest people are all integrated into the global market economy

That's why isolated communities are poor

And why trade restrictions impoverish countries

Why the US being a large free trade zone made it so wealthy

==

It is no wonder that humans are constantly attempting to engage in trade with one another, and trade encourages humans to moderate their aggressive and hostile instincts toward others and seek productive cooperation instead. The ability of strangers who are not connected by bonds of family or kinship to arrive at a mutually beneficial exchange is one of the basic building blocks of human civilization. The extent to which strangers can expect to deal peacefully with one another, respecting each other's bodies, property, and will, is the extent to which they live in a civilized human society.

Lecture 10
Money
Monday January 29, 2024

==

The key to the Austrian understanding of money:

“The services money renders are conditioned by the height of its purchasing power. Nobody wants to have in his cash holding a definite number of pieces of money or a definite weight of money; he wants to keep a cash holding of a definite amount of purchasing power. As the operation of the market tends to determine the final state of money’s purchasing power at a height at which the supply of and the demand for money coincide, there can never be an excess or a deficiency of money”

==

The Problem Money Solves

Trade is highly beneficial. But the more people want to trade, the more they run into the problem of coincidence of wants.

If we understand this problem, we can understand what makes money

==

In an isolated family or small tribe, there are only a few people and a few goods they produce. These can be exchanged directly: **Barter**.

Proximity and familiarity mean goods can be exchanged for promises of future goods: **debt**.

But as the size of the economy increases, barter and debt as a mechanism for trade become impractical because of the problem of **coincidence of wants**

I want what you have, but you don’t want what I have

Outside of a small group of people, impossible to have barter dominate

==

The solution to the problem of coincidence of wants is indirect exchange: instead of exchanging goods directly, people exchange the good they want to sell for another good which they then give to the person who sells the good they want

The intermediate good acquired purely to be exchange, and not to be consumed, is a medium of exchange

==

Reason drives us to use media of exchange. The consequences extend beyond what we plan

Some things work better as media of exchange: they are more **salable**

Salability is the ease with which a good can be sold at prevalent prices

==

\$100 bill is highly salable: you don't need to sell it a discount, or to exchange it for another medium of exchange

On a larger scale, US Treasury bonds are highly salable. Large institutions can liquidate or buy large positions without affecting the price a lot

Low salability examples: cars, houses, washing machine, piano

==

High salability means low bid-ask spread

Bid: maximum a buyer is willing to pay

Ask: minimum a seller is willing to accept

Introducing a lot of products to the market causes increases the supply, which lowers the marginal utility of the good to potential sellers, lowering their bid, causing the bid-ask spread to increase

==

The more salable a good, the more people will hold it in increasing quantities, further increasing its salability

The process naturally amplifies salability of the most salable goods, resulting in one most salable good emerging: money

==

The less a good's marginal utility declines, the more salable it is

The more salable a good, the less its marginal utility declines

Good	Apple	Orange	Banana	Money
1st unit utility	100	90	85	100 (1st apple)
2nd unit utility	80	70	65	90 (1st orange)
3rd unit utility	60	50	45	85 (1st banana)
4th unit utility	40	30	25	80 (2nd apple)
5th unit utility	20	10	5	70 (2nd orange)
6th unit utility	0	0	0	65 (2nd banana)

Table 1. Money's diminishing utility

==

We can deduce what makes a good salable from looking at the facets of the problem salability solves: coincidence of wants

Lack of coincidence of wants across	Description	Monetary property that solves it
Goods	I want to buy a good whose seller doesn't want what I have	Concentration into as few media as possible
Space	I want to sell something in one location and buy something elsewhere	Transportable
Scale	I want to sell something large and buy something small	Homogeneous, divisible & groupable
Time	I want to sell something today so I could buy something in the future	Durable, hard to make

Table 2. Dimensions of the problem of coincidence of wants

==

Scale helps us understand why metals are money

Space helps us understand gold and silver as money, and their limitations today

Scale helps us understand why silver and gold complimented each other, and why gold eventually won out

Metal coins effectively solved the first three facets of the coincidence of wants problem

==

Salability across time

In the long term, time is the most critical dimension of the coincidence of wants problem

Durable metals are more salable than metals that disintegrate

But supply dynamics matter more for salability across time

The most durable metals accumulate very large stockpiles compared to annual production, which makes them effectively impervious to inflation

==

Hardness: the difficulty of increasing the liquid stockpile of a good.

Measured with the stock-to-flow ratio: $\text{stockpiles}/\text{annual production} = \text{inverse of annual supply growth}$

This is a very powerful way of explaining what becomes money

==

Very few people store large quantities of copper, nickel, brass, iron, and similar metals. Most purchasers consume them

All metals that corrode are constantly being consumed in industrial applications

Existing fungible liquid stockpiles are always around the same order of magnitude as annual production

This makes them vulnerable to supply shocks: if demand goes up, supply can go up significantly, because annual production is significant compared to stockpiles

This makes them terrible money

==

Distinguish between

market (industrial) demand demand for consuming the good itself (copper for wires, iron for cars, etc)

and

monetary demand: demand for the good so it can be exchanged for something else

==

Monetary demand increases any time someone acquires something to exchange it for something else

Gold or silver or copper coins or bars -> monetary demand

Gold or silver or copper wires in electronics -> market demand

==

Monetary demand causes the price to rise

if it has a low stock-to-flow ratio, its producers can meet the increase in its price with increased supply, causing the price to fall again

If a metal has a high stock-to-flow ratio, its producers' increased production does not materially affect total stockpiles

==

Industrial metals cannot be used as money, anyone who tries just donates his wealth to their producers: easy money trap

Stock-to-flow for copper and zinc are under 1

Stock-to-flow for gold is around 50-60

Silver is around 4, used to be a lot higher, but as its industrial use increases its monetary demand is declining

==

With modern banking & gold-backed paper money, silver's role for small transactions was lost. Gold could be held across scales

The death knell of silver was when Germany switched from a silver to a gold standard in 1871

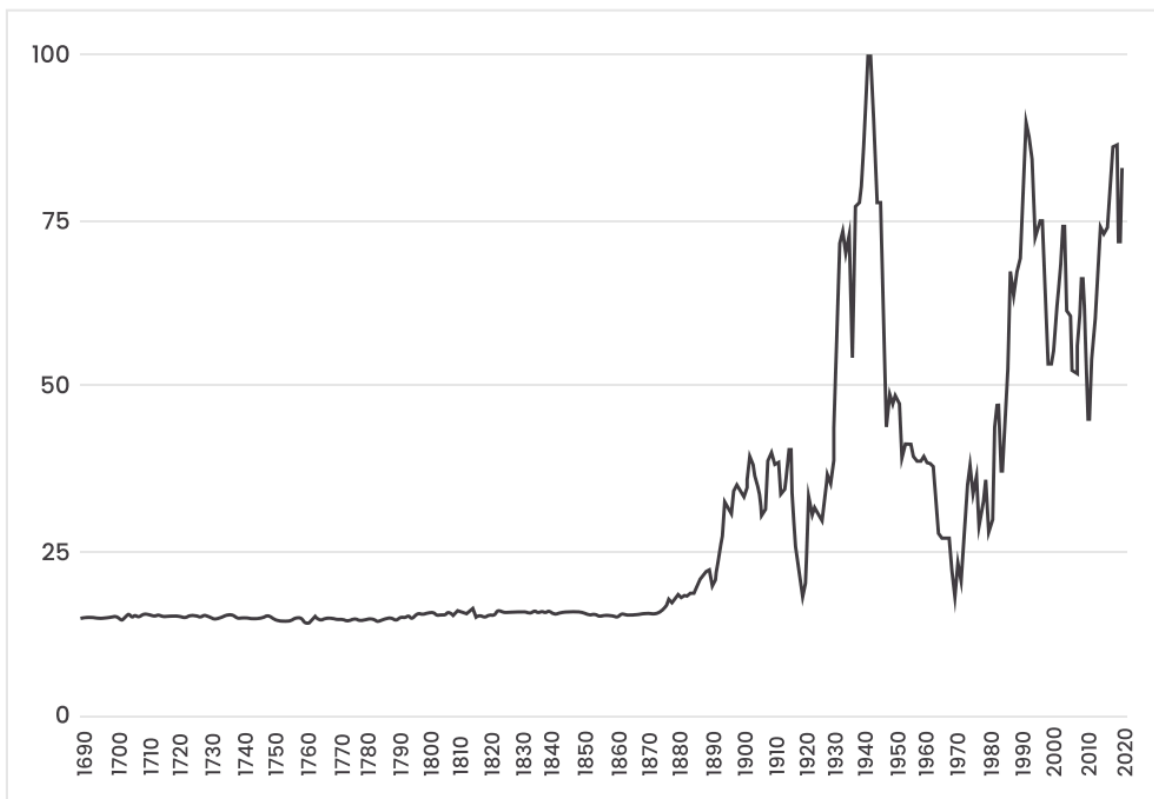


Figure 19. Gold/silver ratio

==

By the end of the 19th century, the whole world was on a gold standard

The hardest metal is the only one that can resist this: its high stockpiles make it the most resistant to inflation, which causes people to hold it more, which increases its stockpiles to grow further, reducing industrial demand

Hard money is money whose stockpiles are hard to increase significantly, no matter what its producers do, since the producers' output is a tiny fraction of the existing stockpiles.

Easy money is money whose liquid stockpiles are easy to increase.

==

People can use anything as money, but some things work as money and some don't

People can also use anything as an airplane, but some things work and some don't

Money is not a “collective hallucination” it is not “a story we tell each other”. People who say this just don’t understand money, and are usually Marxists, of course.

Airplanes are not stories or collective hallucinations. Some of us understand what an airplane does.

==

Money solves the problem of coincidence of wants, and in the long run, the best solution to the problem wins out over the rest

People don’t even need to understand this dynamic: wealth will only concentrate in the hands of those who choose the hardest money

The process of monetization is the process of money appreciating and resisting debasement.

This is why it’s so absurd that modern Keynesians think that money needs to grow in supply: money is always what holds value best and grows in supply the least

==

Why One Money?

The salability of a good incentivizes holding it as a store of value, which increases the size of cash balances it has, which in turn enhances its salability further

The more salable only gets more salable -> winner-take-all dynamic

True for gold, true for the US dollar

==

A medium of exchange has a precise definition: anything acquired to be exchanged, not for its own sake

Anything can be a medium of exchange

Money has a less precise & more subjective definition: a general medium of exchange; a medium of exchange used by a lot of people, or everyone

==

Money and the State

Austrians are the only ones that can explain how money emerges from the market

Everyone else is paid to tell you the state creates money

Menger: "Money is not an invention of the state. It is not the product of a legislative act. Even the sanction of political authority is not necessary for its existence. Certain commodities came to be money quite naturally, as the result of economic relationships that were independent of the power of the state."

==

Even before humans could record their actions, they engaged in direct and indirect exchange. And as humans seek to satisfy their desires through indirect exchange, some goods begin to play that role better than others, and those who employ these media of exchange benefit from using them. Others copy them, and the successful solutions become more widespread. If they do not copy the successful solutions, they lose wealth to those who do. The better solutions impose themselves as economic reality always does, by rewarding those who adopt them and punishing those who do not. There is no need for a central authority to decree a medium of exchange and compel everyone to accept it. Money emerges from the market, out of the actions of humans, and not as a result of any central-planning government.

==

Mises regression theorem:

Explained how a normal market good can develop into a monetary good when it acquires monetary demand, thus raising its value and increasing its salability. As the good acquires increasing monetary demand, its price increases beyond its market demand price.

==

Gold's global monetary role was not conferred by some government authority. It won its monetary role on the market, and government authorities had to accept gold as money on the market if they wanted to operate successfully. Gold did not become money because it was minted into government coins. Government coins became money because they were minted from gold.

==

Fiat money is a misnomer: there was never a good that became money by fiat (decree)

It was always gold receipts whose redemption was fraudulently suspended

Bitcoin became one of the ten largest currencies in the world before a state adopted it

==

Value of Money

Money is an economic act like all of those discussed in Chapters 4-9, it allows us to increase the quantity and value of time we have

It does this in four main ways:

==

1- Increase the division of labor

Solving the problem of coincidence of wants increases the scope of specialization and division of labor

It encourages trade, peace, cooperation, and civilization

==

2- Allow for economic calculation

With direct exchange, each good has a price expressed in other goods

With indirect exchange, each good has a price expressed in money

Significantly fewer prices

==

number of individual prices = $n(n-1)/2$, where n =number of goods

With 100 goods, a barter economy has 4,450 prices, money has 99 prices

With 1m goods, a barter economy has 5b prices, money has 1m prices

This allows people to calculate economic opportunity cost, and the likely implications of different courses of actions: economic calculation

This allows us a complex economy

==

3- Lower time preference

Money is a lot better for saving than durable goods

Money's higher salability makes saving in it better than other things

Money incentivizes saving and future-provision, which decreases uncertainty about the future

This lowers time preference

==

Money's Uniqueness

1- Not a consumption or capital good

2- It offers the utility of the good for which it is exchanged. Least diminishing utility

==

How Much Money Should There Be?

The Austrian Pill: The supply of money does not need to grow

Any supply of money is enough, because nobody needs money itself; people need purchasing power, and there's no limit to how much purchasing power you can pack into money

==

If money supply is fixed then increased demand for holding money is met through appreciation of money

This means prices of goods and services drop == A VERY GOOD THING

Savings appreciate over time, so people have an incentive to provide for their future

==

Keynesians think this is bad, because they don't understand marginal analysis or capital:

More saving -> collapse in spending -> unemployment -> less spending -> unemployment -> calamity

(Only governments can fix this)

In reality:

More savings -> marginal decline in consumption of final goods + marginal increase in capital production

==

Time preference is positive, people always prefer to spend, consumption is necessary for survival

But restraining spending and accumulating savings allows us capital accumulation

Even if jobs decline at the margin in consumption goods; they increase in capital goods

More capital results in higher productivity and better living standards

Abstaining from consumption will allow you to consume more in the long-run

Lecture 11: Markets

Monday 12 February, 2024

==

With the deployment of money, it becomes possible to engage in specialization, division of labor, and capital accumulation at a much larger scale. The emergent outcome is a market economy.

A market economy is a social order in which people are able to cooperate in very large numbers on economic production, providing goods and services for one another to the benefit of all involved, voluntarily, without a coercive authority dictating and coordinating their actions.

==

On one extreme, you provide for yourself, and live a precarious existence seeking the basics every day

On the other extreme, you are engaged in a global market economy where you only specialize in producing the thing you are most productive at, and obtain everything else by trading with others.

The second option is far superior by any measure. There is no evil conspiracy to get you to be part of a market economy. You do it for its benefits.

==

The productivity of labor in a market economy is infinitely higher than in isolation.

Profoundly, the capitalist market system makes people specialize in what they do best and focus on how to provide value for others, rather than focusing on what they value.

Markets compel you to work in the service of others rather than yourself, as it is the best way of meeting your own needs.

==

People cooperate without coercion, central direction, or social ties to compel them.

The motivation is self-interest

The coordination is economic calculation performed with one denominator: money

Every action is calculated against money and the actor's preferences

Without money, there are no markets

==

When prices are all expressed in one good, individuals compare prices of goods to their subjective valuations and make consumption and production decisions

Value cannot be measured, but valuation can be ranked ordinally

An individual can perform economic calculation because all prices are compared to his personal preferences: ordinally

==

Consumer goods

People rank goods ordinally in relation to each other: they produce a value scale

A value scale shows the valuation of different goods against monetary units

==

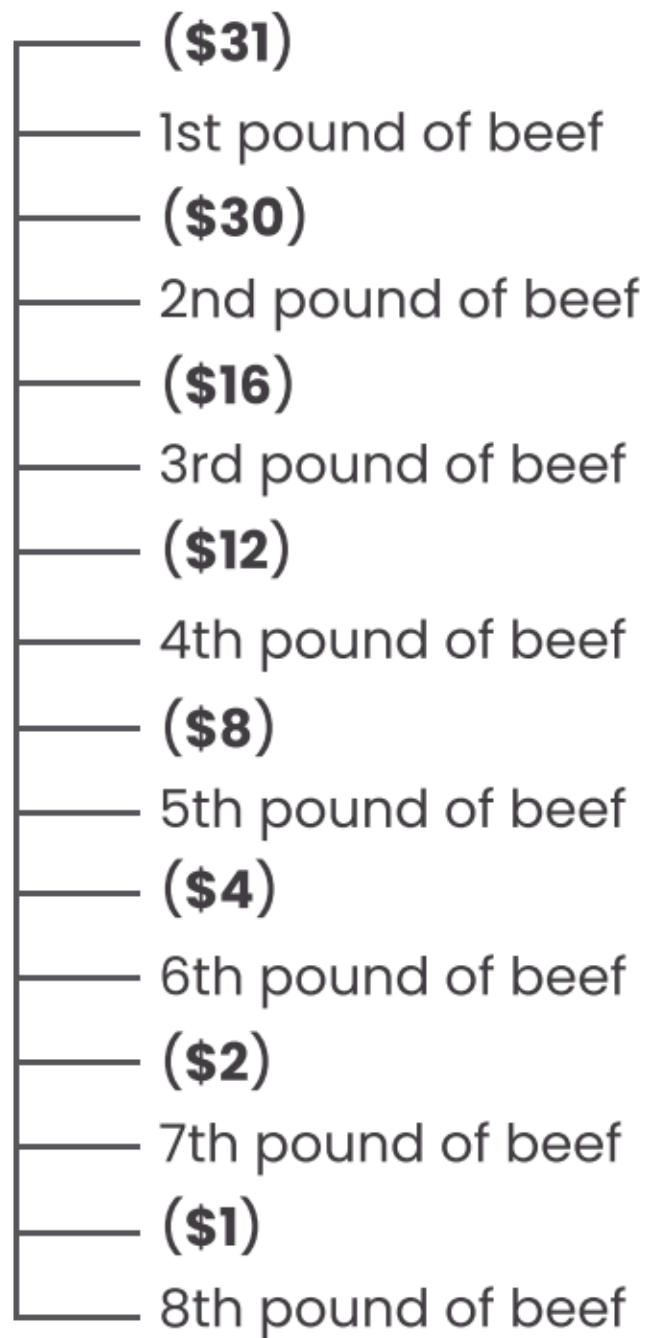


Figure 20. Ordinal consumer valuation scale

==

Market Price, \$	Quantity Demanded, in pounds of beef
\$31	0
\$30	1
\$20	1
\$16	2
\$12	3
\$8	4
\$4	5
\$2	6
\$1	7
\$0	8

Table 3. Demand schedule

==

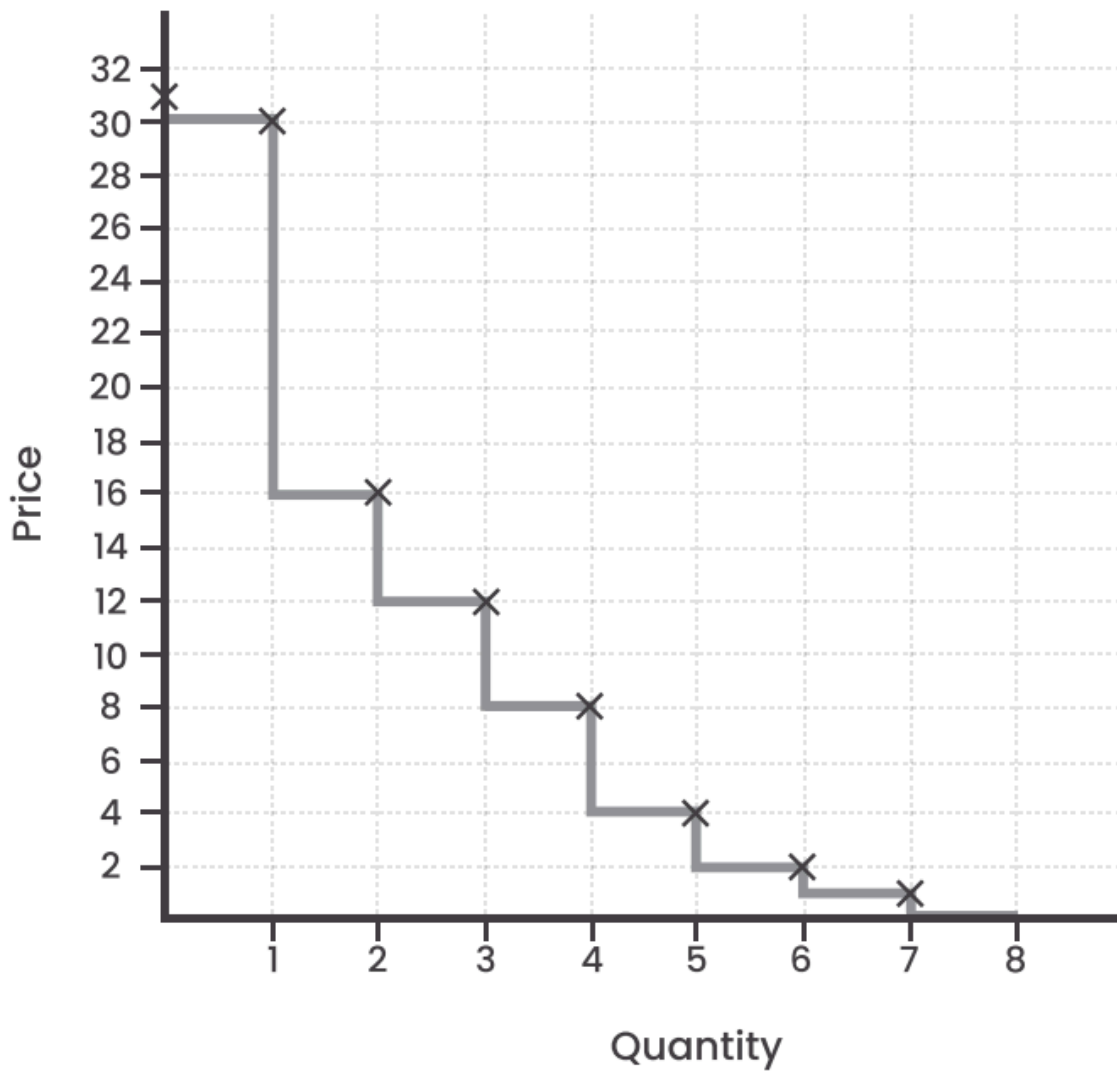


Figure 21. Demand curve

==

The law of demand:

As the price increases, the quantity demanded declines. Demand curves always slope downward, or are vertical, but they cannot slope upward because the quantity demanded of a good cannot increase as the price increases.

==

Market Price, \$	Quantity Demanded, in pounds of beef
\$31	0
\$30	100
\$20	140
\$16	200
\$12	300
\$8	400
\$4	500
\$2	600
\$1	700
\$0	800

Table 4. Market demand schedule

==

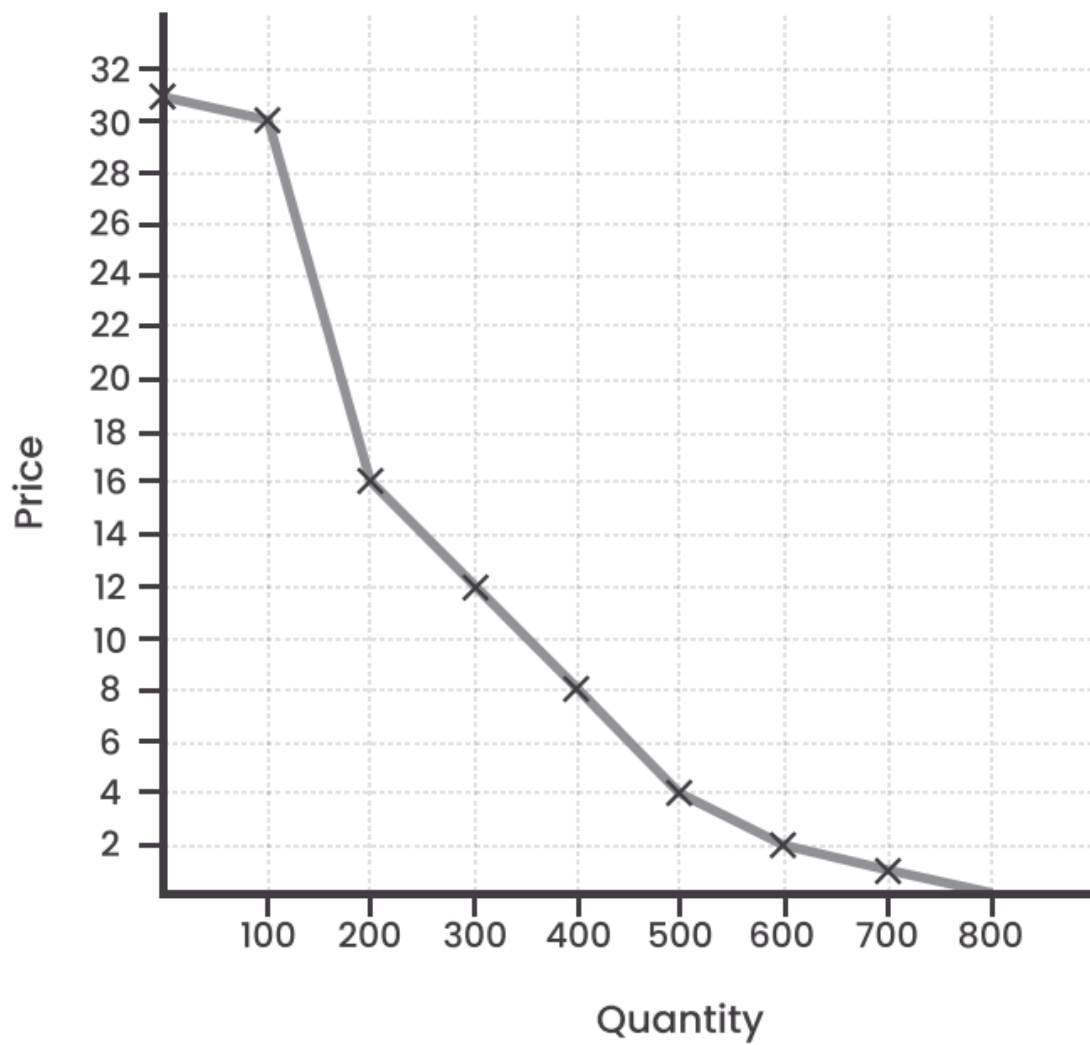


Figure 22. Market demand curve

==

Producers face a very similar ordinal ranking in their decision-making process

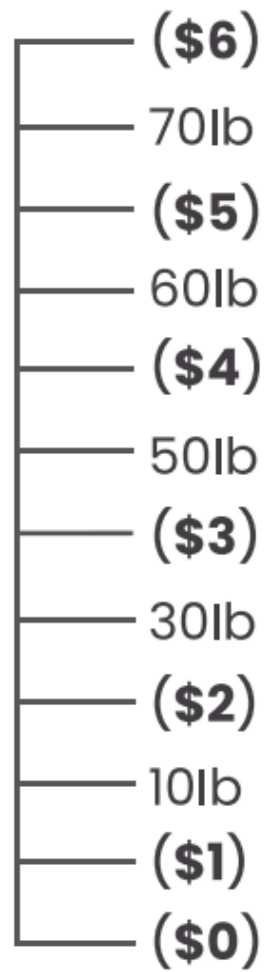


Figure 23. Ordinal producer value scale

==

Market Price, \$	Quantity Demanded, in pounds of beef
\$7	70
\$6	70
\$5	60
\$4	50
\$3	30
\$2	10
\$1	0
\$0	0

Table 5. Producer supply schedule

==

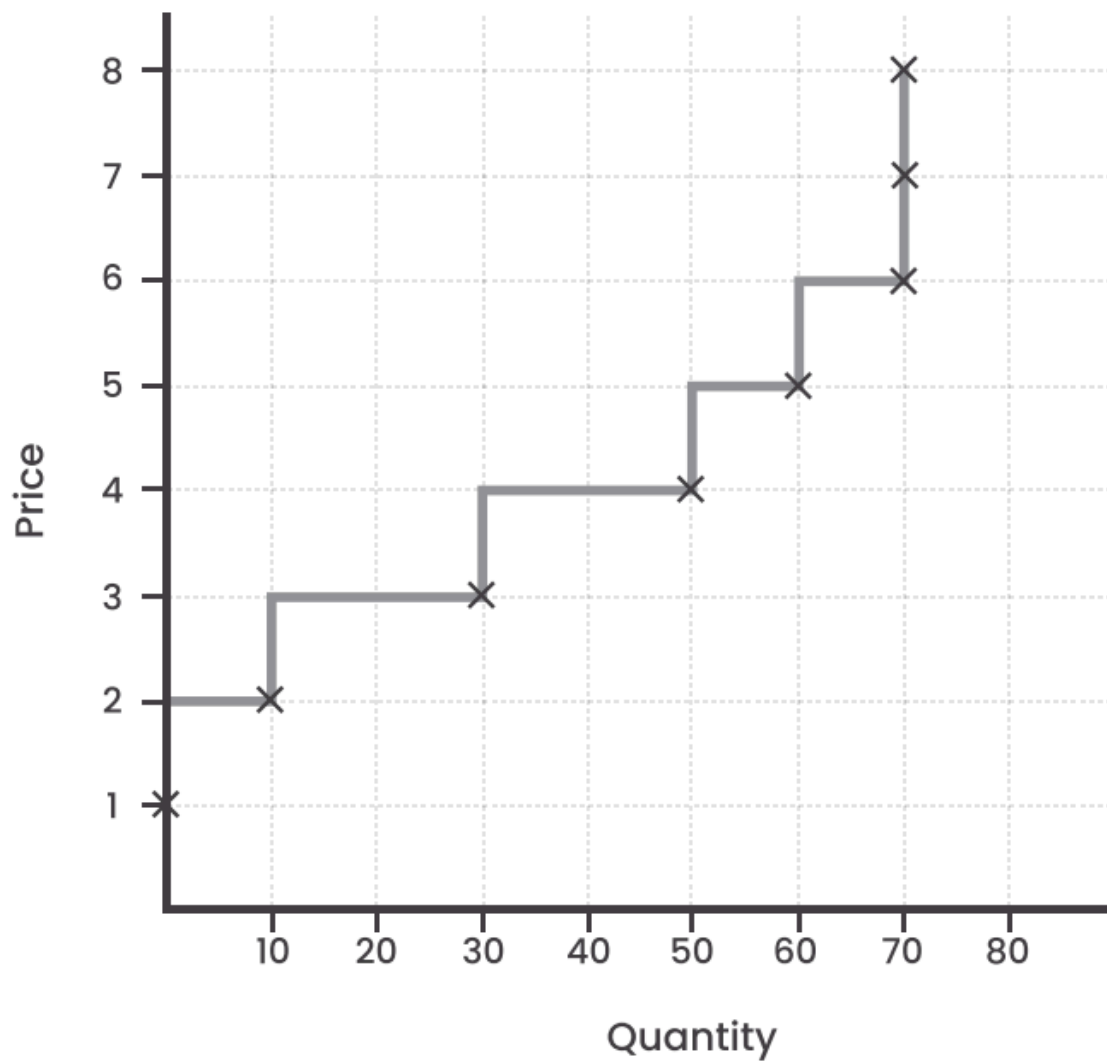


Figure 24. Producer supply Curve

==

The law of supply: As price increases, owners of economic goods become more willing and able to sell larger quantities. As a consequence, supply curves slope upwards only

==

Market Price, \$	Quantity Demanded, in pounds of beef
\$7	700
\$6	700
\$5	600
\$4	500
\$3	300
\$2	100
\$1	0
\$0	0

Table 6. Market supply schedule

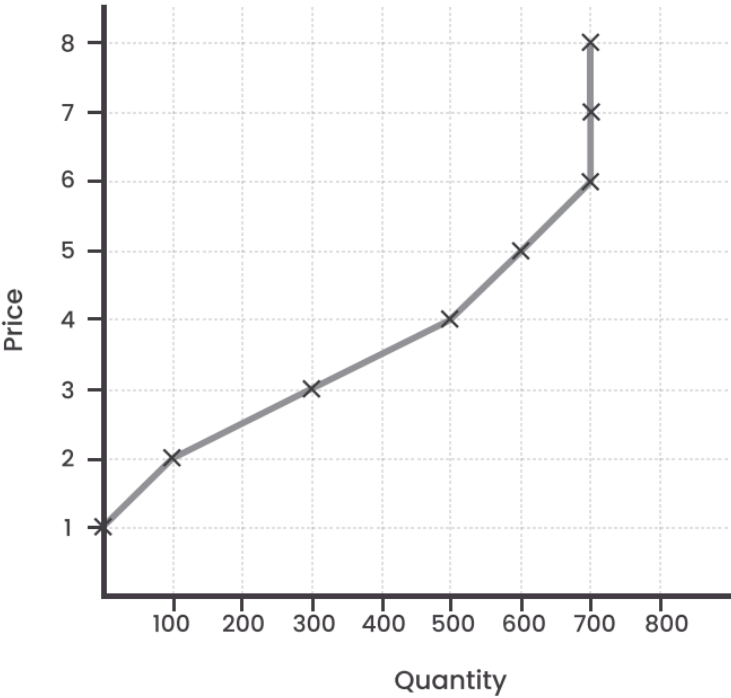


Figure 25. Market supply curve

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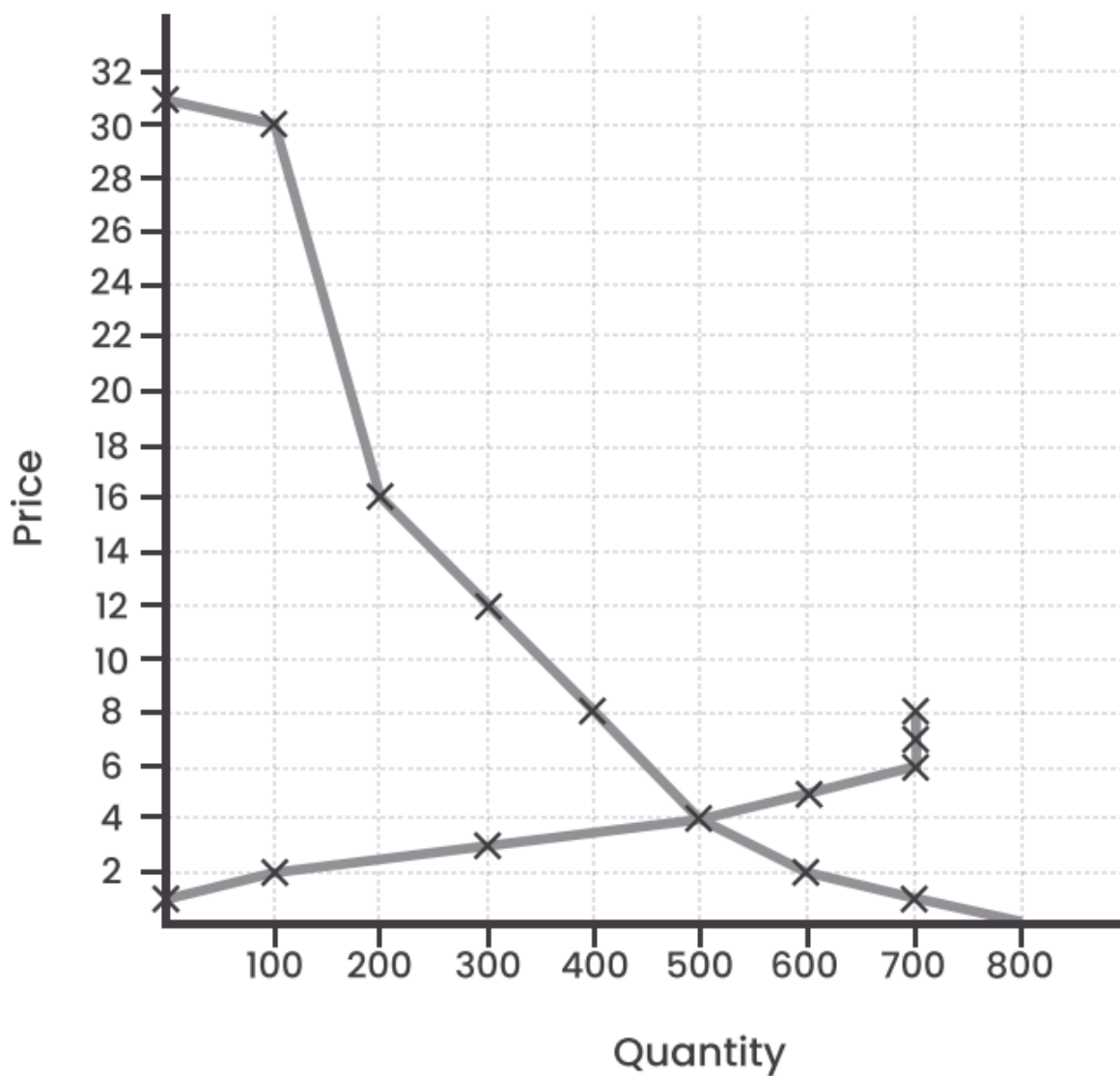


Figure 26. Market equilibrium

Equilibrium

Since the demand curve slopes downward
And supply curves slopes upward

They can only meet once → equilibrium (price and quantity)

If the price is set above equilibrium -> **surplus**

If the price is set below equilibrium -> **shortage**

==

Better to think of equilibrating process rather than an endpoint equilibrium

It's not a final state; it's a process of constant discovery in reaction to changing conditions

==

Changes in price result in a change in the quantity individuals demand, movement along the curve, but the curve stays static

Changes in other relevant factors result in the movement of the curve, the reformulation of the price-demand relationship

==

Things that can shift the demand curve: changing preferences, income, wealth, or prices of other goods and services, compliments or competitors

If income/wealth rises -> demand curve shifts right for normal goods

If income/wealth rises -> demand curve shifts left for inferior goods

If price of good B rises -> demand curve for good A shifts left -> A & B are complementary goods

If price of good B rises -> demand curve for good A shifts right-> A & B are competitor goods

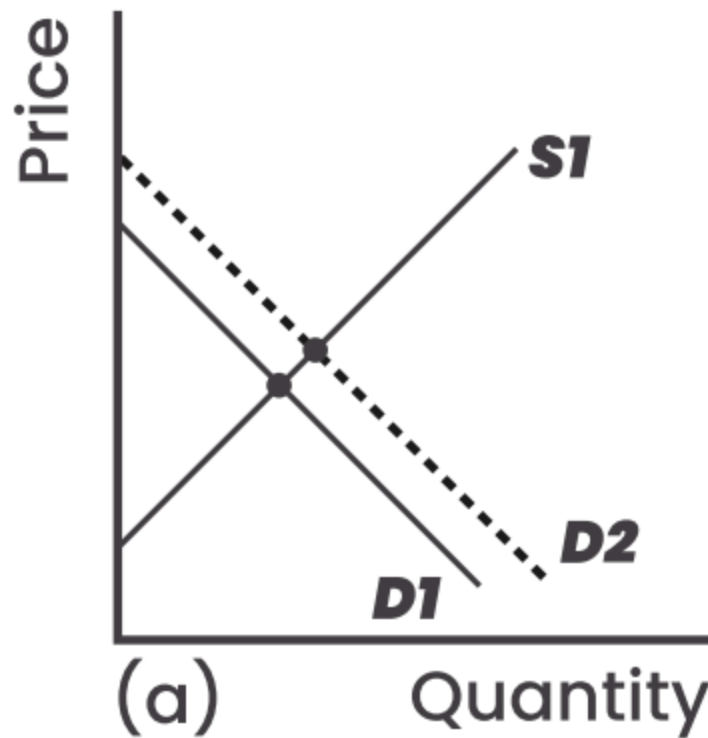


Figure 28. Shifts in the demand curve

==

Things that can shift the supply curve: Producers' costs, and price of others goods the producer can produce

If producers' costs rise -> they can supply lower quantities at every price level, Supply curve shifts left

If producers' costs fall -> they can supply higher quantities at every price level, Supply curve shifts right

If price of good B rises, producers can shift from producing A to B, so supply curve of A shifts left

If price of good B falls, producers can shift from producing B to A, so supply curve of A shifts right

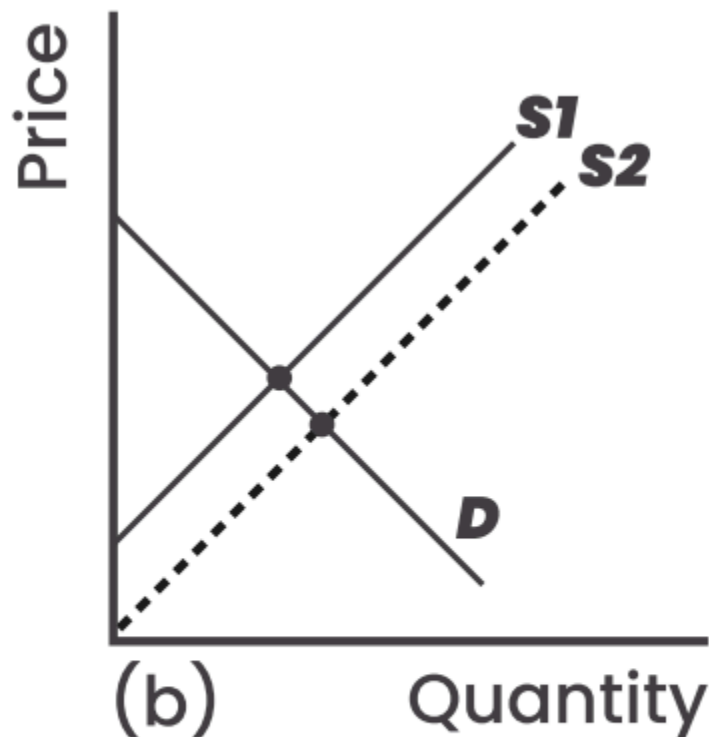


Figure 27. Shifts in the supply curve

==

Producer Good Markets

In markets for producer goods (capital, land, labor), producers do not assign ordinal scales for goods based on the utility they derive from producer goods, but on the product they deliver

Each production good is employed to the extent that it contributes more revenue than it costs

The marginal revenue from each deployed unit has to exceed its marginal cost

==

Consumer valuation of final goods is what gives value to producer goods

Worker wages or capital returns are merely a reflection of consumer valuation of the product of these resources

Businesses that pay rates different from what consumer valuation dictates will not survive next to those that are responsive to consumer valuations

==

Economizing in the market order

All forms of economizing become more productive in the large extended order of the market

Productivity keeps increasing the more people cooperate

Different from the world of animals, humans are able to cooperate and benefit one another

==

Consumer Sovereignty

Consumers are sovereign since producers cannot force them to buy things

Their valuation is what dictates the market rate of return on wages and capital

Capital is not a way for capitalists to exploit society; it's a liability that only survives if it serves consumers

==

What happens if prices are dictated by someone other than the parties in a transaction?

Lecture 12: Capitalism

Monday Feb 26, 2024

==

The extended monetary market order allows people to economize and seek their self-interest to the benefit of everyone involved.

It results in the emergence of capitalism: a free market in capital goods

Capitalism: the system of private ownership of capital goods in which individuals can buy and sell capital freely, and decide how to employ their capital, reaping the rewards of using it productively and bearing the losses of using it unproductively

==

If capital allocation is determined by capital owners who are free to buy and sell capital -> capitalism

If capital allocation is determined by government officials who don't own the capital -> socialism

Mises: "the key is whether the economy has a stock market."

==

Why the stock market?

Once a stock market exists, you are able to trade in capital as a financial good, without having to own and operate and hold capital goods directly.

The extension of the division of labor to the process of capital production separates management from financing, and creates a market in the financing of capital production.

Capital investment is available to anyone.

==

Allows capital to be allocated to those who use it most productively.

Only way to keep capital is to use it productively.

Only with property rights in capital can you have a free market in capital goods and the allocation of capital to its most productive users.

==

The value of capital goods is subjective and depends on individuals valuing them; it is not inherent or intrinsic. Whether something is a capital good or not is entirely the consequence of the judgment and action of the person in command of it. A computer used for playing games is a consumer good, but the same computer used for professional graphic design is a capital good.

==

Without the ability to command capital goods for profit, there is little incentive for anyone to accumulate and maintain capital in the first place. Without the ability to trade capital for monetary gain, there is no mechanism to ensure capital is allocated for productive uses and is not monopolized by those who misuse and degrade it.

==

Capital is not a lump of machines, but a mental construct that survives, like a living organism, in an ecosystem where it is constantly valued and traded by acting individuals. It thus makes little sense to speak of a societal capital stock outside of the ability of individuals to freely value and command these capital goods, use them in production, and benefit from their use.

Capital outside a market economy is like a fish out of water—a limp, lifeless shell of its former vivid self.

==

This is a very simple yet powerful way of understanding economies

If you have never had a stock market -> pre-capitalist

If you have a stock market -> capitalism

If you shut down a stock market -> socialism

==

History for most of the world's countries has been the positive development from pre-capitalism to capitalism, interrupted by calamitous forays into socialist devastation.

Russia:

First stock market in early 1800s

Closed stock market in 1917

Reopened stock market in 1991

See examples of Germany and Poland

==

stock markets of all Scandinavian countries have been open and operational without interruption for more than a century. Denmark's stock market has been functioning since 1808, Sweden's since 1863, Norway's since 1881, and Finland's since 1912.

==

Capitalism Is Entrepreneurial, Not Managerial

The division of labor extends to the process of investment itself, which is divided into three roles:

Capitalist: defers consumption to make capital available

Entrepreneur: allocates capital

Manager: oversees production

==

The entrepreneur performs economic calculation in the capital market, on capital itself

The manager performs economic calculation on the capital deployed by the entrepreneur

The function of the entrepreneur in a market economy is to determine the allocation of capital to different lines of production and different industries.

The entrepreneur decides which products to produce and which lines of production need to be introduced, expanded, contracted, or shut down.

==

There is an important distinction between management and entrepreneurship, which escapes most academics and economists

If they don't understand the entrepreneurial function for allocating capital, and how it is reliant on private property: they imagine they can replace capitalism with government management: socialism

==

For academics and scholars who have never engaged in entrepreneurship, this distinction is not obvious, which results in their belief that private ownership of capital can be curtailed without affecting the production process, as in their models, the workers and managers can capably handle the entire production process, the capitalists do not contribute anything, and the entrepreneur is an inconsequential detail.

==

The correct costs and benefits of actions cannot be calculated unless the capital goods involved are owned by someone who can use them in any way he likes. Having all options available to the owner allows the owner to choose the option that serves society best and would generate the most profit for him.

Without ownership and full command over capital goods, which entails reaping profits and suffering losses, there is no scope for rational calculation of profit and loss.

==

Profit and Loss

Entrepreneurs speculate on production processes being profitable and apply the factors of production (labor, capital, and land) to them. They incur the upfront costs and risks and collect the revenues and rewards.

Calculation requires money

==

Calculation ensures capital is being used to serve others most efficiently

If entrepreneur revenue from output goods is greater than input good costs -> entrepreneur is providing value to society

If entrepreneur purchases input goods at costs lower than the revenue from output goods -> entrepreneur is wasting resources

His capital stock is reduced: he has to change what he's doing or run out of capital

==

Entrepreneur's wealth and prosperity is at stake: it's the scorecard for entrepreneurship

Economists who imagined market production could be replicated without private property, profit, and loss are engaging in cargo cult science, like primitive tribes who encountered airplanes for the first time and imagined that replicating their shape with wood sticks would produce a functioning airplane.

==

Unless the person making the allocation has to make real choices involving trade-offs between different options over scarce resources, they will not be able to consider the true costs involved.

==

The Economic Calculation Problem

The problem of socialism is not incentives

It is *calculation*

"What exactly would those planners tell this army to do? How would they know what products to order their eager slaves to produce, at what stage of production, how much of the product at each stage, what techniques or raw materials to use in that production and how much of each, and where specifically to locate all this production? How would they know their costs, or what process of production is or is not efficient?"

==

There is no rational means of ascertaining how to allocate resources without property, prices, and a market for entrepreneurs and consumers to conduct economic calculation.

How to decide where the resources go?

==

Mises demonstrated that, in any economy more complex than the Crusoe or primitive family level, the socialist planning board would simply not know what to do, or how to answer any of these vital questions. Developing the momentous concept of calculation, Mises pointed out that the planning board could not answer these questions because socialism would lack the indispensable tool that private entrepreneurs use to appraise and calculate: the existence of a market in the means of production, a market that brings about money prices based on genuine profit-seeking exchanges by private owners of these means of production. Since the very essence of socialism is collective ownership of the means of production, the planning board would not be able to plan, or to make any sort of rational economic decisions. Its decisions would necessarily be completely arbitrary and chaotic, and therefore the existence of a socialist planned economy is literally “impossible.”

...

Mises concludes that, in the socialist economy “in place of the economy of the ‘anarchic’ method of production, recourse will be had to the senseless output of an absurd apparatus. The wheels will turn, but will run to no effect.”¹³⁸

==

Socialists reformulated their economic system, partly in response to Mises’ critique

central-planning board would order managers to assign prices to goods, observe the reactions of buyers, and use trial and error to arrive at proper prices in the same way capitalists would: They would react to a surplus by lowering

the price, while reacting to a shortage by raising prices.

==

The socialist central planners' managers were not entrepreneurs. They did not have secure property in the goods they managed, and they could not calculate the profits and losses associated with different lines of production.

==

But the characteristic mark of the socialist system is that the producers' goods are controlled by one agency only in whose name the director acts, that they are neither bought nor sold, and that there are no prices for them. Thus there cannot be any question of comparing input and output by the methods of arithmetic.

==

omy is and how it functions. Economic decisions are made only in the context of scarcity, when each decision will carry with it a real cost and benefit that the decision-maker will experience in the real world. Without property, opportunity cost, and real-life consequences, socialist pretend-markets bear no resemblance to the real thing. As Mises puts it:

What these neosocialists suggest is really paradoxical. They want to abolish private control of the means of production, market exchange, market prices, and competition. But at the same time they want to organize the socialist utopia in such a way that people could act as if these things were still present. They want people to play market as children play war, railroad, or school. They do not comprehend how such childish play differs from the real thing it tries to imitate.¹⁴¹

==

Modern Economics and Calculation

Markets are dynamic, economic models cannot capture the complexity of all life

Capital allocation is not a one-off problem to be solved

General Equilibrium ignores the role of entrepreneur as it assumes it's a one-off problem a central planner can solve

==

But economic reality is constantly changing

This is why popular textbooks continued to say socialism works until 1991

==

The Effects of Entrepreneurial Investment

Increases productivity of capital investment

Encourages more saving and lowering of time preference

Increases wages and rents in real terms

Capitalists have risk, but workers just watch their productivity go up thanks to capital

Encourages behavior conducive to peaceful coexistence

==

Hard money and time preference

Saifedean Ammous

Property and Freedom Society

Bodrum, September 17, 2021

Outline

- Time preference
- Time preference and money
- The process of civilization
- Fiat and decivilization
- Bitcoin and time preference

Time preference

Time preference is the degree of preference of present goods over future goods. It is always positive, because humans always prefer present over future goods, but its magnitude varies from person to person, and for each person across their life. A high time preference indicates heavy discounting of the future in favor of the present, and present-orientation while a low time preference implies a lower discounting of the future, and more future-orientation.

Time preference and money

As human society develops money as a good, humans find a very convenient and powerful tool for transferring value into the future, and that allows them to lower their time preference, and engage in more saving and future-provision.

Time preference and money

Monetary competition is constantly driving economic value toward the hardest monetary media to produce

Seashells, salt, glass beads, cattle > metals > precious metals

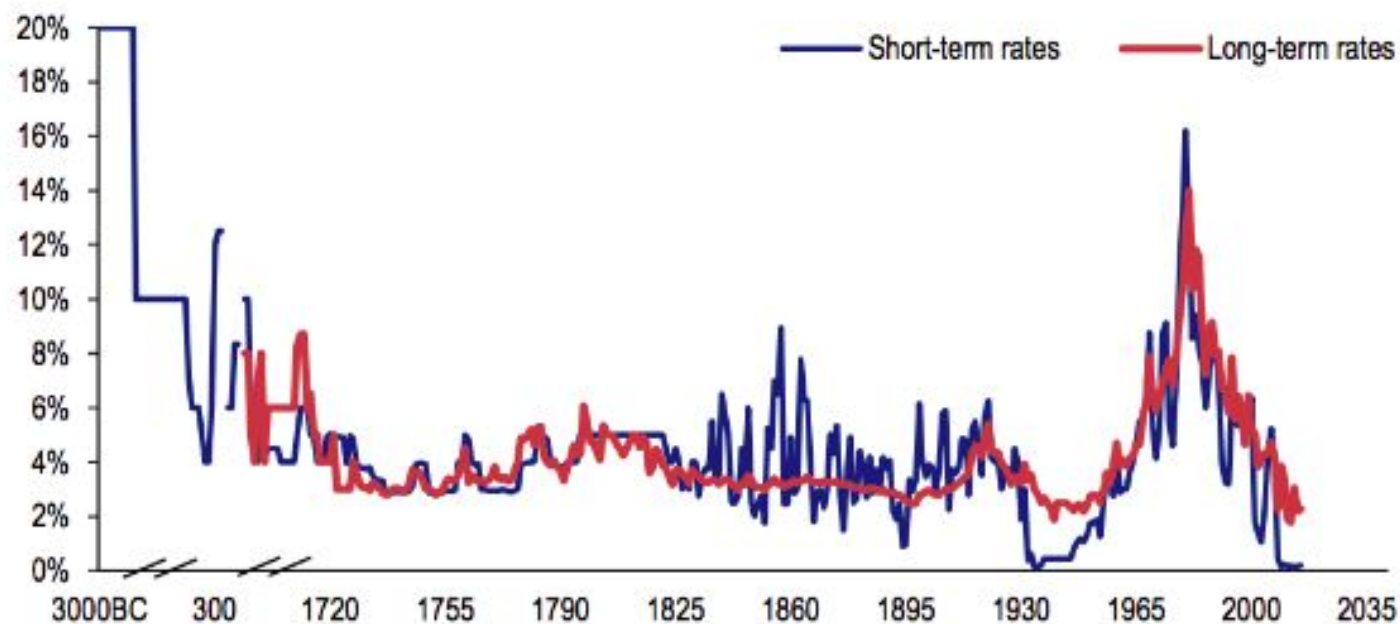
Time preference and money

As the efficiency of transacting with our future selves increases, and the uncertainty of the future declines, and the expected wealth we are able to transfer to it increases, the discounting of the future decreases, and time preference declines.

Time preference and civilization

As time preference declines, capital accumulation increases, productivity increases, income increases, and time preference falls further.

Time preference and civilization



Sources: Bank of England, Global Financial Data, Homer and Sylla "A History of Interest Rates"

Note: the intervals on the x-axis change through time up to 1700. From 1700 onwards they are annual intervals. Full methodology available upon request.

Fiat money and decivilization

Security of property rights lower time preference

Governmental violations of property rights are particularly harmful

Fiat is a violation of the property right in money

Reversed thousands of years of money becoming harder

Fiat money and decivilization

Gold increases in supply around 1.5% to 2% per year

Fiat currencies increase at around 30% numerical average per year

Weighed by market cap, they increase at 14% per year

Best fiat currencies increase at ~7% per year

This is pure property right violation

Hyperinflation as an extreme demonstration of fiat inflation effects

Fiat money and decivilization

Effects of decline in fiat value:

Reduction in saving, increase in spending

All manners of other factors: conflict, civility, manners, social norms, cooperation, aggression,

Fiat money and decivilization



Art on hard money



Art on easy money

Bitcoin and time preference

Bitcoin is a peer-to-peer software for operating a payment network with its own native currency.

Two most important features of bitcoin:

- 1- its native currency has a strictly fixed supply that is completely irresponsive to demand, making it the hardest money ever invented;
- 2- it allows for cross-border payments without needing any political authority to supervise the transaction.

Bitcoin: The hardest money ever

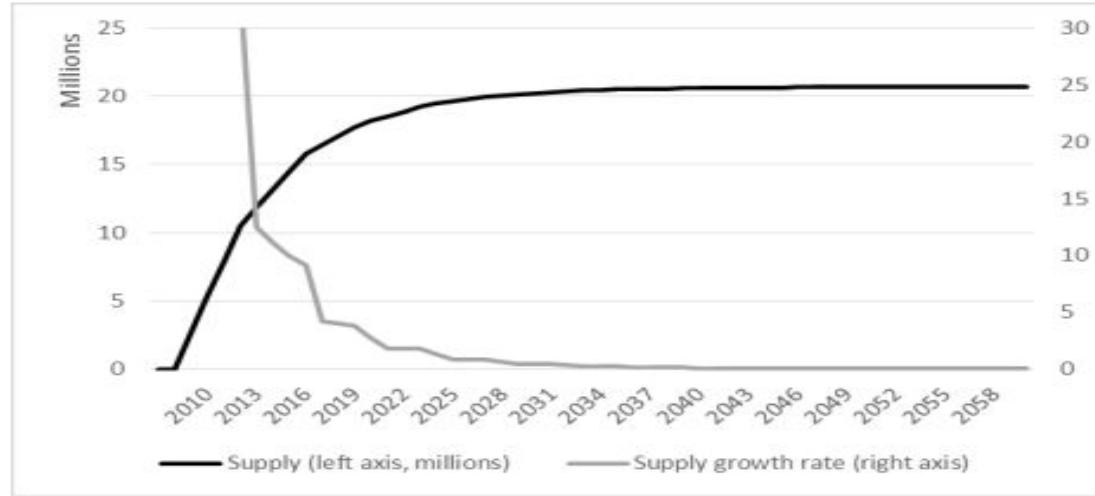


Figure 14: Bitcoin supply and supply growth rate assuming blocks are issued exactly every ten minutes.

How secure is Bitcoin

- No single point of failure
- No single piece of critical hardware or infrastructure
- No single critical individual or organization
- Bitcoin cannot be stopped—a protocol always open to anyone who wants it
- Around every 10 minutes, a new block of transactions is released. Has never failed.
- Has never confirmed a fraudulent transaction

Bitcoin's monetary uniqueness

- The only alternative to central banks for international settlement
- The hardest money ever invented
- Available worldwide for anyone who can receive 2MB of data every 10 minutes
- Purely voluntary, does not need regulation, enforcement, or police
- Chosen and valued freely on the market: sound money.

What is Bitcoin good for?

The best savings account ever invented

Appreciated at 215% per year in its first 10 years

Over four years:

Bitcoin price has never been down

Only been down less than 5-fold on one day

Only been down less than 10-fold on 100 days

Average four year return on holding bitcoin ~23-fold

Bitcoin is the best technology for saving

Dollar Cost Averaging Bitcoin



\$2,610

Total Invested



\$30,503

88,459,000.00 Satoshis
Total Value



1,068.70%

Percent Change



Buy Bitcoin

on eToro

Buy

DCA Settings

Purchase Amount

\$ 10 .00

Repeat Purchase

Weekly

Accumulate For

5 Years

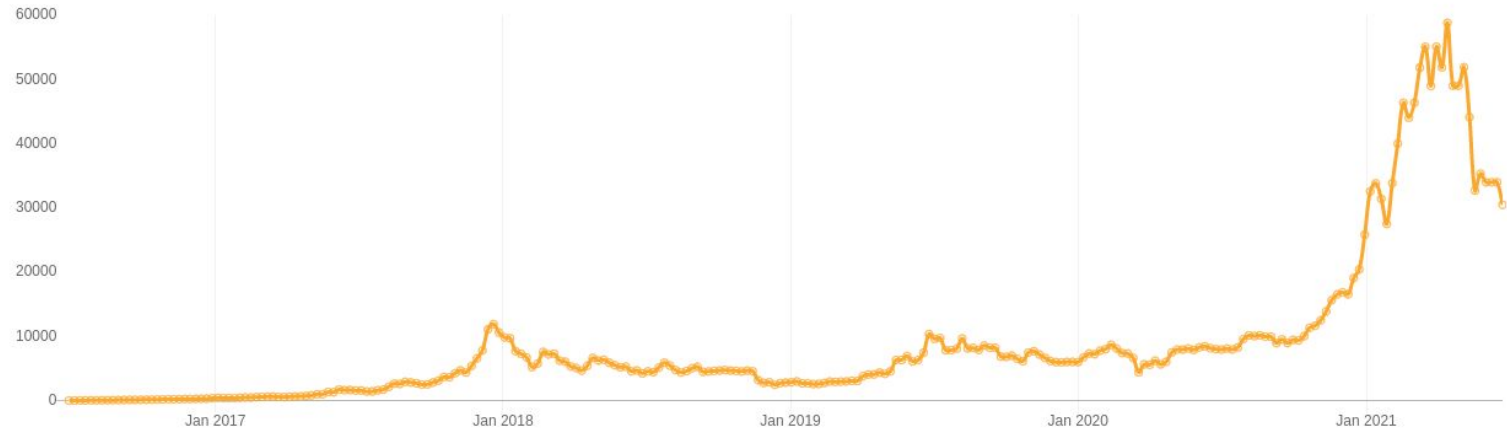
Starting

5 Years Ago

Compare to other assets?

No

Portfolio Value Over Time - By dcabtc.com



Graph Options...



Bitcoin teaches saving

The best savings account ever invented

Q1: Before first buying bitcoin, the total percentage of my income that went to saving or investment was:



4,200 votes · Final results

Q2: After at least a year of holding bitcoin, the total percentage of my income that goes to saving or investment is:



3,520 votes · Final results



Nakadai.王/21M
@Nakadai_mon

Quit alcohol, drugs and start stacking sats.
Bitcoin is Individual alchemy as well.

@saifedean

5:59 PM · Nov 20, 2020 · Twitter Web App

...

orti



BTC Comix
@Bitcoin_Comix

...

Replying to @bitcoinbekka

true story: bitcoin helped me quit drugs (cannabis isnt a drug 🤔)

11:32 PM · Jun 1, 2021 · Twitter for Android



Suddenly Satoshi
@SuddenlySatoshi

Today I'm going to quit my drug addiction and funnel that money into bitcoin investments instead. \$BTC #Bitcoin 📈

8:33 PM · Jan 6, 2021 · Microsoft Power Platform

...



Jamie Bartlett
@JamieJBartlett

...

I suspected a lot of people on the dark net came for the drugs but stayed for the bitcoin. High quality weed was a "gateway drug" into crypto-anarchy.

1:07 PM · Aug 5, 2020 · Twitter for iPhone



David Lieberman @DavidLieberman · Sep 11

...

Replying to @AngstHoodie @MyInjuries and @GravellInstitute

That's actually how a lot of people got introduced to **Bitcoin**. They **came for the drugs** and poker, **stayed for the** decentralized finance and potential to solve a lot of societal issues we currently face through trustless decentralization of money



1



2



@_Bellal13_

Replying to @DeFiGod1

Thanks to drugs I discovered BTC (onion fields)...
Thanks to BTC i quit drugs

Thank you #Bitcoin 📈

6:52 PM · Nov 21, 2020 · Twitter for Android

Bitcoin teaches you opportunity cost

THE
BITCOIN
STANDARD



Hodl Against The Machine 🌂
@RealHMeliani

...

Replying to @100trillionUSD

Thanks man for all the work you did.
Few years ago I was lonely and had no Hope... You made me discover bitcoin and hard money. I did my due diligence and found out @saifedean's work. This was like a reborn. I quit doing drugs, and start stacking sats (thanks @TheCryptoLark).

12:43 PM · Jan 14, 2021 · Twitter for Android



EncryptedHodler
@EncryptedHodler

...

Replying to @HODLAMERICAN615

Reminds me of all the cocaine I used to do. I quit cocaine so I could buy bitcoin. Now I'm not broke due to drugs, I'm broke due to leveraged at the teeth holding these MF sats 🔥🔥🔥🔥🔥🔥🔥💉
Can't wait to build my own city. I just want good people and innovation for the world!

7:54 PM · Nov 19, 2020 · Twitter for iPhone



ShillBilly 🍊🌍
@shillbillyusa

Replying to @BitcoinIsSaving

bitcoin addiction is so powerful it led me to quit buying any other drugs and alcohol 🧠

5:45 AM · Jun 1, 2021 · Twitter for iPhone



Shadowy Super Broker
@LowBtc

Replying to @CoinCornerDanny

"came for the drugs, stayed for the hard money" -



NebraskanGooner 📈
@nebraskangooner

...

Replying to @KoroushAK

I quit meth because now that Bitcoin is going up I can't stop smiling and I don't want my teeth ruined.

Bitcoin is my anti-drug

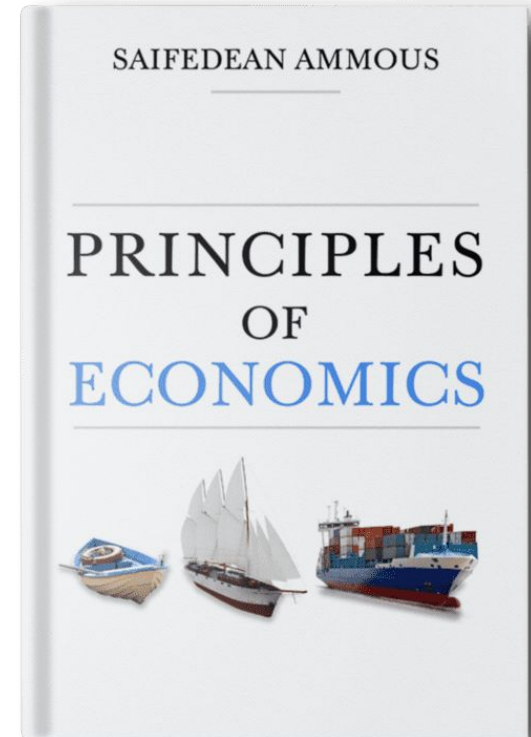
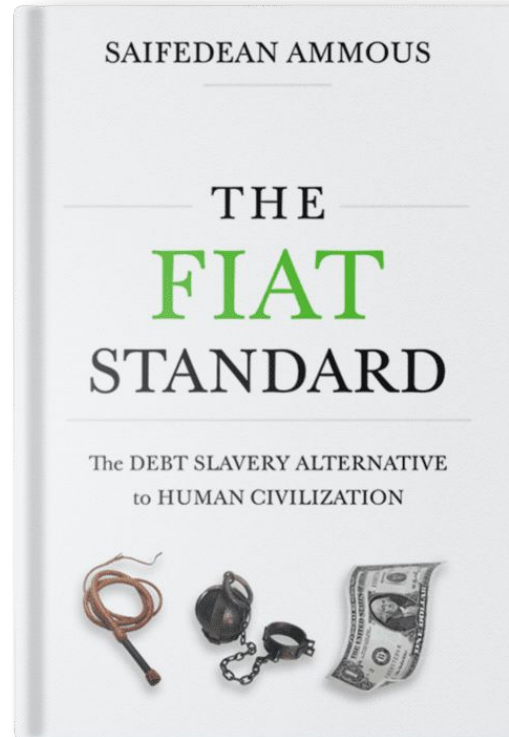
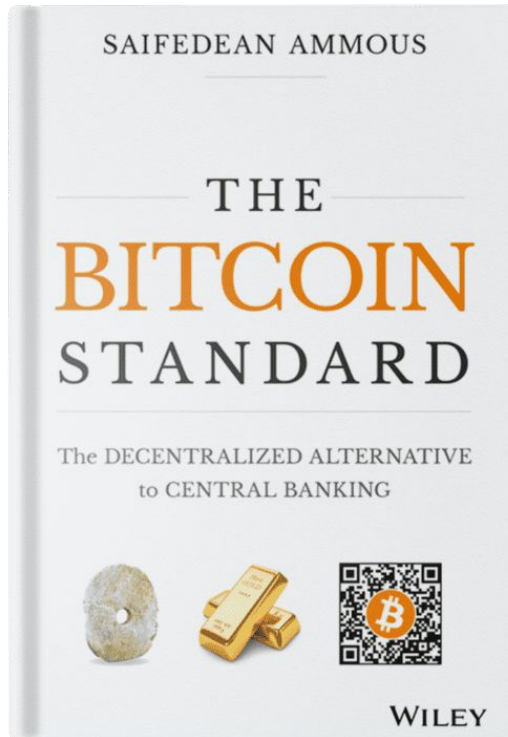
3:58 PM · Dec 17, 2020 · Twitter Web App

The relationship between monetary hardness and time preference

As it is expected to lose its value over time, easy money is not a reliable way for providing for the future, which increases the uncertainty of the future, encouraging heavier discounting of the future, or a higher time preference, as observed in the twentieth century under the fiat standard.

Because it can be expected to hold on to its value into the future, hard money increases the potential pay-off from saving and delaying gratification, reducing the uncertainty of the future, and encouraging more saving and more future-oriented behavior, as was the case under the gold standard, and in the nascent bitcoin standard.

Thank you!



Lecture 14: Credit and Banking

March 25, 2024

Time preference is the starting point of understanding money, capital, and banking

It is only because of time preference declining that it becomes possible to forgo consumption and save, which makes capital available for borrowing

Without lowering time preference and saving, there can be no capital

Misunderstanding this is the cause of most of the world's heartache

==

Time preference declines → savings increase → more capital investment → productivity increases → better living standards → Time preference declines

As capital/money becomes plentiful managing it becomes a specialized job in the division of labor

==

Banking is the industry that specializes in the management of money and it has two essential services:

1- Deposits: specialization in maintaining savings

Simple basic boring market good, unless done wrongly!

2- Investment: specialization in allocating capital to increase it

Specialization in allocation of capital, allows people to focus their time on earning money rather than investing it

==

The introduction of specialization and division of labor into the job of capital investment

- increases productivity

- allows individuals to invest amounts of money they would otherwise have no obvious use for investing in their own line of work

- Their ability to invest becomes no longer contingent on the ability of their own business to grow.

By investing in lines of production unrelated to their own industry, investors are able to hedge against the failure of their business or disruptions to their industry.

==

Extending credit allows investor to make a return by deployed it in the service of capitalist production

Banker is an intermediary between saver and entrepreneur

Bankers also perform an entrepreneurial role by allocating capital

Allocating capital, like fishing, cooking, or singing, is a job in which people get better if they specialize

==

Two kinds of credit:

1- Commodity credit

2- Circulation credit

==

Commodity Credit

Bank invests exact quantity it receives from savers, for the exact duration granted by savers.

Mises:

“The credit that the bank grants must correspond quantitatively and qualitatively to the credit that it takes up. More exactly expressed, ‘the date on which the bank’s obligations fall due must not precede the date on which its corresponding claims can be realized.’ ”

==

If credit exceeds saving, or mismatches its duration, circulation credit is being created, the money supply is effectively being increased.

Commodity credit: involves sacrifice by the lender

Circulation credit: no sacrifice on part of the lender

==

In commodity credit:

Lender forgoes money in the present in exchange for higher payment in the future -> has a lower time preference

Borrower gains money in the present in exchange for paying a higher cost when repaying → has a higher time preference

The difference in time preference creates the opportunity for trade

This is a market for money/time

==

What would determine the price in the free market?

What rate of interest will borrowers pay?

Time preference of borrowers and lenders determines interest rate

==

It isn't productivity that drives time preference.

There are infinite projects with varying degrees of productivity, but what determines how much of them gets funded is the time preference of savers and borrowers

==

Originary Interest

The ratio of the value assigned to a present good and the value assigned to an identical future good.

The percentage increase in the quantity that needs to be offered to that individual to delay their consumption

==

All economic phenomena have their root in human action, and interest is no different. Time preference is what creates the phenomenon of originary interest.

The existence of time preference is itself the determinant and originant of monetary interest.

==

Money and the credit market harmonize ordinary interest across goods and individuals

Future obligations of money are traded for present payments, establishing a general discount rate of the future, or an interest rate.

==

Time preference determines the quantity of loanable funds, which will then go to fund the projects with the highest expected returns

The more funds are saved, the lower the interest rate, the more projects can be funded, and the lower the expected rate of return on the marginal project.

==

By deferring consumption to provide capital for investors, the capitalist incurs the cost of the operation in terms of time.

The capitalist invests the time in the enterprise by sacrificing present goods for future goods.

This allows workers and providers of input goods to get paid before production is concluded and the goods are sold on the market.

==

In the same way that a fisherman living in isolation needs to sacrifice catching fish to build a fishing rod

Entrepreneur uses the resources sacrificed by the capitalist to pay the workers, landowners, and input goods sellers in the present.

Entrepreneur only gets paid after production takes place and goods are sold, if at all

==

The profit is derived from the difference between the market valuation of the input goods and the market valuation of the final goods.

The interest is merely the payment for the time input provided to the production process by the capitalist.

The profit or loss is the difference in market valuation of the inputs (including interest) and outputs.

==

The market for capital

Individuals have value scales ranking present goods against future goods.

Present goods are more valuable than identical future goods

Individuals compare their own discount rate for goods to the market interest rate.

==

If a person's personal discount rate is higher than the market interest rate, she would borrow from the market, since she would value the repayment of the principal and interest in the future less than the principal in the present.

Ex: If $IR=5\%$, but your personal discount rate is 10% .

If you borrow \$100 today, you pay back \$105 next year

But you value the \$105 next year at a discount of 10% , so at \$94.5 today

So you borrow \$100 today and pay back what you value today at \$94.5

==

If, on the other hand, her personal discount rate is lower than that of the market, she would lend her cash savings on the capital market

Ex: If $IR=5\%$ but your personal discount rate is 2%

If you borrow \$100 today, you pay back \$105 next year

But you value the \$105 next year at a discount of 2% , so at \$102.9 today

So you would not borrow, because entails a loss for you

Instead you lend \$100 and you gain money you value today at \$102.9

==

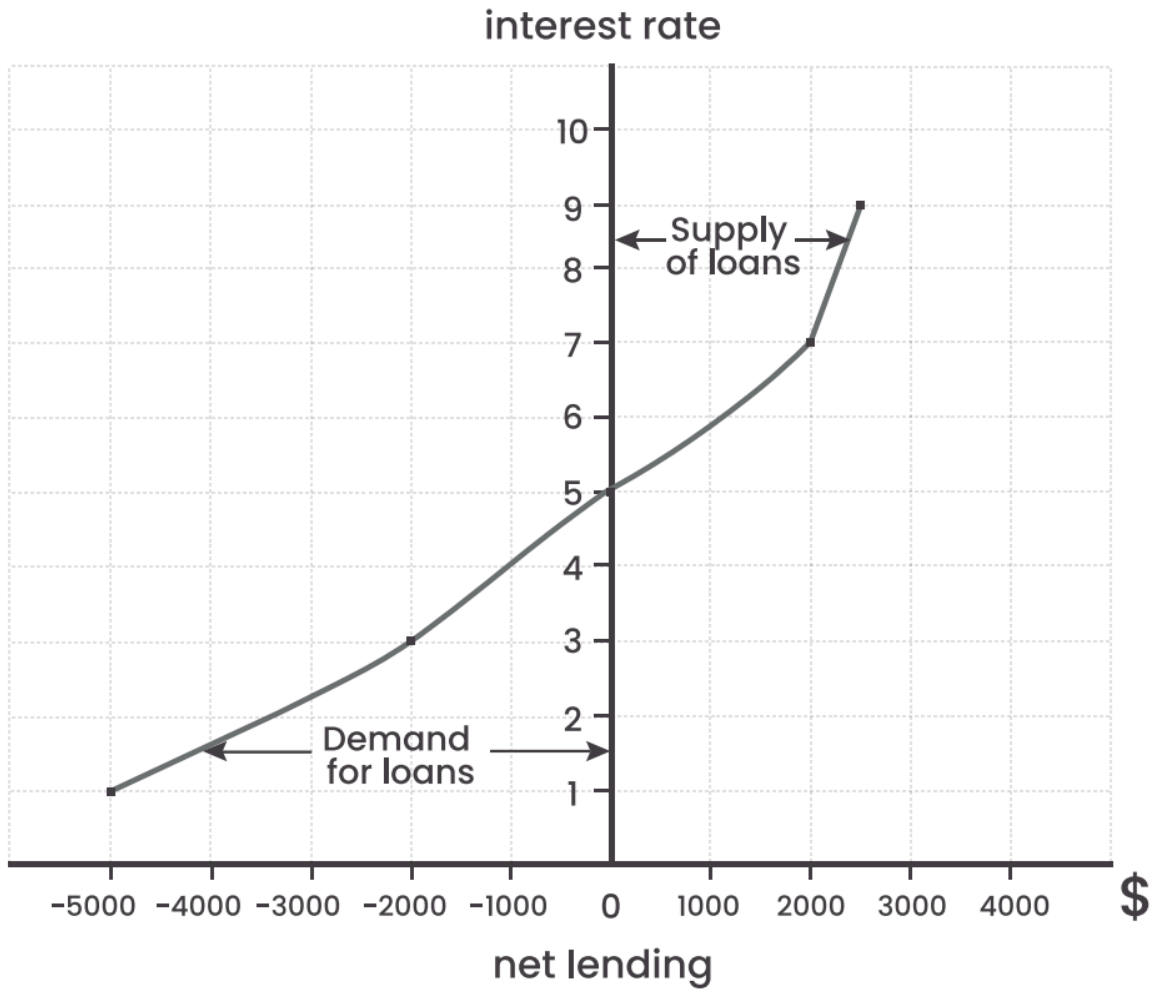


Figure 29. Individual time market

==

interest
rates, %

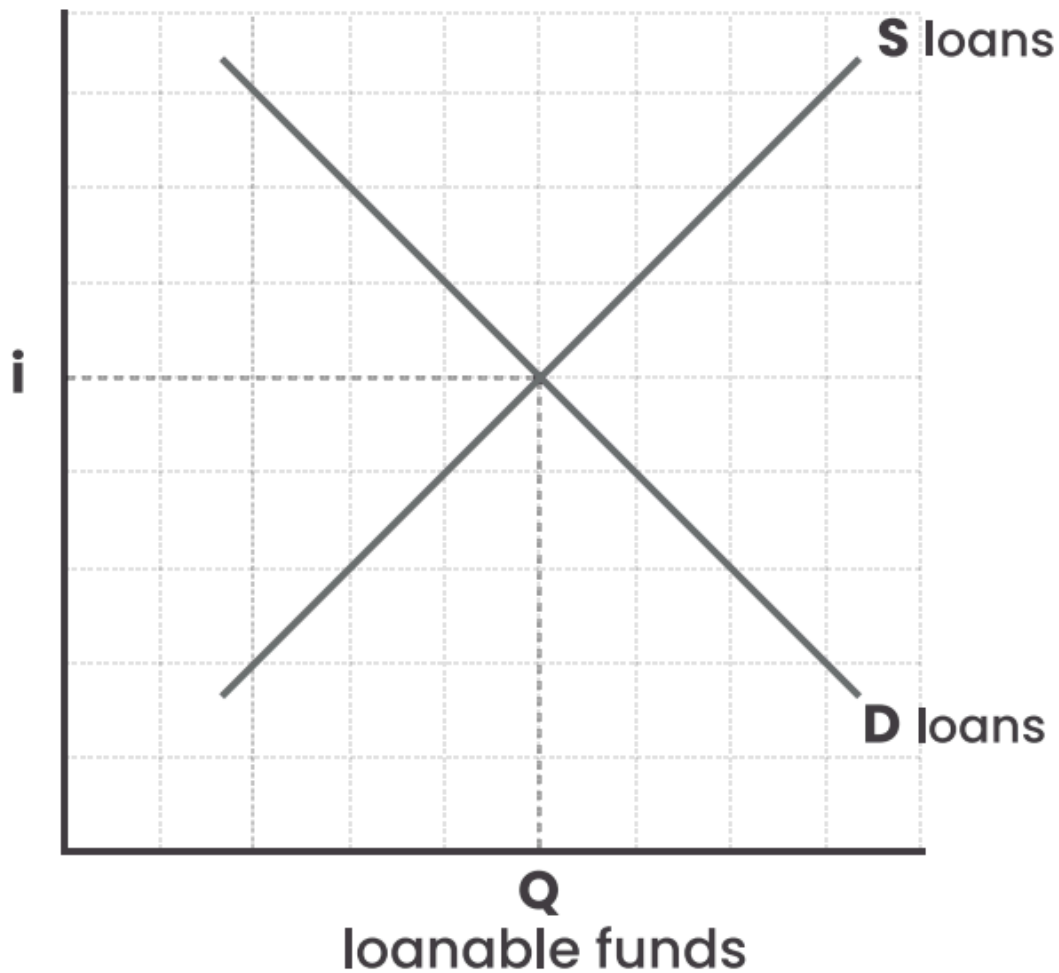


Figure 30. The market for loanable funds

==

Can Interest Be Eliminated?

The Austrians make the best case for why interest is a natural market phenomenon

Originary interest exists, and without it nobody would consume anything

Banning interest lending doesn't eliminate originary interest; it incentivizes capital consumption

==

Banning individuals from trading financial assets based on their time preference will not eliminate their time preference, which will continue to direct their consumption and production decisions.

Capital owners with a positive time preference who no longer have access to the option of lending at interest find themselves with a stronger incentive to consume their capital stock.

==

Banning interest:

Prevents borrowers from accessing funds that would make them better off subjectively

Prevents lenders from benefiting from capital accumulation

Lowers the incentive to accumulate capital

==

I respectfully disagree with the Mises and the Austrians here

I think interest would be eliminated by a free market, without the need for government edicts

==

The process of civilization is initiated with the lowering of time preference, which results in capital accumulation, increased productivity, and improved living standards, in turn encouraging further reductions in time preference in a continuously amplifying spiral.

Wars, diseases, natural disasters, increased future uncertainty, and growing uncertainty over property rights forestall this process

==

Humanity has seen a steady, long-term decline in interest rates over the past 5,000 years, interrupted by calamities raising interest rates

In fact, a tendency toward falling interest rates characterizes mankind's suprasecular trend of development. Minimum interest rates on "normal safe loans" were around 16 percent at the beginning of Greek financial history in the sixth century B.C., and fell to 6 percent during the Hellenistic period. In Rome, minimum interest rates fell from more than 8 percent during the earliest period of the Republic to 4 percent during the first century of the Empire. In thirteenth-century Europe, the lowest interest rates on "safe" loans were 8 percent. In the fourteenth century they came down to about 5 percent. In the fifteenth century they fell to 4 percent. In the seventeenth century they went down to 3 percent. And at the end of the nineteenth century minimum interest rates had further declined to less than 2.5 percent.¹⁶⁴

==

This trend of decreasing time preference and decreasing interest rate stopped in the twentieth century with fiat money

Hypothetical: What would have happened to interest rates had they continued their decline in the twentieth century?

What if humanity remained on a gold standard, and people maintained the ability to save for the future, capital continued to become more abundant, and productivity increased? How low would interest rates go?

==

We can accept Mises' contention that originary interest may never drop to zero.

But even without it dropping to zero, market interest rates can drop to zero

Because money has a **carrying cost** that is always larger than zero

Whatever form of money you use, it always costs something to hold it

And there is always a nonzero risk of it being stolen

==

If holding money has a cost, then not lending money has a nonzero cost

If originary interest continues declining until it is lower than the carrying cost of money, it is rational to lend at a 0% nominal interest rate!

If holding money has a nominal return of -1%, then a 0% nominal return by lending is preferable

Rather than requiring abolition by decree, the continued process of civilization, capital accumulation, and lowering of time preference could naturally eliminate lending with interest entirely.

==

A continuously advancing civilization would witness its time preference decline, leading to more future provision and more moral concern for future generations, which results in capital being widely abundant.

As people own larger quantities of capital, the demand for borrowing declines as well.

At a sufficient level of abundance, the return on lending becomes lower than the cost of carrying the money, at which point a borrower can secure a loan from the many lenders available by simply promising to pay it back in full

==

As interest rates decline with time preference, the asymmetry of the loan deal becomes increasingly unappealing to the lender.

Why take on the risk of losing all the capital in exchange for such a measly return? The loan contract limits the upside benefit to the lender, but there is no force that can truly guarantee that the lender will get their money back.

Currently risk of lending is protected through the destruction of currency: Banks are insured by the central bank which bails them out by expanding the money supply

==

But in a world of continuously declining time preference, the money must be hard, which makes these bail-outs impossible, so there's no possible protection of the lender

If money could be expanded to guarantee savings deposits, it would not be hard, and time preference would not drop to the point where originary interest is lower than the carrying cost of money

If there is no downside protection, lenders would prefer to share in the upside fully

Equity investment financing would likely replace interest lending financing

==

With real abundance of capital, it would be easily for trustworthy people to secure zero nominal interest rate loans for emergencies or hardship

But business investment will likely take the form of equity

Banking is neatly divided into deposit banking and investment equity banking

==

The Austrian theory of interest rates explains interest rates, but also helps explain the religious case against it

Religious mandates against interest can be understood as prescriptions for lowering time preference to the point where interest lending is no longer tempting

Expecting to live forever lowers the discounting of the future

==

Religions impose this reality on believers through divine dictates

Modern market economy imposes this through capital accumulation, division of labor, technological advancement all lowering time preference

Capitalism freely delivers what religions naturally seek to impose

==

Schumpeter: Interest reflects people's intelligence, moral strength and cultural level

The more moral, intelligent and cultured a society, the more it will accumulate capital and the lower the interest rate

==

Interesting question: Does banning interest lending cause time preference to decline?

Or does it have the opposite impact? People accumulate less capital because they cannot lend it, which causes their time preference to rise.

Is it only interest lending that abolishes interest lending?

Lecture 15: Monetary Expansion

Monday April 8, 2024

==

“The expansion of credit cannot form a substitute for capital”

--Mises

Previous chapter discussed commodity credit, which corresponds perfectly to the quantity and maturity of the savings held by the bank. Credit entails sacrifice of consumption.

==

Circulation Credit

Lending institutions creates money to lend; no corresponding sacrifice of consumption by savers

Examples:

1- Fractional reserve banking: Depositors' money is available on demand while it is also loaned out to borrower

2- Maturity mismatching: Duration of loan is longer than the duration of savings; bank assumes it can find savers/lenders to keep loan going

3- Rehypothecation: Same collateral is pledged for several loans

==

Each of these ways generates **fiduciary media**:

Notes and bank balances that are redeemable for money, but do not have an equivalent amount of money available on demand for redemption

==

Money is unique in that it is only exchanged, not consumed like consumer goods or used in production, like capital goods

This means that a claim for money can perform the function of money (almost) indistinguishably from money

A voucher for food cannot be eaten; a receipt for a sewing machine cannot sew; an airplane ticket cannot fly. But a receipt for money can be used as a medium of exchange like money

Money substitutes can be used as money; they increase the supply of money

==

Mises' Typology of Money

Claims are not goods; they are means of obtaining disposal over goods

Money in the narrower sense is a good in its own right. In contrast, money substitutes were legal titles to money in the narrower sense.

At the heart of Mises' banking theories is the distinction between two types of money substitutes: money certificates and fiduciary media

==

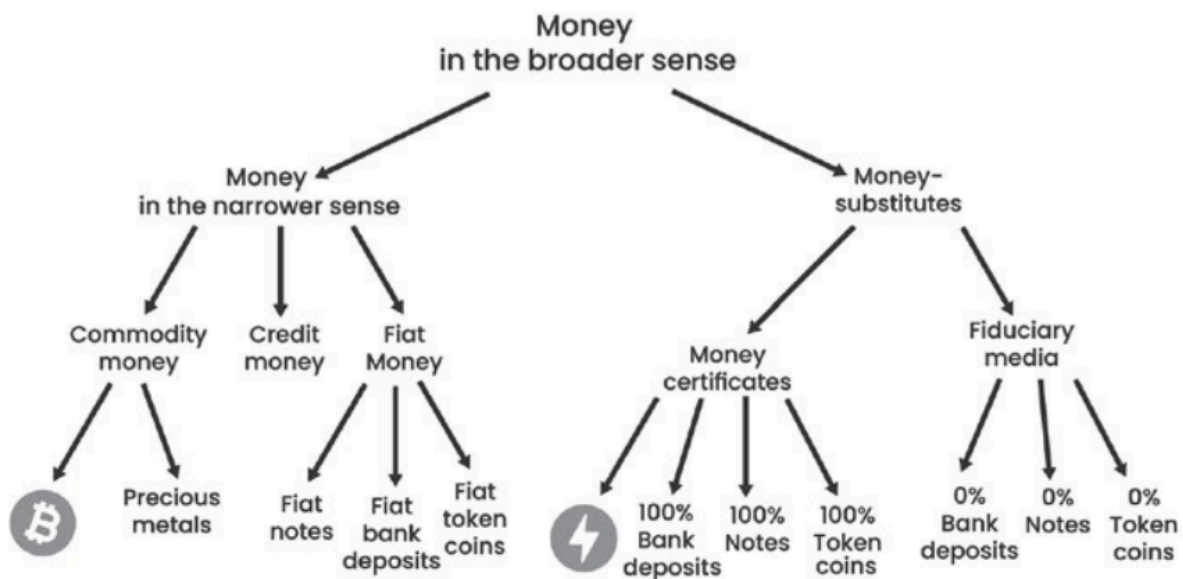


Figure 31. Money typology¹⁷²

==

Commodity money: A general medium of exchange that is also an economic good that is exchangeable with goods of the same type. It is sold on an open market with many producers and consumers. Historical examples are mainly precious metals, but more recently, bitcoin can be added as a new form of non-metal digital commodity.

==

Credit money: A future financial claim on an entity that is used as a medium of exchange. What distinguishes credit money from credit is that the recipient accepts it with the intent of passing it on to another recipient, not because they want to collect the financial claim.

==

Fiat money: A medium of exchange accepted because of the legal decree of an authority. “The deciding factor is the stamp, and it is not the material bearing the stamp that constitutes the money, but the stamp itself.” Fiat money can take the form of paper money, bank deposits, or token coins.

==

Money substitutes: Physical or financial instruments that are legal titles to money in the narrow sense. They can be redeemed for money on demand and are used as a medium of exchange in transactions. Money substitutes come in two forms:

==

Money certificates: A financial instrument or piece of paper redeemable in full for money on demand. (Value is 100% covered by the issuing authority.) Examples include a dollar bill redeemable in gold under a strict gold standard, or a bank account based on gold-backed dollars. Receipts for bitcoin held by a financial institution are an example. Bitcoin on the lightning network is a unique type of money certificate, since its redemption is not dependent on a third party.

==

Fiduciary media: Money substitutes not backed by money holdings. When a financial institution issues money substitutes but does not have the money to redeem all substitutes, the difference is fiduciary media. This is a key term in Mises’ explanation of the business cycle, as it is precisely the creation of these media that sets in motion the boom-bust cycle. In the digital realm, these would be the equivalent of bitcoin-denominated credit issued without equivalent bitcoin backing.

==

Money’s function is orthogonal to its physical form: Bank deposits can be money certificates, fiduciary media, or fiat money. Same is true for paper money. Same is true for physical coins.

By stepping away from their physical forms, and explaining the difference between fiduciary media and money certificates, Mises could provide an explanation of business cycles grounded in human action

==

The primary distinction is that fiduciary media increase the supply of money while money certificates do not

Governments used to mix base metals into their precious metal coins, which would increase the money supply and raise prices

They do something similar by forcing the use of unredeemable money certificates.

With their redeemability suspended, money certificates become fiduciary media, which increases the overall supply of money

==

Business Cycles

Mainstream economists have no coherent explanation of what causes business cycle; in fact, they take pride in not thinking about it

Success in modern fiat academia is primarily a function of fealty to central banks, not coherence

Unburdened by having to toe the central bankers' line to secure funding, Austrians are able to offer more than the dubious Keynesian recommendations for exiting the depression: They can offer an explanation for how to avoid a depression in the first place.

==

Austrian theory of business cycles builds on theory of time preference and money

Basic premise is that resources cannot be conjured by creating more unbacked claims

There is no free lunch; you just don't understand how you're paying

==

In essence:

Governments and banks attempting to pass off unbacked claims for economic resources as

equivalent to the resources or backed claims to them results in an increase in the supply of money, manifesting as an increased amount of financial capital in the hands of entrepreneurs. The increased financial capital causes entrepreneurs to engage in investments for which they do not have sufficient resources, something which only becomes apparent after they begin spending their financial capital, causing an unanticipated rise in the price of their input goods, preventing them from completing the projects.

==

In an economy with only commodity credit, interest rates are determined by individuals' preferences for borrowing and lending

All loans require someone to forgo consumption and lend

Opportunity cost is real

Saving and consumption of financial capital correspond directly to physical capital

==

If you don't consume corn, you can use it as a seed: consumer good to capital good

If you don't go on vacation, the resort has less money to hire the marginal worker
You save the money in the bank, which lends it to a factory which hires that marginal worker

As long as we're on commodity credit, consumption decisions reflect real individual preferences for real world resources

==

If circulation credit is lent, fiduciary media increase the supply of money

The bank issues credit to the farmer to buy the seed corn that's already been eaten

The factory can get financed even as you spend your money at the resort

==

When the money is first issued, it's hard to tell that this is going to be a problem

But once the entrepreneurs start buying their inputs, their prices rise, which means they can't afford all the inputs they need to complete their project

The seed corn price rising makes farming no longer profitable

==

The resort has the customer's money, and the car factor has the equivalent credit from the bank

Both will bid for the workers and land, raising prices

The wages of workers and land prices rising mean the resort can no longer sustain its demand

==

Entrepreneurs' plans are ruined because their economic calculation is distorted

What was profitable before monetary expansion stops being profitable

If interest rate is 6%, a business offering 4% return will not get funded

If issuing fiduciary media drops interest rates to 3%, the business will get funded

But issuing fiduciary media did not make more capital abundant

==

The Business Cycle Graphically

Production Possibilities Frontier

Market for loanable funds

Intertemporal structure of production triangles

==

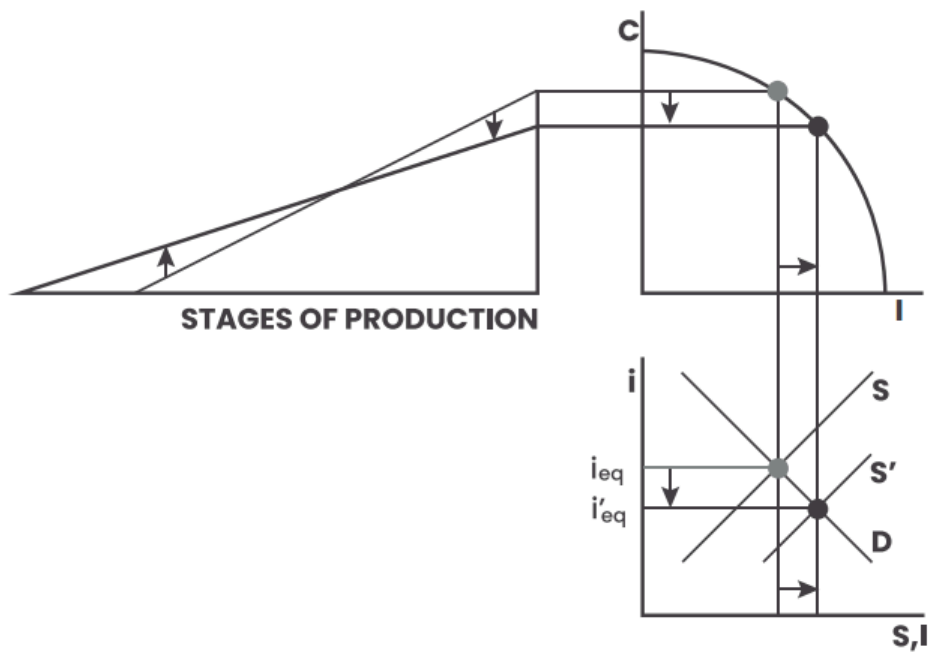


Figure 32. Economic growth through investment and deferral of consumption

How things go right: Economic growth

Time preference $\downarrow \rightarrow$ consumption forgone $\rightarrow$ capital availability $\uparrow \rightarrow$ stages of production elongate $\rightarrow$ Loanable funds supply curve shifts right $\rightarrow$ interest rates $\downarrow \rightarrow$ lending $\uparrow$

If the business is profitable (BIG IF) $\rightarrow$ PPF shifts outward $\rightarrow$ Product $\uparrow \rightarrow$ Consumption $\uparrow$ (more than initial forgone consumption) $\rightarrow$ stages of production triangle goes higher

==

How things go wrong:

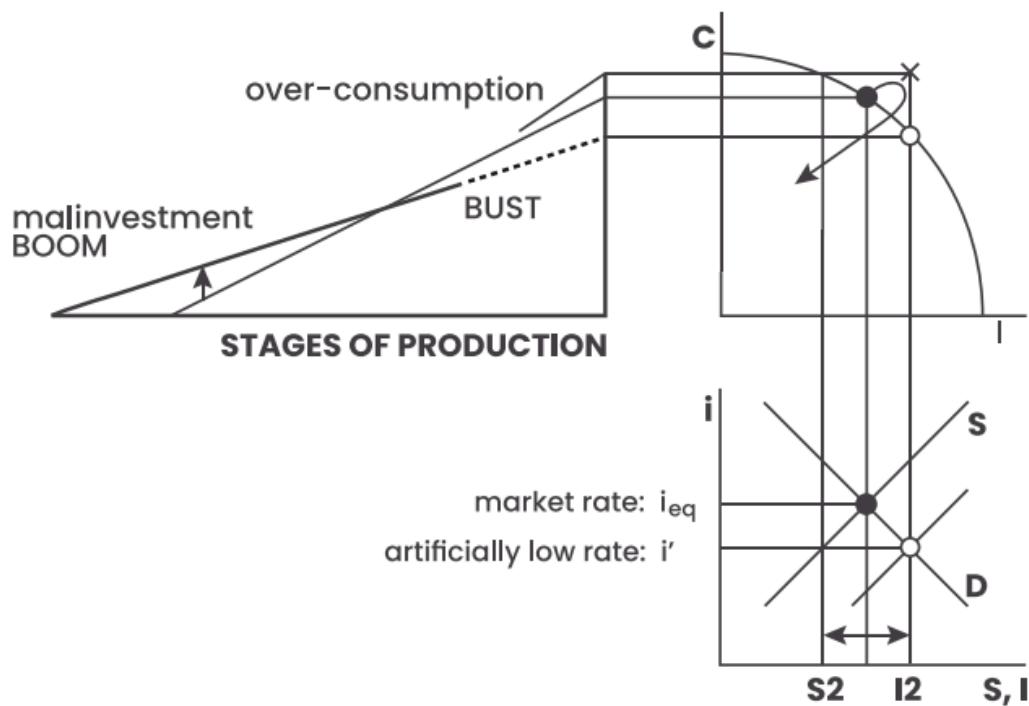


Figure 33. Credit expansion with fiduciary media and the business cycle

No decline in time preference → no consumption forgone → capital availability doesn't increase
 → stages of production are elongated without necessary capital → Move to point outside PPF
 → loanable funds curve splits: investment goes up without savings supply increasing → interest rates ↓ → Increase in investment without requisite savings → BUST

==

The difference between investments and savings is called **malinvestment**

As the prices of inputs rise, businesses reliant on them get liquidated & lay off workers:
 recession

As an economy advances and becomes increasingly sophisticated, the connection between physical capital and the loanable funds market does not change in reality, but it does get obfuscated in the minds of people.

==

Analogy:

Developer wants to build 100 houses

A house requires 10,000 bricks
1 million bricks are needed

A Keynesian contractor offers to build 120 houses with 800,000 bricks (just like interest rate manipulation reduces savings and increases borrowing)

This can't last, at some point it becomes clear the 120 houses can't be finished

The sooner this is realized, the more it is possible to recover

==

Do you come to terms with reality, or kick the can down the road?

We now have a tiger by the tail: how long can this inflation continue? If the tiger (of inflation) is freed he will eat us up; yet if he runs faster and faster while we desperately hold on, we are still finished! I'm glad I won't be here to see the final outcome.¹⁷⁸

==

Capital Market Central Planning

Fiduciary would be unlikely to survive on a free market

They can be created, since they are a close enough substitute to money

But they fail because when people try to redeem them, there won't be enough money

==

Fiduciary media existed under the gold standard because gold has limited salability across space in a modern economy, creating a strong incentive to not redeem fiduciary media

Fiduciary media in the form of paper money or bank credit was far more salable across space

Redeeming fiduciary media for gold leads to a loss of salability

The less competitive banking, the bigger the margin

==

In 19th century US, bank licensing laws made banks an oligopoly, allowing them a margin for inflation via fiduciary media

Boom and bust cycles followed, but at least you were protected if you stayed away from these banks

Liberalizing banking would have led to the emergence of money certificates at the expense of fiduciary media

But history went in the opposite direction

==

Bank oligopolies established the Federal Reserve to bail out banks when their fiduciary media inevitably collapse

Booms and busts were alleviated, by externalizing the cost to the reduction in the value of the currency

In order to protect financial institutions from the consequences of unbacked lending, a socialist central-planning board was placed in charge of the market for money and capital, the most important market and the one integral part of all markets.

==

A capitalist system cannot function without a free market in capital, where the price of capital emerges through the interaction of supply and demand and the decisions of capitalists are driven by accurate price signals. Recessions and financial crises are best understood as the failures of capital markets when central planning restricts monetary freedom.

==

Over time, the result is the destruction of capital, money, the ability to save, and the division of labor itself. Placing money in the hands of government monopoly is far from a panacea; it is destroying the foundations on which human society and modern capitalist civilization are built.

Lecture 16: Violence

Monday April 22, 2024

==

This book has so far only discussed the economics of voluntary interactions: everyone acts out of their own will

But there is another way to act: violating the will of others by using violence or the threat of violence

Coercion: Imposition of one's will on another

==

Non-Aggression Principle

Voluntary interactions: All participants expect to benefit

Coercive interactions: At least one participant expects negative consequences

==

Violent aggression is like animal attacks or natural disasters: undesirable

People value not suffering these catastrophes, and so they work to protect themselves

Defense against violence is just another economic good, a human act

Important to distinguish between: violence and initiation of violence

==

Initiating violence violates victim's property right in body and objects and likely leads to retribution or the absence of cooperation

The extent to which groups of individuals, small or large, agree to reject the initiation of violence is the extent to which they can live in a peaceful extended market order and benefit from the division of labor.

The extent to which societies believe some groups/individuals have the right to initiate violence, conflict becomes a regular feature of society

Why should one get the right and not others?

==

Violence, on the other hand, can be legitimate when deployed in self-defense

It is possible to have a large functional society and division of labor in which violence is acceptable as self-defense but initiating violence is not accepted

This is a universal rule that can apply to everyone in society and allow for peaceful cooperation, production, and prosperity

The NAP allows society to scale: Anyone can join a society successfully and productively by abiding by this rule.

It is not based on authority of anyone

==

Non-Aggression Principles

Rothbard:

No one may threaten or commit violence ("aggress") against another man's person or property. Violence may be employed only against the man who commits such violence; that is, only defensively against the aggressive violence of another. In short, no violence may be employed against a non-aggressor

==

Edward Fuller:

[A] large and diverse group of history's most eminent thinkers have expressed ideas very similar to the non-aggression principle. The rudiments of the principle were known to the ancient Egyptians around 2000 BC, the ancient Hindus around 1500 BC, and the ancient Hebrews around 1000 BC. Around 500 BC, the ancient Chinese and Greek philosophers expressed the underlying logic of the principle. Cicero came close to articulating the principle in its modern form. Thomas Aquinas reasserted something strikingly similar to non-aggression after the Dark Ages, and the scholastic philosophers carried the idea into the early modern period. During the seventeenth century, the non-aggression principle rose to the pinnacle of Western philosophy

==

Government Coercion

Most economists and social scientists present government as the solution to society's problem of aggression.

Since aggression and violence are part of nature, they cannot be eliminated, only managed, and the only way to do so is by monopolizing with one entity.

When everyone accepts the legitimacy of the monopolist, acts of violence committed by anyone else are considered illegal and punishable.

==

Mises:

Government ought to do all the things for which it is needed and for which it was established. Government ought to protect the individuals within the country against the violent and fraudulent attacks of gangsters, and it should defend the country against foreign enemies. These are the functions of government within a free system, within the system of the market economy.

Under socialism, of course, the government is totalitarian, and there is nothing outside its sphere and its jurisdiction. But in the market economy, the main task of the government is to protect the smooth functioning of the market economy against fraud or violence from within and from outside the country

==

For Mises and the classical liberal, government is unable to perform economic calculation over production decisions, because of the economic calculation problem (Chapter 12)

But...

Government can protect property and protect against foreign enemies

But, isn't protecting property just another market good? Why can government produce property protection but not apples?

==

How government coercion fails:

Price controls: always result in shortages, surpluses, black markets, highly wasteful methods of rationing supply, like queues and coupons.

Forty Centuries of Wage and Price Control: How Not to Fight Inflation

Government cannot magically make the producer profitable at a lower price; it can just stop him producing, which results in reduced supply

==

Black markets: Secures the good for those who need it at a higher price, and imposes added risks and costs: prosecution, confiscation, and imprisonment

Specialist black market traders emerge and capture the profit at the expense of the producer, allowing him to invest less in future production

Tax on production and subsidy for crime

==

Queuing: Consumers pay non-monetarily. Rather than pay the higher price, everyone pays the lower price, but they have to pay the cost of time spent standing in a queue. The extra expenditure of time effectively rations the limited supply, but it is wasted as it doesn't go to the producer to allow him more production

==

The opposite is also a problem: governments trying to bring prices up

Minimum wages, discussed in chapters 1 and 4

The root of the problem of prices is always inflation: it's why prices are too high and why wages are always too low

Inflation takes real wealth from savers, devaluing their money and raising the prices of the goods they purchase while allowing the government to spend with little constraint.

==

Mainstream economists believe government spending can fix inflation

But that's because they don't understand opportunity cost

All money spent to meet government needs is money not spent to meet individual needs

==

Another intervention is to subsidize specific goods: if government covered a part of the cost of an important good, it becomes more easily affordable for society

But that also ignores opportunity cost

At the margin, spending is directed toward the goods the government wants citizens to have, and away from what they would want to have

Subsidies for cheap foods just make other foods more expensive, making everyone fat and sick

Unemployment subsidies incentivize unemployment and punish employment

Needs-based welfare encourages remaining poor

==

Government production of goods and services is offered as a solution to lack of affordability and availability

Government doesn't have to chase profit and can focus on inclusion and access

But this fails because it misunderstands the nature of prices and economic calculation

==

Prices are not just a way for greedy people to get rich: they allow economic calculation

Eliminating the profit motive from economic production does not lead to selfless, abundant, and affordable production; it leads to a failure of economic calculation, causing large amounts of waste.

Government spending has to come from taxes or inflation, both of which destroy savings, reducing the incentive to save, raising time preference

==

To their credit most mainstream economists demonstrate some understanding of the problems of government intervention in the economy, even Samuelson!

But they have found a new eternal fountain of new rationalizations for government action: "market failure"

Market failure: a product of free human interaction unfavorable to an economist

==

Rationales for Government Violence

Market failure: Left to their own devices, free individuals will produce outcomes that are inferior and suboptimal

The term “market failure” posits an omniscient central planner capable of deciding what would be the optimum outcome of individuals’ free interactions, then denouncing the actions of free individuals as inferior and in need of change. While couched in terms of the public good, methodologically, this approach simply consists of a central planner declaring their will to supersede the will of all freely acting individuals.

==

An economist performs a large amount of theoretical or mathematical or experimental make-work, then concludes that freely acting individuals are producing something suboptimal to society as a whole, which they, in turn, call a “market failure.” They conveniently skip over the question of what allows an academic—who has to write government research grants to eat—to pass judgment on the ultimate ends of every other person’s actions and what goal they should meet.

==

By presenting economics as an objective mathematical function, when economic value itself has no unit with which it can be measured, government-funded economists can conjure any numbers needed to justify any form of aggression against the individual property.

==

Rather than follow the Austrian school method of individual action as the basis of understanding economics, modern economists, in a bold display of cargo cult science, attempted to copy physics.

Remember Chapter 1: there is no constant unit with which to perform measurement of utility and value in economics, so all mathematicization is unworkable

But when has something been unworkable ever stopped fiat people from ruining your life trying?!

==

In order to get over the unworkability of the math, several ridiculous assumptions are made:

- 1) All agents have complete knowledge

- 2) All agents are rationally self-interested (as defined by the economist)
- 3) Perfect competition

None of these assumptions hold in reality.

A sane adult would conclude the invalidity of the assumptions makes modeling markets invalid

A fiat economist concludes the invalidity of the assumptions makes markets unvalid!!

==

And, with equally nonexistent reason, the economist concludes government can fix this “market failure”

Fiat economists built up the straw man of the mathematical model of the market economy, then dismantled it and concluded that its defeat means markets don't work, not that their models don't work.

==

Information Assymetry

Individuals taking part in a transaction do not know everything related to the transaction

One party knows less than the other

Therefore the government needs to intervene to allow trade to happen

==

But billions of trade take place every day with both parties walking away satisfied, without having to know everything

And why would the government know what the transacting parties do not know?

Whose interest will the government be looking out for?

==

In reality, information is itself just another market good, and there is no reason why government will know how to provide it

Economists' favorite example of information asymmetry is the used car market, but used car history report services solve this problem voluntarily: Buyers prefer to have cars with history reports, and so sellers sign up for these services

==

Irrationality

The pseudoscience of behavioral economics has produced a highly popular cluster of fallacies used to justify government coercion: irrationality

Behavioral economists posit arbitrary and irrelevant criteria for what constitutes rational behavior and then test their university's undergraduate students—as human lab rats and stand-ins for all of humanity—to see whether these criteria are fulfilled by humans.

After the undergrads fail to give the researcher a result that meets his criteria of rationality, he smugly denounces the human race as irrational. Finally, he concludes that the only way to correct this behavior is through the coercive intervention of the government.

==

Economic rationality, though, cannot be studied in the context of a lab experiment, as it is inherently subjective and marginal. It pertains to individuals' decisions at the time and place where these decisions need to be made, and in a lab setting, all decisions pertain to the lab, not to the real world.

No good reason to accept behavioral economists' contrived criteria for what constitutes rationality

And if you do accept them, why are humans irrational but behavioral economists rational?

Why do biases not distort behavioral economists?

And more importantly, why would governments intervening in these markets be immune from this irrationality?

Wouldn't it be far more destructive if the irrationality is imposed at a coercive macro scale rather than individually voluntarily?

You have little to fear from others being peacefully irrational, you have a lot to fear from a central planner being irrational

==

Imperfect Competition

Without an infinite number of buyers and sellers, competition is imperfect

No market has an infinite number of buyers and sellers, so all markets are monopolistic and imperfectly competitive

The only fix is to have a monopoly on violence that forces all market participants to obey its edicts on how to operate in a market free of monopolies

==

The scam here is obvious: they scare you of 'monopolies' on the free market who have no power to force you to buy or sell anything, and subjugate you to the monopoly that will destroy your life if you disobey anything it says

Free markets do not produce monopolies, simply because anyone is free to produce anything anyone else produces.

A producer charging exorbitant prices is powerless to stop others from undercutting him

==

Only government coercion allows monopolies to exist

In decades of examining this question, I have never come across a single example of a monopoly provider whose monopoly status was secured on the market peacefully rather than through coercive intervention.

Government regulations create the monopoly, and economists then call it a "natural monopoly", which justifies more government intervention

==

Often government monopoly laws target a producer acquiring large market share through offering a superior product

In this case they are not protecting consumers, but inefficient producers

Rockefeller's Standard Oil is the classic example: Reduced prices of kerosene massively by improving productivity, benefiting consumers

==

Externalities and Public Goods

Most mainstream economists accept that the market economy is the best way to organize production of private goods.

But they contend that it fails for “public goods” and “externalities”

==

Externalities are positive or negative economic implications accruing to a person as a result of another person’s consumption or production decisions

Positive externality: My business booms because of another business opening nearby

Negative externality: Pollution from nearby factory

==

Externality is an economically incoherent concept if you understand property rights. Your actions either violate the property rights of others or they do not. If they do, they are aggression, if they do not, then you are just being incoherent and bitter

==

Pollution is aggression, and can be resolved in the same way violations of property are dealt with: arbitration or police

Externalities that don’t involve violations of property rights are just emotions that you need to get over.

Anyone can decide to derive any positive or negative utility from anyone else’s decisions, but none of that justifies violating property rights

A market economy necessarily involves infinite positive and negative externalities from others

It can only work when everyone agrees to respect everyone else’s property

Trying to carve out exceptions for negative feelings will result in interminable conflict as people fight to prove that their interventions are justified and others are not

==

Public goods: Non-rival and non-excludable

Non-excludable: Not possible to stop others from benefitting from the good
Example: street light, national defense, national parks, clean air

Free rider problem: Since beneficiaries cannot be excluded, they have incentive to not pay, which leads to underproduction

If government forces everyone to pay, it can be provided in the necessary quantity

The fatal conceit is to imagine that economists can decide what the optimal necessary quantity is, rather than people's actions

==

But countless of these goods are provided non-coercively:

Private parks are very common: there are a sixth of South Africa

Lighthouses have been built privately without taxes, by charging docking boats

==

The fundamental problem with externalities arguments is ignoring marginality in decisions

People carry out an act if its benefits exceed its costs.

Whether others benefit from it or not is immaterial. You will not forgo a beneficial act in fear of others benefitting. Seaports will not self-sabotage by not building a lighthouse they can afford to build just to ensure they won't benefit a distant boat that passes by and doesn't dock in the seaport and pay a fee.

==

And countless examples exist of the failures of the provision of these goods by government

Roads are a great example: congestion everywhere

Why? Because governments can confiscate them and so do not face the real cost of producing them, so they do not calculate rationally, and always overproduce.

==

Without roads being considered "public goods", we would still have roads.

But every road would be built when the land's owner calculates that the return from the road will exceed the opportunity cost.

When government has no opportunity cost for it, of course they overprovide it.

In conclusion: non-excludable goods are not a rationalization for violating property rights

==

Non-rival: One person benefitting from it does not reduce the benefit others get from the good

Example: lighthouse, street lights, army protecting the entire country

But this makes no sense

A non-rival good is a non-economic good. Only way to be non-rival is to be non-scarce

==

All of these examples are scarce and economic goods

Streetlights are part of the street, and there is a limit on how many people can be in a street, and the only way to figure out the right amount of lighting is through economic calculation

Each individual's security adds to the burden of the security provider: more people & more territory mean more cost of security

==

All of this talk of externalities and non-rival and non-exclusive is sloppy thinking caused by not understanding marginalism

If it's scarce, it's an economic good, it needs to be economized, and that can only be done with private property and economic calculation

Whether it is a soldier, policeman, judge, road, or lamppost, there are only individual units being deployed, with an economic cost and benefit. Only through economic calculation with property rights can these resources be deployed productively and rationally.

==

Rationality in Economics

To model the market mathematically economists had to make ridiculous assumptions: complete knowledge, be rationally self-interested, and perfect competition.

The past seventy years of economics have primarily consisted of supposed geniuses receiving government paychecks to poke holes through this ridiculous mathematical model and then concluding that they have disproved the possibility of markets working.

==

Imagine an engineer creating a model for the flight of the bird

To make it computable on a classroom blackboard, he makes some simplifying assumptions: the weight of the bird is uniformly distributed across its body

The reasonable answer is to conclude that the model is inadequate, since birds are obviously flying.

Modern economists are effectively disputing the validity of this assumption, and thus concluding that this means that birds cannot fly!

==

Vernon Smith:

Lifelong experimental economist, repeatedly arrived at the conclusion that market participants are able to conduct beneficial trades and discover prices without meeting to meet the assumptions of the neoclassical model, and without a central planner.

Real world markets needs the assumptions of the neoclassical model to work as much as the sun needs astronomers to rise.

==

Vernon Smith distinguishes between Constructive Rationality and Ecological Rationality.

Constructive Rationality: Human reason consciously designing things: cars, airplanes.

Ecological Rationality: Emerge out of human action and interaction without a designer: airplane routes, language, market structure, supply chains

Hayek's Spontaneous Order: Complex phenomena that appear as the output of a designer's work but are the product of human action and interaction under a set of agreed-upon abstract rules

Markets are like language: nobody designed them

==

Nobody designs markets or brings them into existence by fiat; they emerge in a world in which individuals are free to engage in the economizing acts discussed in the second part of this book. In a social order in which humans have justly acquired property and maintain ownership of their bodies, they are able to work, accumulate capital, increase their utilization of energy sources to meet their needs, and improve the state of the technology they use. In a society where humans respect each other's property and reject the initiation of aggression, we can trade with one another, and from that emerges money, the division of labor, and the modern capitalist system. There is no conscious designer directing the development of a market economy; it is the spontaneous order emerging from the observance of the abstract rules that govern modern civilization.

==

The fatal conceit here, to borrow Hayek's term, is that by seeking to improve and mend the market economy with top-down planning, coercive action will undo and disrupt the basic abstract rules that are the foundation of the market economy: specifically property rights.

==

Markets function regardless of economists' objections and models

Markets fail when governments and economists coerce participants

It isn't humans that are irrational, just economists

But then again, it is rational for an economist today to optimize their scholarship for justifying government intervention

Lecture 17: Defense

Monday May 6, 2024

The previous chapter argued the state is a manifestation of the problem of violence in human society, not the solution to it.

19th century and early 20th century classical economists and liberal philosophers used economic reasoning to argue against the initiation of violence in the economic sphere, but argued the state was the way to stop it.

Late 20th century and 21st century economists extended economic analysis to the state itself, and argued against it

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If the state isn't the answer to violence, then what is?

Defense is just an economic good:

It has utility: not being subject to coercive and unwanted violence is valuable

It is scarce: aggression is an infinite series of potential threats but defense consumes real resources and is finite and must be economized

Utility + scarcity = economic good

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Like any good: individuals can produce it for themselves, or they can acquire it from others on the market

Defense may involve violence, but it does not involve the initiation of violence

Initiation of violence is not an economic good; defensive violence is

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The market for defense is highly developed, diverse, and sophisticated. Includes:

Safety locks, alarm systems, surveillance cameras, drones, fences, personal guns, armored vehicles, security guards, private investigators.

Amazing fact: there are more private security personnel than state security personnel in the world

Majority of humanity lives in countries with twice as many private security guards as police

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Even without having to willingly earn its money, the state provides a lot less defense than the market

Private defense is not some techno-utopian futurist fiction; it is reality today

Companies with valuable inventory rely on private security

How else do you solve the calculation problem?

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Remember Chapter 12: capitalist markets function because entrepreneurs are able to perform economic calculation when they have private property rights

The examples usually given for the calculation problem usually involve physical goods like cars and shoes

But the same problem applies for abstract goods like defense

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How many policemen should protect the bank? The billionaire's home? The school? The poor neighborhood?

Police, and all defense goods are scarce, the answer can't be that everyone gets all the defense he wants

Should rich people get more protection because they are more likely to be targets? But then why would poor people pay to protect rich people? Why shouldn't the rich pay for their own protection?

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There is no satisfactory answer to the allocation of defense resources without private property and economic calculation.

Without property rights, there is no objective unit against which to measure the utility from individual allocation decisions

There is no way to allocate scarce resource to where they would produce the most value

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The reality is that defense is provided on the market already

Government defense is mostly about defending the government, not the people

Even the weapons industry is mostly private, and even government weapons manufacturers have to operate in free markets for resources, and much of their sales go to open international markets

If it wasn't for private property, capital accumulation, profits, division of labor, and economic calculation, we wouldn't produce weapons much more sophisticated than rocks and arrows

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Power in the military sense consists of delivering large amounts of kinetic energy over brief bursts

Better weapons deliver more power to physically change reality on the ground by murdering enemies or destroying their structures

Private property, capital accumulation, and the division of labor are the best way to produce a lot of power in any context, including military

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Without a productive modern capitalist economy financing it, even the world's strongest army would degenerate into slave labor camps

The world's sophisticated weapons systems could never be developed without the extreme degree of specialization, division of labor, capital accumulation, and technological advancement that is only possible in a free-market economic system.

It is the market economy that has produced all the most amazing innovations in weapon making, which public sector and private sector criminals use daily for violent aggression.

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The uncivilized and violent may take pride in their aggression and rejection of peace and cooperation, but their choice of weaponry in aggression speaks louder than their puerile words.

They do not choose to live in isolation from civilized society, produce their own weapons, and use them to aggress against civilization.

They choose to acquire the most advanced products of the division of labor to increase the productivity of their violence.

They may not have the mental capacity to understand how peaceful division of labor is so valuable to them, but their actions do.

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The Market for Law and Order

Just another economic good with a market

Doesn't need a violent monopoly to exist

British common law: developed under Independent courts with no special privileges from the state.

Overlapping jurisdictions, no monopolies

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Offered services to people who would willingly hire them, so had to succeed by being fair and just

Judges could look at precedents to make better decisions, and that's how common law came about

Law Merchant (Lex Mercatoria) and admiralty law

British industrial revolution and modern capitalism were born under this emergent free market law system

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Private arbitration continues to grow today

It offers a better basis for entrepreneurial economic calculation than state courts

The same problem of calculation applies in the court system: without property rights in the capital goods, there is no way of performing entrepreneurial economic calculations of profit and loss to decide where and how to allocate resources, and to what end.

Allows contracts to have clauses for contingencies without the need to resort to government monopolies

Industry experts, lawyers, judges, legal scholars can all provide it outside the state

Contracts don't need a judiciary monopoly

Private Governance, Edward Stringham

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State Monopoly of Defense and Law

Mises stressed secession and self-determination

With the right of secession granted, the state cannot take for granted the allegiance and revenue from its citizens and needs to work for them.

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he had a different conception of the state than what is prevalent today. Mises stressed the importance of the right of self-determination, making government a voluntary entity. He writes:

The right of self-determination in regard to the question of membership in a state thus means: whenever the inhabitants of a particular territory, whether it be a single village, a whole district, or a series of adjacent districts, make it known, by a freely conducted plebiscite, that they no longer wish to remain united to the state to which they belong at the time, but

203 Mises, Ludwig von. *Human Action: The Scholar's Edition*. Ludwig von Mises Institute, 1998, p. 714.

wish either to form an independent state or to attach themselves to some other state, their wishes are to be respected and complied with. This is the only feasible and effective way of preventing revolutions and civil and international wars. ... However, the right of self-determination of which we speak is not the right of self-determination of nations, but rather the right of self-determination of the inhabitants of every territory large enough to form an independent administrative unit. If it were in any way possible to grant this right of self-determination to every individual person, it would have to be done.²⁰⁴

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With secession, government cannot take for granted the allegiance and revenue of its citizens and needs to work for them.

It can perform economic calculation since it acquires all its property voluntarily on the market.

Without secession, government is a territorial coercive monopoly.

It cannot perform economic calculation since it acquires its resources without an opportunity cost,

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Fiat economists have stories for why this good is also different and requires their violent monopolist buddies

Without a monopoly frame of reference for just claims of property, there is no possibility of defining property rights in a way that avoids conflict

But the state doesn't determine property, it enforces principles of legitimate ownership to disputes on property

Property does not get its legitimacy from the state; the state gets its legitimacy from the extent to which it protects property

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Others argue that property is the function of the state since it is essential to all economic activity, and without it there would be no economic activity. But many other goods like food and land are also essential, but they are better provided through free enterprise.

Coercive monopoly over defense and law are not an inevitability, they are the cause of the failures we see in these goods

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Without a market in capital in any good, a coercive monopoly creates shortages, reduces quality, raises price

This is exactly what is happening in defense and law today

The monopolist, government, benefits at the expense of the people

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The struggle for civilization is the struggle for humans to deal with each other based on the principle of non-aggression, where everyone agrees to respect the property rights of everyone else in their person and justly acquired property.

If the principle of non-aggression is overturned for law and defense, it will be overturned everywhere.

Rothbard and Hoppe exploded the contradiction at the heart of

modern classical liberal thought and offered a coherent anarcho-capitalist alternative congruent with the principles of economics as the study of human action.

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Rather than peaceful cooperation under the rule of law applicable to all, society under government eventually degenerates into competitive conflict and aggression between people seeking to gain control of the power to dominate others.

Understood correctly, the state is the largest gang of thugs, and the progress of human civilization depends on minimizing the damage from this gang, not on commandeering it for the impossible task of using its license for evil to do good.

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The purpose of state security is to protect the state, not the people. Individuals must still work and pay to secure themselves through the various avenues of defense available on the market. A free market in security is not hypothetical. A coercive tax-funded monopoly in security provision that succeeds in providing security, on the other hand, is the hypothetical that state-sponsored scholarship treats as a given.

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State Monopoly Failure Modes

With government monopoly of defense, law, and security, there is no market in the resources and capital goods

Without a free market in the goods and services of the defense industry, there can be no prices and no economic calculation

Defense is not some on/off switch, it is a MARGINAL good

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Should each neighborhood get a twenty-four-hour police patrol? Or should each street? Or each household?

Should police spend more time protecting rich houses and neighborhoods because they are more likely to be the target of burglary? But why should poor taxpayers pay to protect the rich?

How many policemen does a certain neighborhood need? Should some people get bodyguards? Should sporting events and concerts get extra police patrols to prevent trouble, or should the organizers of these events handle their own security?

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In a free market individuals would be able to calculate the best allocation of resources and property to meet these needs in the best way they can.

Without a free market in these resources, allocation is made without calculation

That's why private security officers are a lot nicer than police

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Tax-funded security providers have no incentive to care about:

- 1- Customer satisfaction
- 2- Resource conservation (the safety of police and military)

In a free market, entrepreneurs who provide these services would have the incentive to conserve resources and provide the best product

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Same thing happens with a judicial monopoly, no market test means no rational allocation of resources

The concept of justice shifts away from legitimate property rights to government-given grants

If one part of the population has the right to initiate violence against others, they would likely use that to their benefit

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Without property, national militaries also cannot calculate and fail in their stated mission

US military spends more than a trillion dollars a year, and children in American cities can't walk in the street

US military and associated parasites do not have an incentive to provide actual security; they have an incentive to manufacture conflicts to extract more money from tax cattle

Smaller countries' militaries become puppets for outside financial backers

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Security and defense are like any other good: best provided through division of labor, capital accumulation, and entrepreneurial calculation in an extended market order

In practice, most security is provided by the market

But it would be a lot better if we didn't have a monopoly

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Americans pay enormous sums to police and military, but they are very unsafe

Imagine if the people of Chicago had all their wealth that goes to the police and army available to them to spend on security services that were responsible to them, had no monopoly, no special legal protections under the law, no right to initiate aggression, and no ability to extract tax.

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How can the market handle defense?

1- Legitimate self-defense

Property rights enforcement is encouraged in a free society

2- Mutually-agreed contracts deferring to mutually-agreed courts
Transactions happen under mutually agreed terms

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3- Ostracism, shaming, boycotts

Credit ratings, expert reviewers of products, third-party specialists in supervision of production
If products of division of labor are made unavailable to those who initiate aggression, it would be very effective

4- Insurance

Has incentive to provide security and ensure well-being

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It is difficult to predict what defense and law would look like in a modern capitalist free society

Forms of allocating capital which succeed at providing security will grow and evolve

Whatever people want from their government can be provided with property rights respected

This doesn't mean the freedom to do anything without consequence; it means the freedom to reap consequences

It means people can choose to disassociate with you; if a drug is destructive to its users, imposing undesirable consequences on others, it might be the case that users won't be able to join social and protection institutions

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Libertarianism does not mean libertinism

Libertarianism is the rejection of the initiation of violence

What matters is that people are able to opt into whatever arrangements

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The State in the Third Millennium

Service provision with right to secession guaranteed

Political freedom through exit, not voice

Like market institutions

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Perhaps monarchies will be the naturally emergent outcome of this selection process if they are understood as family businesses that have provided law and order for their societies over the long term.

Monarchy matches long-term incentives of people with leaders

Lecture 18: Civilization
Monday May 27, 2024

Labor performed under the division of labor is more productive than work performed in isolation.

Man's reason is capable of recognizing this.

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Humans act to increase the value and quantity of time on Earth

Human reason recognizes ends, human action seeks them.

Actions and institutions that increase productivity proliferate at the expense of those that reduce it.

As humans use their reason, lower their time preference, and cooperate in pursuit of improving their life, they build civilization

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Underpinning civilization is material improvement.

Not the end, but the means.

Seeking material improvement is what drove us from barbarism to modern civilization.

Economic logic dictates our actions, we seek productivity and better standard at every step

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Civilization is the emergent result of humans seeking to improve their well-being--acting

Three processes drive human civilization:

- 1- Lowering time preference
- 2- Division of Labor
- 3- Ingenuity and reason

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- 1- Lowering time preference

Gives us saving and capital accumulation

Allows us to cooperate in pursuit of long-term goals
Develop civilized mores, like respect for private property, because of their long-term benefits
The lower our time preference, the more civilized we become

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2- Division of Labor

Realize how to cooperate and specialize to increase our productivity
Social institutions thrive if they are able to increase the division of labor

3- Ingenuity and reason
Recognize and develop actions and institutions that are conducive to long-term well-being and the division of labor

==

Social institutions thrive if they are able to increase the division of labor

Family is a great example

Lowers time preference by making you more concerned about what comes after you

We build things for the long-term:

Languages, religions, traditions, technologies, ideas, physical infrastructure, and buildings

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These are only possible because of people using their reason, lowering their time preference and engaging in the division of labor

Allow us to conquer nature, subdue violent animals, increase the quality and quantity of time we have on Earth

Civilization is the sum of our efforts at economizing and increasing the quantity and quality of time we have on Earth

We are in a process of civilization if each generation lives better than the one before it; decivilization is the opposite

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The Cost of Civilization

Societal cooperation increases productivity, but comes at a high cost

You must curb all the instincts incompatible with social living: incompatible with self-ownership

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The incredible achievements of modern civilization were only possible because of productive free people worldwide coordinating their work through free exchange. No violent ruler could ever muster what free-market capitalism built in the modern era. No slave owner could ever get slaves to produce the marvels produced by free people who willingly choose to work.

The output of a modern society is not something that can be produced by one controlling mind—it requires billions of people world- wide to *voluntarily* work in a free market, using prices to calculate the costs and benefits of alternative options to decide which is the most productive and profitable.

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There is no use planting the tree of civilized behavior if its fruits are constantly up for grabs. The prohibition of murder, assault, and theft forms the basis of all human societies and is a main tenet of religious and political institutions.

Customs, traditions, and moral normals of civilized society are the patterns of behavior that allow us to benefit from the division of labor.

Honesty, conscientiousness, and trustworthiness allow business between strangers

Sexual restraint allows the family

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It takes years of education, rearing, and refinement for humans to learn to subdue these base instincts and instead defer to reason in anticipation of future gain. This is not easy, but civilization can only exist if human reason leads us to subdue our instincts and cooperate.

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The Case for Civilization

Our imperative as living organisms is survival

Civilization is a benefit from this point of view

“It has enabled man to hold his own in the struggle against all other living beings, both the big beasts of prey and the even more pernicious microbes; it has multiplied man’s means of sustenance; it has made the average man taller, more agile, and more versatile and it has stretched his average length of life; it has given man the uncontested mastery of the earth; it has multiplied population figures and raised the standard of living to a level never dreamed of by the crude cave dwellers of prehistoric ages.”

==

But value is subjective, what if someone doesn’t value a long and easy life?

What if they prefer brutal short fast living?

Civilization is what emerges when people respect each other’s natural rights

But what if someone doesn’t believe in natural rights?

And most people don’t act like natural rights exist in any context, so they don’t believe they are universal.

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Argument for civilization from human action:

Vast majority of humans choose to live in civilization even though vast majority of Earth is uncivilized wilderness.

Even when someone forsakes civilization, he still needs it and steals from it

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Even though people think it’s ok to aggress against others, they still engage in civilization and depend on it

Critics of civilization and capitalism and cooperation all rely on them for the vast majority of their needs

They rely on electronics that could not be built without cooperation

Governments and criminals justify their violence and aggression but still rely on the fruits of the division of labor

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Relieved of the hypocrisy of using the fruits of civilization to fight civilization, the strongest and most belligerent uncivilized human, like the strongest most belligerent animal, stands no chance against any adult or child capable of pulling the trigger of a gun produced by capitalist civilization.

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All civilization critics rely on civilization to make their critiques

Nobody is ever forced to stay in civilization; and yet, all the people who complain about it are unable to separate from it.

==

Argumentation Ethics

If you are able to engage in arguments, you accept the premise that others have property in their ideas and self. You reject the initiation of violence.

The mere act of arguing itself is an acknowledgement of property rights and the mores of civilization

You can be against civilization, but you cannot argue against it. Arguing is engaging in civilization, so arguing against it is incoherent nonsense.

You can act out like an animal against civilization, but if that is more complex than slinging your own feces, you are a hypocrite reliant on civilization.

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Corollary to argumentation ethics: any arguments against capitalist civilization can only be considered if expressed without resorting to any of the fruits of the division of labor and property rights. No TV, internet, newspaper.

Arguing against property rights is just making noises like a savage.

Savages are not new to civilization. Human civilization has always found ways to deal with savages, because civilization is far more productive

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Capitalist civilization continues to win because its opponents either fling their feces powerlessly at it, or engage in it to try to fight it, effectively supporting it and pushing it forward.

Arguably civilization continues to advance:

Increased productivity
Increased energy consumption
Lower energy cost
Technological advancement
Decline in interest rates

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The Fiat Slavery Alternative to Civilization

But this advance has likely slowed or stopped in the last century

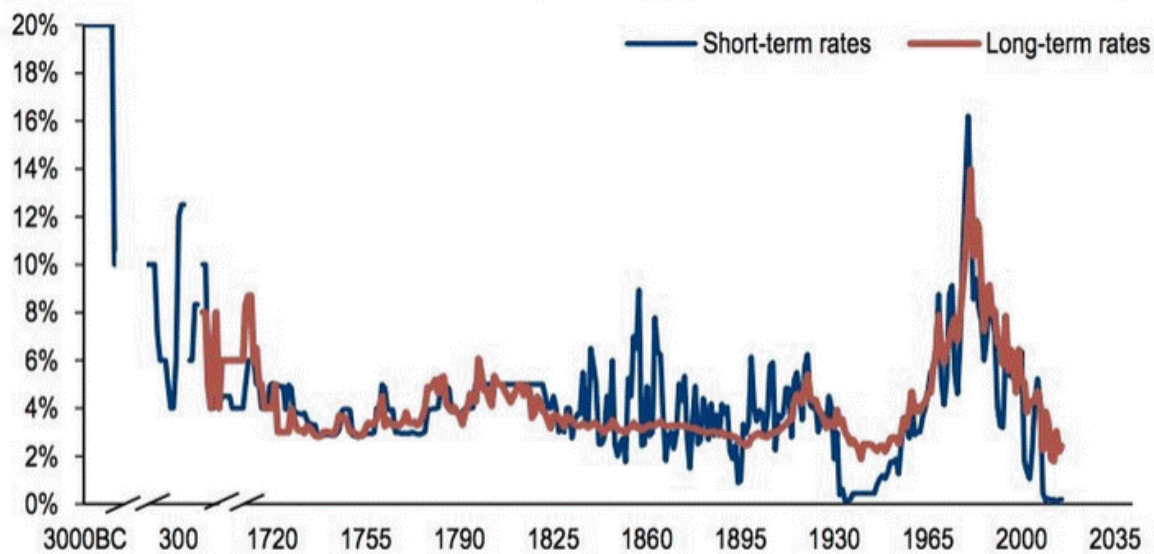
Interest rates rose in 20th century after a long decline

Arguably it was the destruction of money that destroyed civilization

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World War I as a pivotal moment, and you see it in interest rates as we saw in Chapter 14

The lowest interest rates in 5000 years



Homer & Sylla's A History of Interest Rates

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World War I and fiat money derailed human civilization

Applying the analysis of The Fiat Standard to see the impact of fiat on human economizing.

Fiat takes away incentive to delay gratification, reduces the creation of capital

Everyone has to borrow and become a debt slave

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Fiat breaks the contract of gold money, when money is debased, everything is debased

If government breaks this contract, everything breaks

Fiat allows the state to monopolize law and order, use them to serve itself

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Creates business cycles, destroying capital, causing hyperinflation or high inflation

Undermines economic calculation, as the value of money is not determined freely in the market

Markets become about monetary policy, not fundamentals

We no longer have a money in the sense of a generalized medium of exchange with high salability across time and space, as was the case with gold before World War I.

We use a big mix of things, going back to partial barter

Money is many fiats and also bonds, gold, real estate, art, stocks, and an endless kaleidoscope of assets

Hampers global trade and makes it a side activity to currency speculation

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It undermines technological progress and energy consumption

Inflation at once devalues the savings and earnings of citizens, taking away from them the ability to spend on modern energy sources. It also allows their government to spend limitlessly on propaganda to try to distract citizens from their declining living standards by blaming it on a slew of ridiculous bogeymen

Subsidies to unworkable energy sources

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Universities as propaganda for inflation: economics, nutrition, and climate as examples

Breakdown of family and crime are a product of capital consumption

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Yet, the sustainability and continuation of civilization arise from the superior organizational efficiency of capitalist economic calculation, the enormous benefits of voluntary specialization, and the incessant creativity of humans.

Without capitalist civilization, you have no prices, no calculation, no access to the global division of labor. You have problems.

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You can think of the capitalist free-market economy as a very powerful machine because, in many ways, it is. All the privately owned machines and capital deployed in the process of production are acting together in one economic system: the extended order of the free-market economy. The ability to deploy billions of machines worldwide in production processes, all interrelated and interdependent, allows us to achieve much higher levels of productivity than any alternative.

==

Capitalism's enemies are external, not internal now

For all of its problems, the fiat monetary system is still superior to autarky and isolation from the world economy. Violent monopoly over the money supply allows central governments to commandeer a large portion of the gains of capitalist free markets, thus benefiting from its superior productive capacity, using its gains to tighten its control on all facets of economic life, and ultimately strangling the capitalist civilization on which it depends.

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The entire process of civilization is based on the systematic application of reason to human action, and the more monetary central planning becomes a problem for civilization, the more the market provides incentives for solutions to this problem.

Innovation happens because of economic calculation

The more of a problem the money is, the more of an incentive for a solution

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Technology is the sum of tools humanity has devised to confront the problems facing civilization. The human mind remains the last bastion of freedom, and the most advanced technology free humans can produce is software, if measured in terms of its productivity. Information in the form of letters and numbers, when conveyed in the correct way, can cause many machines worldwide to perform large amounts of work and thus create economic value for their owners.

Software is eating the world and increasing efficiency, and will likely enter money

==

The software alternative to fiat central banking is bitcoin

A decentralized peer-to-peer payment network that uses its own native token, whose supply is capped.

First, bitcoin offers the only working alternative to central banking for the transfer of money across international borders.

Second, bitcoin's supply is strictly capped, meaning there is no way to devalue the existing supply to the benefit of any entity.

==

By offering everyone in the world the ability to save in a form of money that cannot be debased, bitcoin can stop the constant process of rising time preference. By giving everyone the ability to send and receive money internationally without resorting to their monopoly central bank, bitcoin allows everyone to partake in the global division of labor.

It is precisely the central planning of these two markets—money and international transfers—that lies at the heart of the problem of global capitalism.

The historical importance of bitcoin is that it is a technological solution to the problem of central banking, offering a technologically and infinitely more compelling alternative that obsoletes central banking.

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In the same way, human reason moved us from using slaves to horses to cars to sophisticated supersonic jets—and moved us from using human messengers to carrier pigeons to paper mail to email to video calls—it is now moving us away from relying on monopoly central banks to reliable open-source software.

==

The current parasitic governmental banking monopoly is just another in the long list of challenges human reason has faced, and bitcoin may prove to be the device our reason concocts for conquering it.

With transparent rules available for anyone in the world to audit, and with a system built entirely on verification rather than authority, bitcoin gives the entire world a monetary market commodity that works without needing coercive political authority.

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It allows us to make peaceful non-aggression the basis of human economic interaction, bringing the productivity of the market system to the monetary realm, reversing the violent high time preference statist fiat detour of the last century.

If it can unleash human civilization from the clasp of the state's fiat claws, bitcoin will be remembered as our age's most significant civilizational achievement.