

Dave Ramsey's Personal Finance | #36

Jun 24



00:00

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42:37



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Dave Ramsey's Personal Finance | #36

June 24, 2019

The whole team has an informative conversation on Dave Ramsey's personal finance philosophy and tactics. Russ

42:37



Trump's Trade War with China | #35

June 17, 2019

Note: This episode was recorded on June 3, 2019 Russ and Levi discuss the trade war between President Trump and th

29:12



Randall Holcombe on Politica...

June 10, 2019

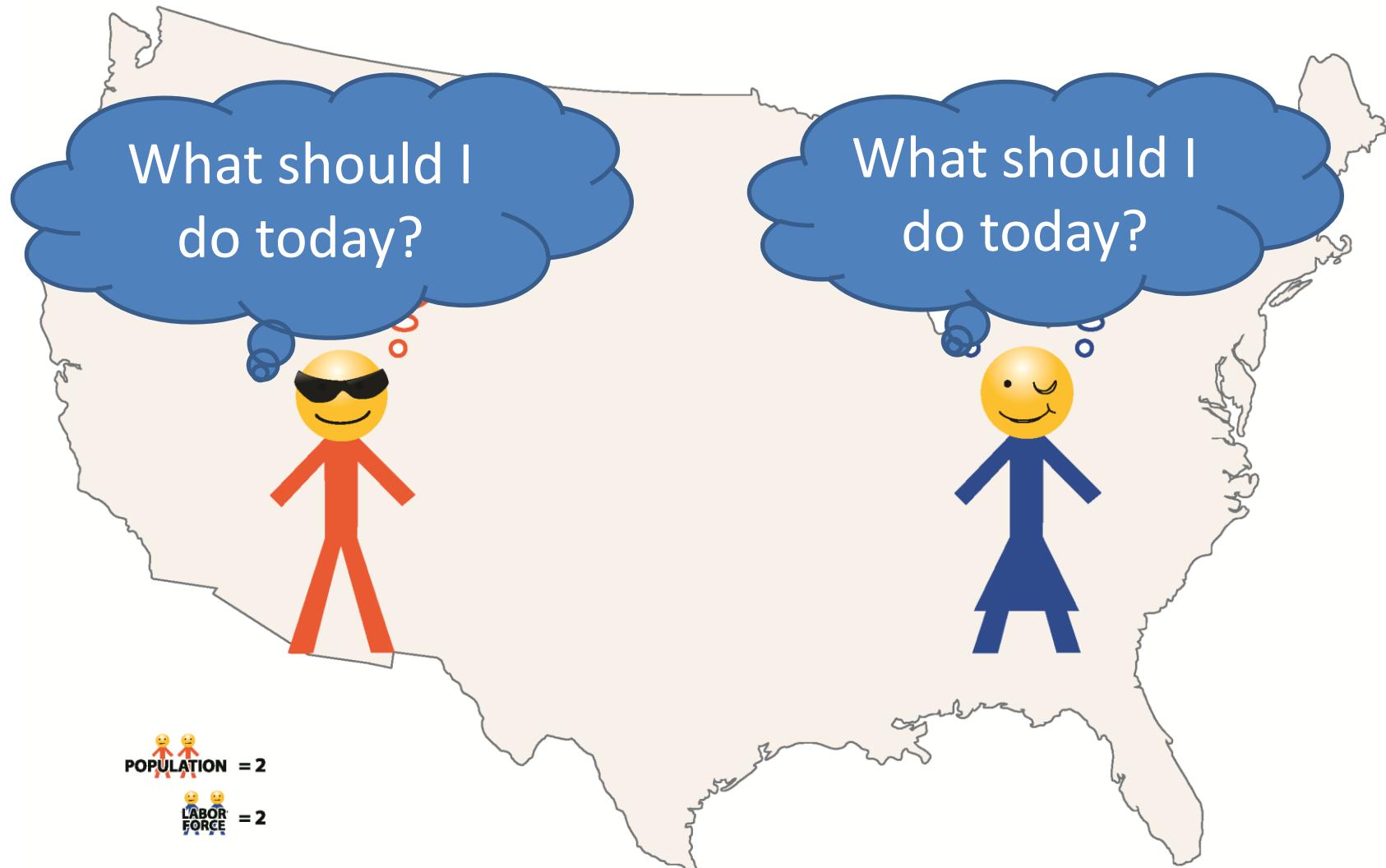
Russ and Levi interview Dr. Randall Holcombe of Florida State University. Dr. Holcombe discusses the concepts in hi

42:41



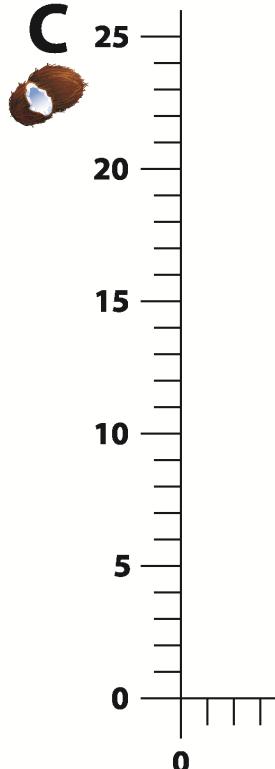
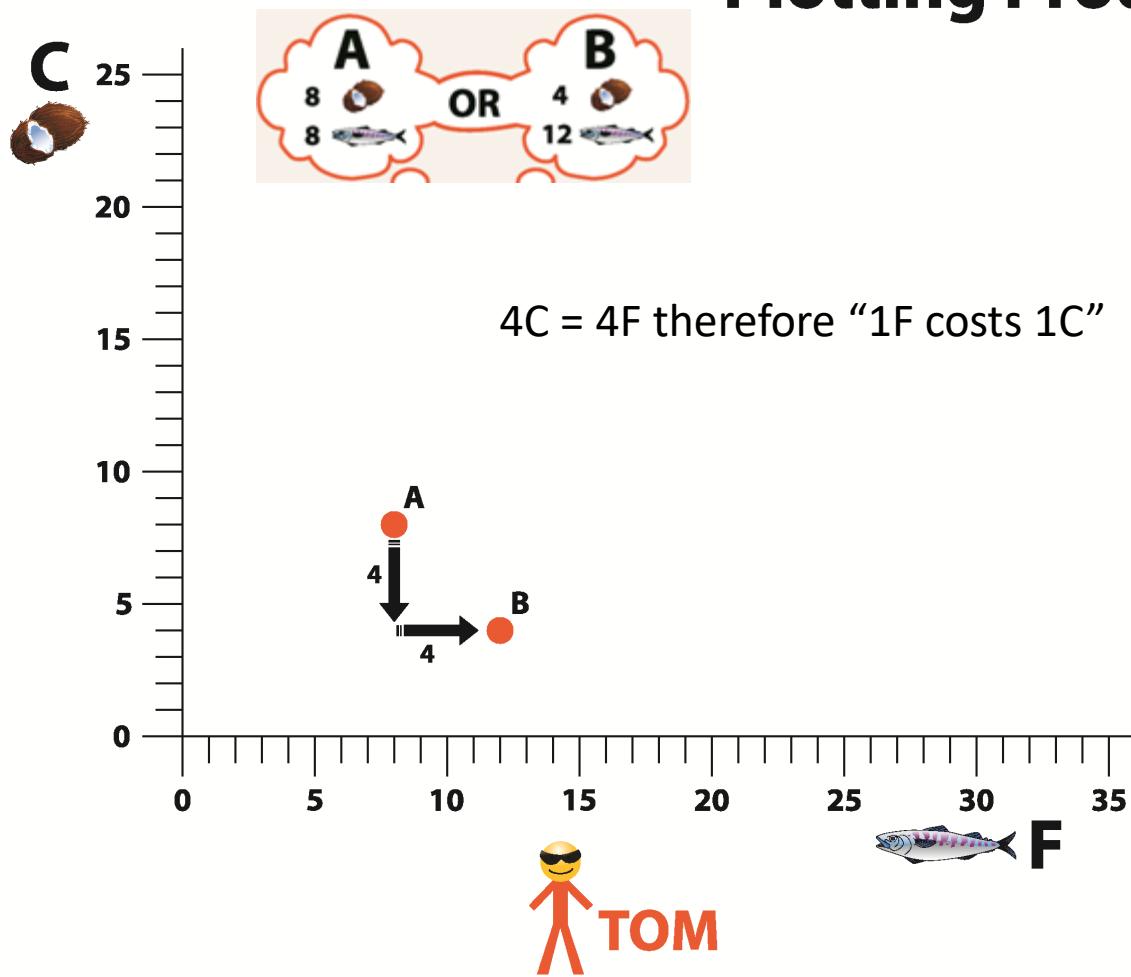
Figure 1.2

Production Possibilities

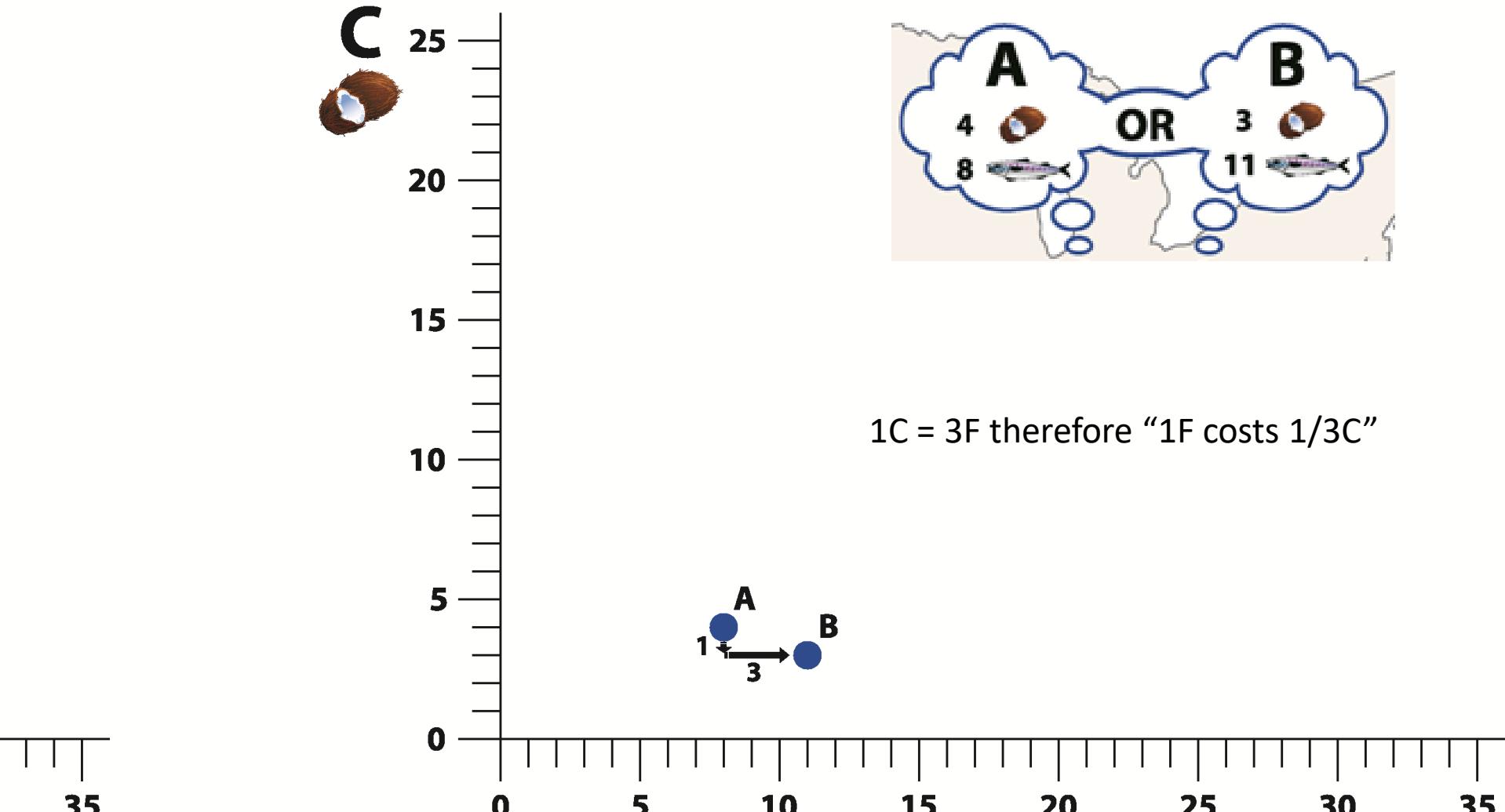


Tom's Possibilities

Figure 1.3



Production Possibilities



$1C = 3F$ therefore “1F costs $1/3C$ ”

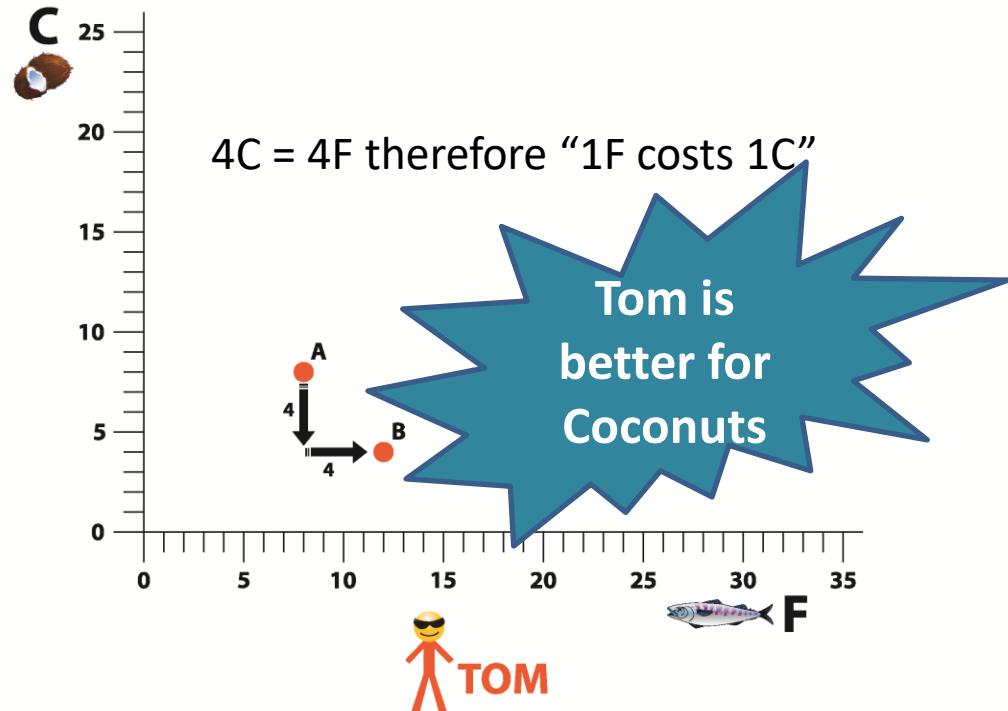
JENNIFER



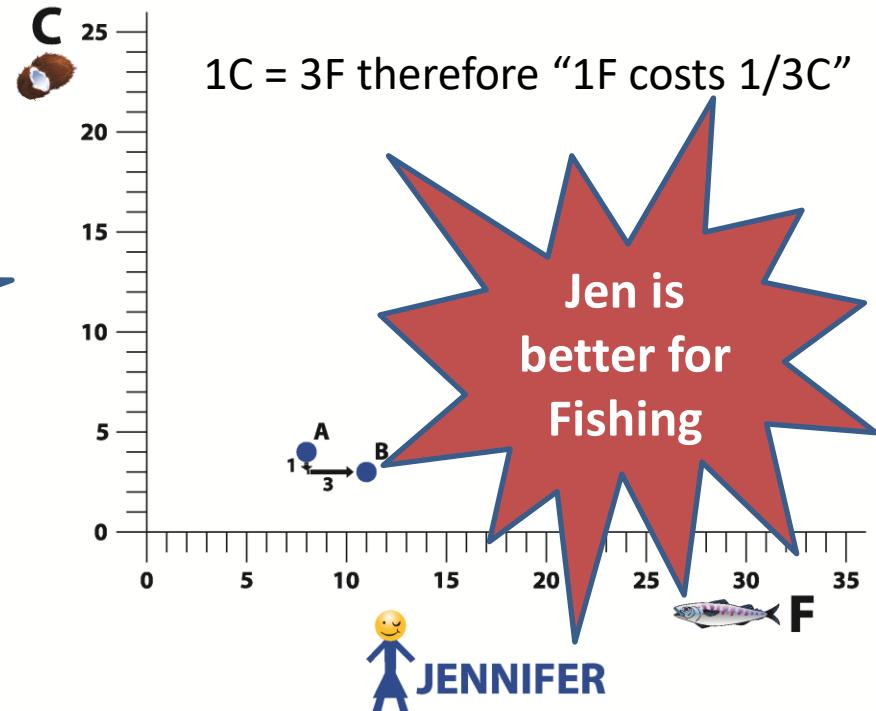
Who should do what?

Figure 1.3

Plotting Production Possibilities



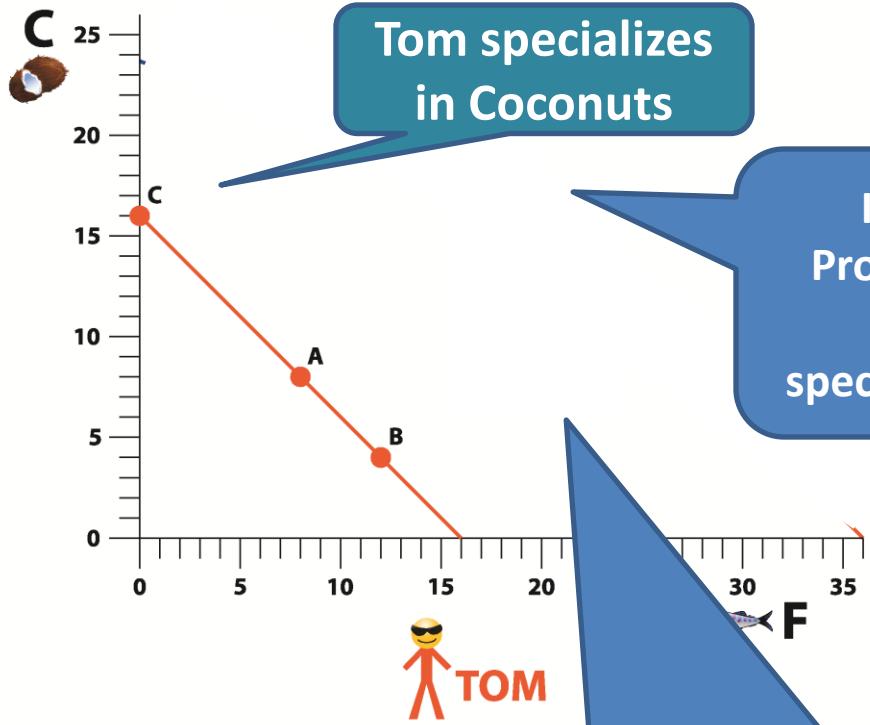
$4C = 4F$ therefore "1C costs 1F"



$1C = 3F$ therefore "1C costs 3F"

Figure 1.4

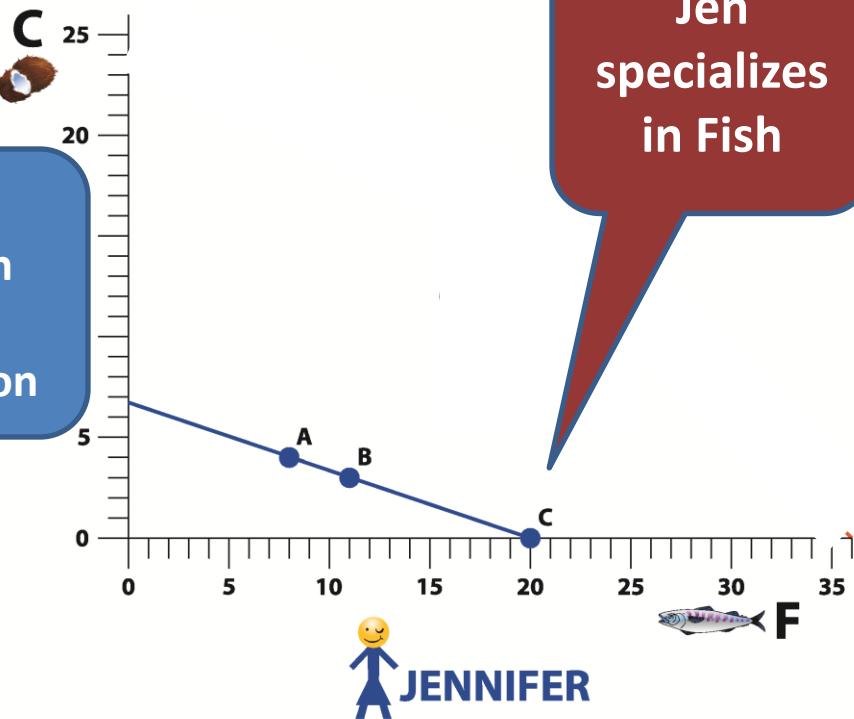
Island vs Individual PPF



Tom specializes in Coconuts

Island Production with specialization

All other combinations for society without specialization are less than potential



Jen specializes in Fish

Figure 1.5

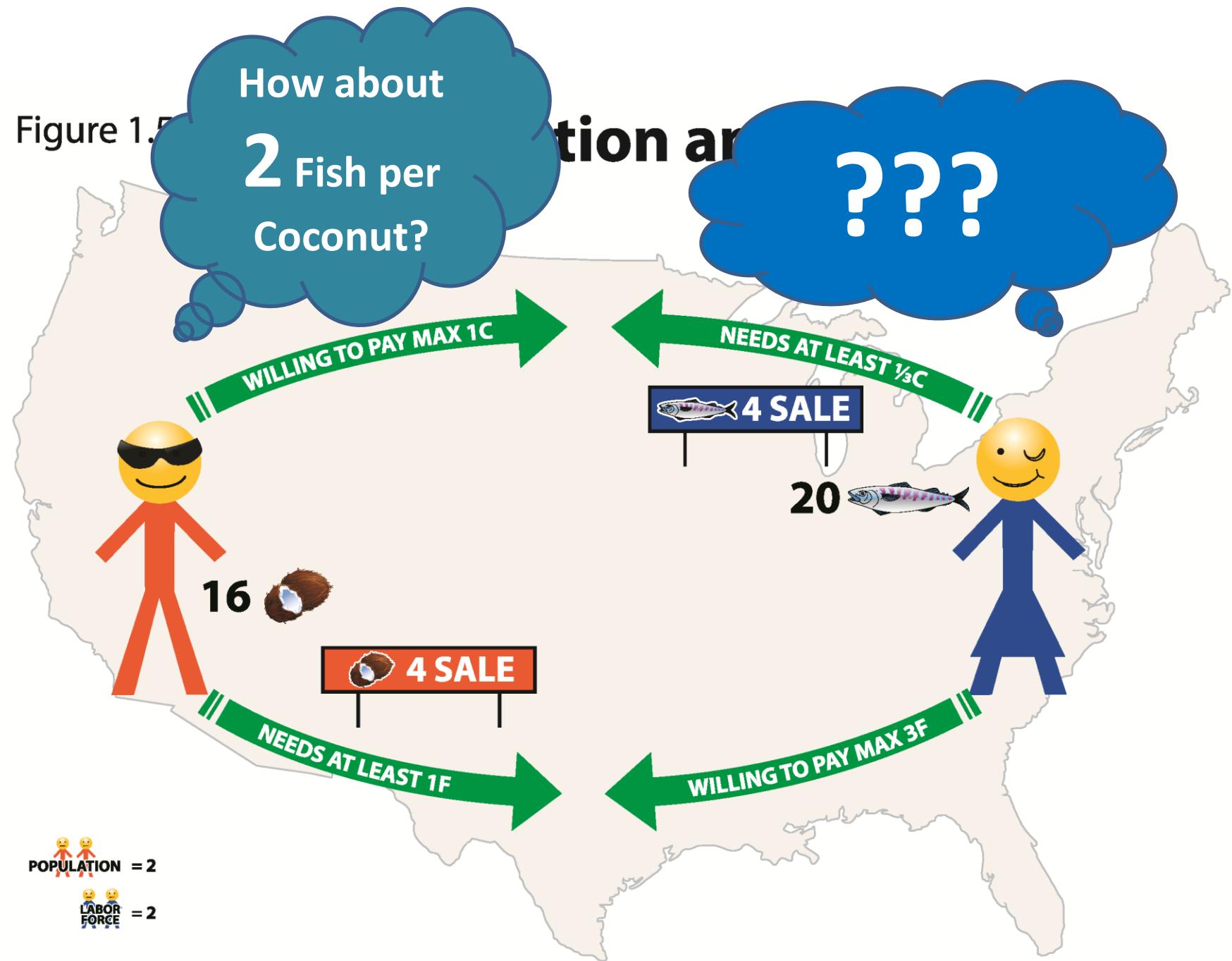


Figure 1.5

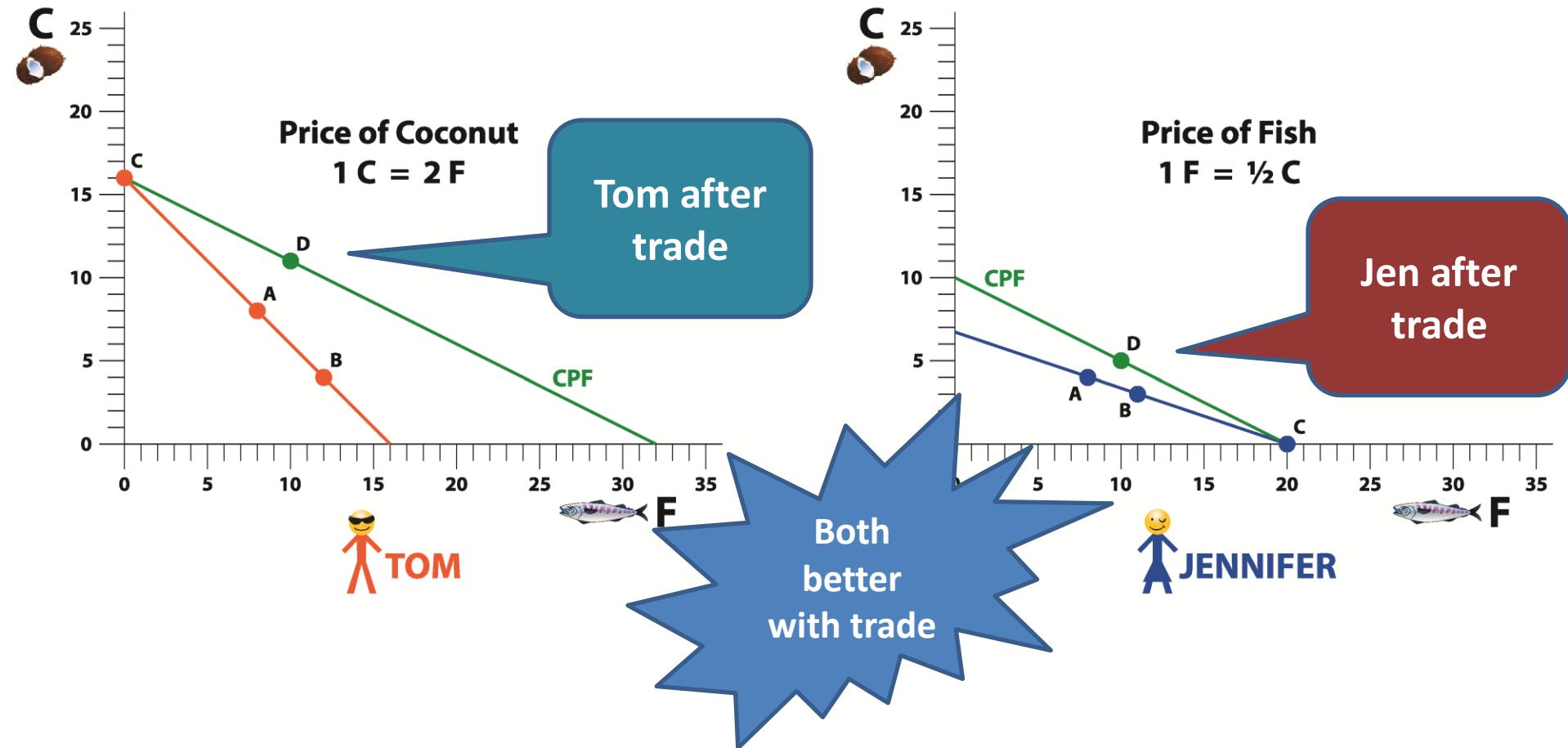
Specialization and Trade



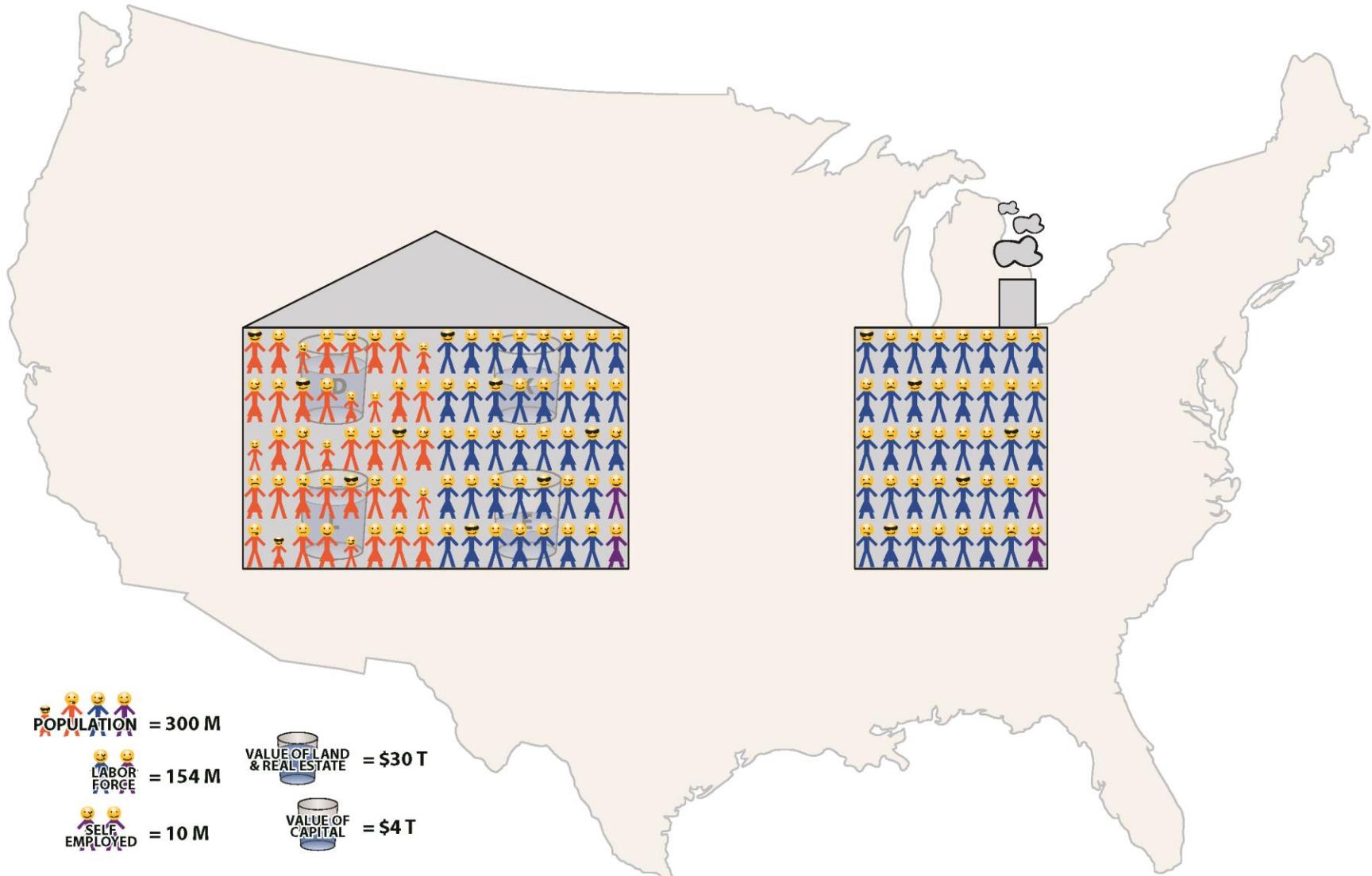
Two Winners!

Figure 1.6

New Consumption Possibilities



Specialization Today



Economic Freedom of the World

Russ McCullough PhD

Wayne Angell Chair of Economics
Angell Snyder School of Business
Founder/Director, Gwartney Institute

Levi Russell PhD

Economic Education and Research
Angell Snyder School of Business
Associate Professor, Gwartney Institute



James Gwartney PhD

*Eminent Scholar – The Gus A. Stavros
Center for the Advancement of Economic
Education and Free Enterprise*



What is economic freedom?

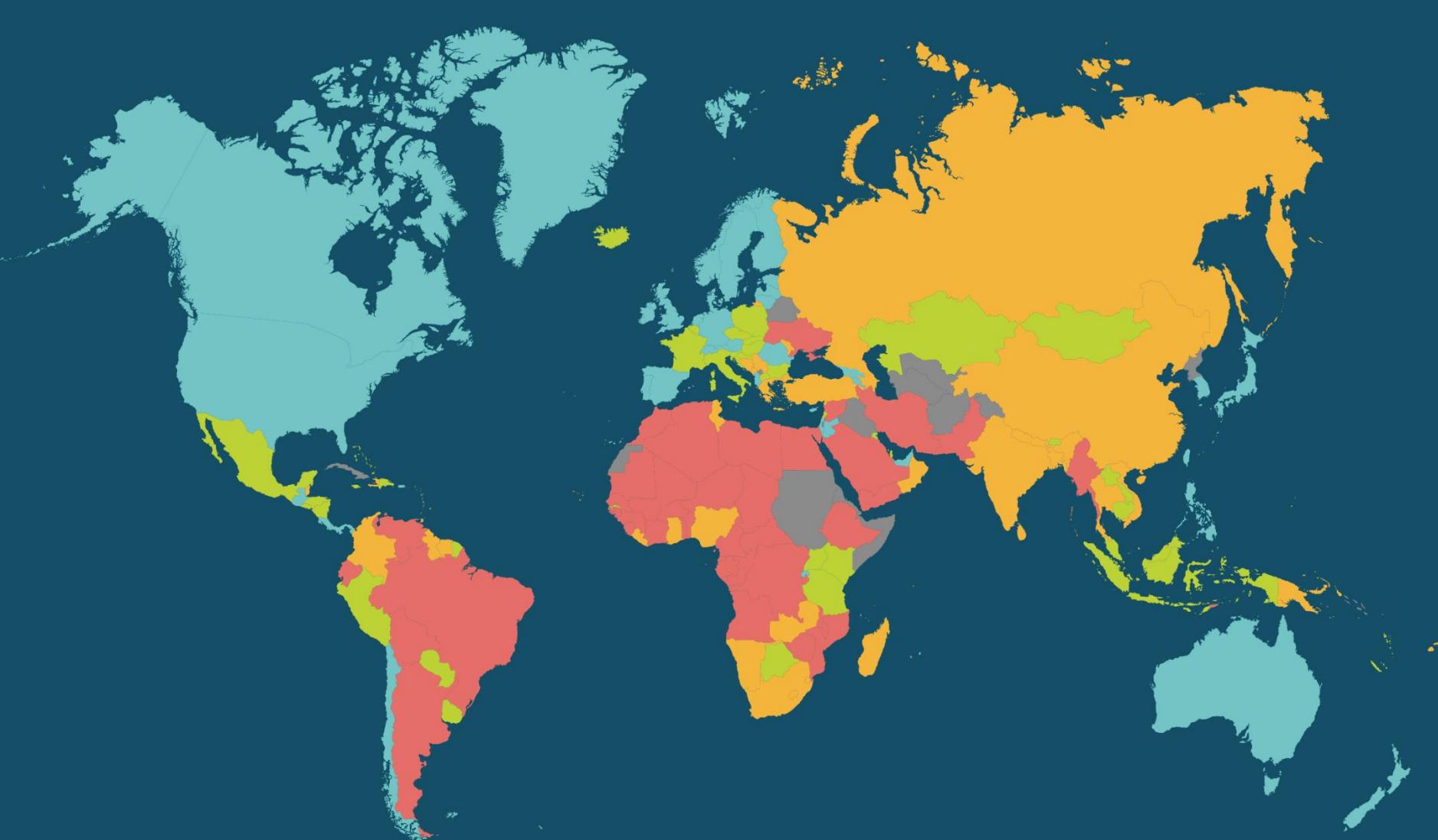
- Individuals have economic freedom when property they acquire without the use of force, fraud, or theft is protected from physical invasions by others and they are free to use, exchange, or give their property as long as their actions do not violate the identical rights of others.
- In order to achieve a high economic freedom rating, a country must keep government spending and taxes low, provide access to sound money, protect property rights, and enforce contracts evenhandedly. It must also refrain from imposing trade barriers and regulations that undermine voluntary exchange

Methodology of EFW Index

- Objectivity and transparency
- 162 countries
- 42 variables grouped into 5 areas
- Time series: 1980-2016 for 102 countries
- 0-10 rating scale for components with 10 indicating more economic freedom
- Gender adjustment – Gender Disparity Index (GDI) used to adjust Area 2 (Legal System)

The Five Areas of EFW Index

1. Size of Government
2. Legal System and Protection of Property Rights
3. Access to Sound Money
4. Freedom to Trade Internationally
5. Regulation of Capital, Labor, and Business



MOST FREE

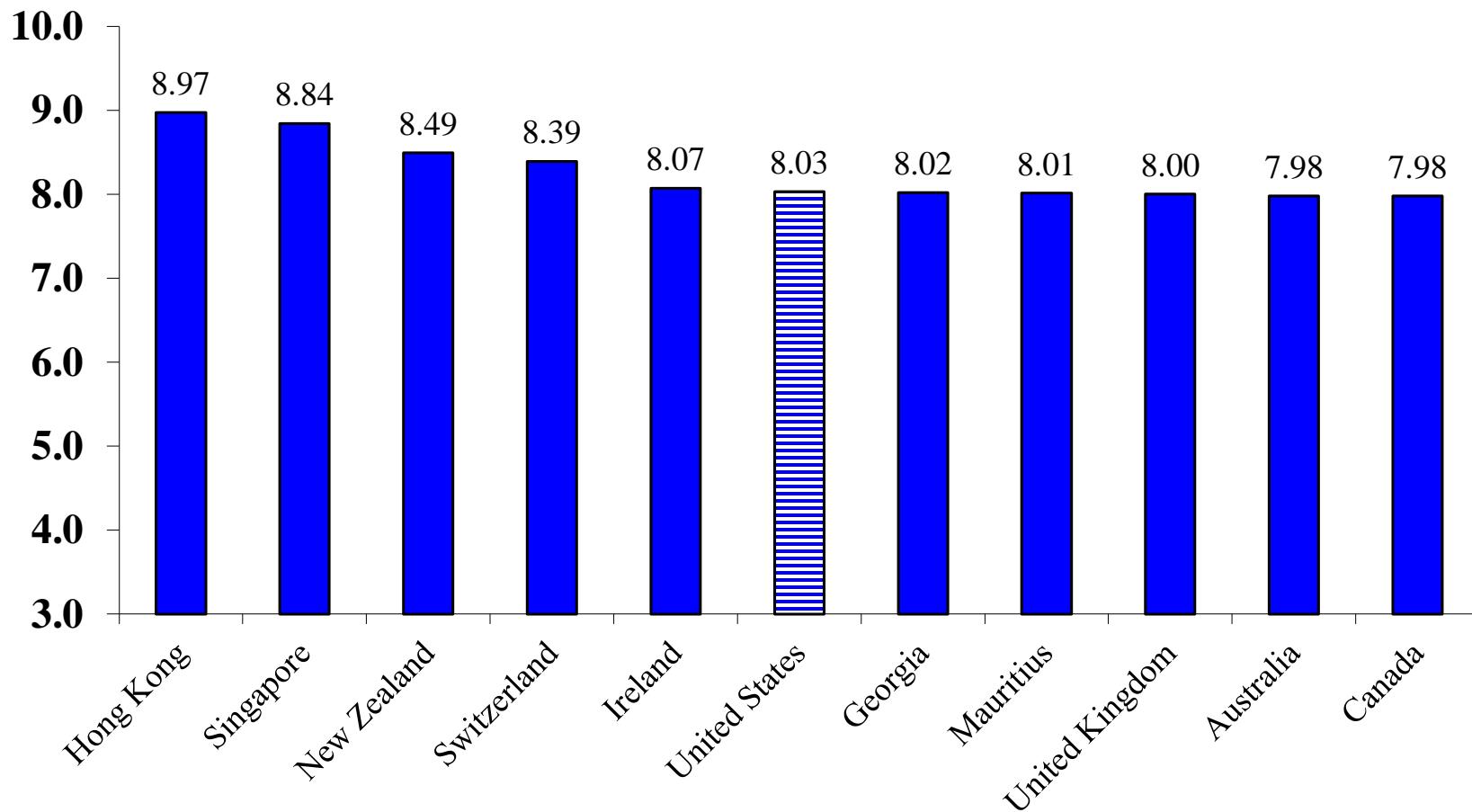
2ND QUARTILE

3RD QUARTILE

LEAST FREE

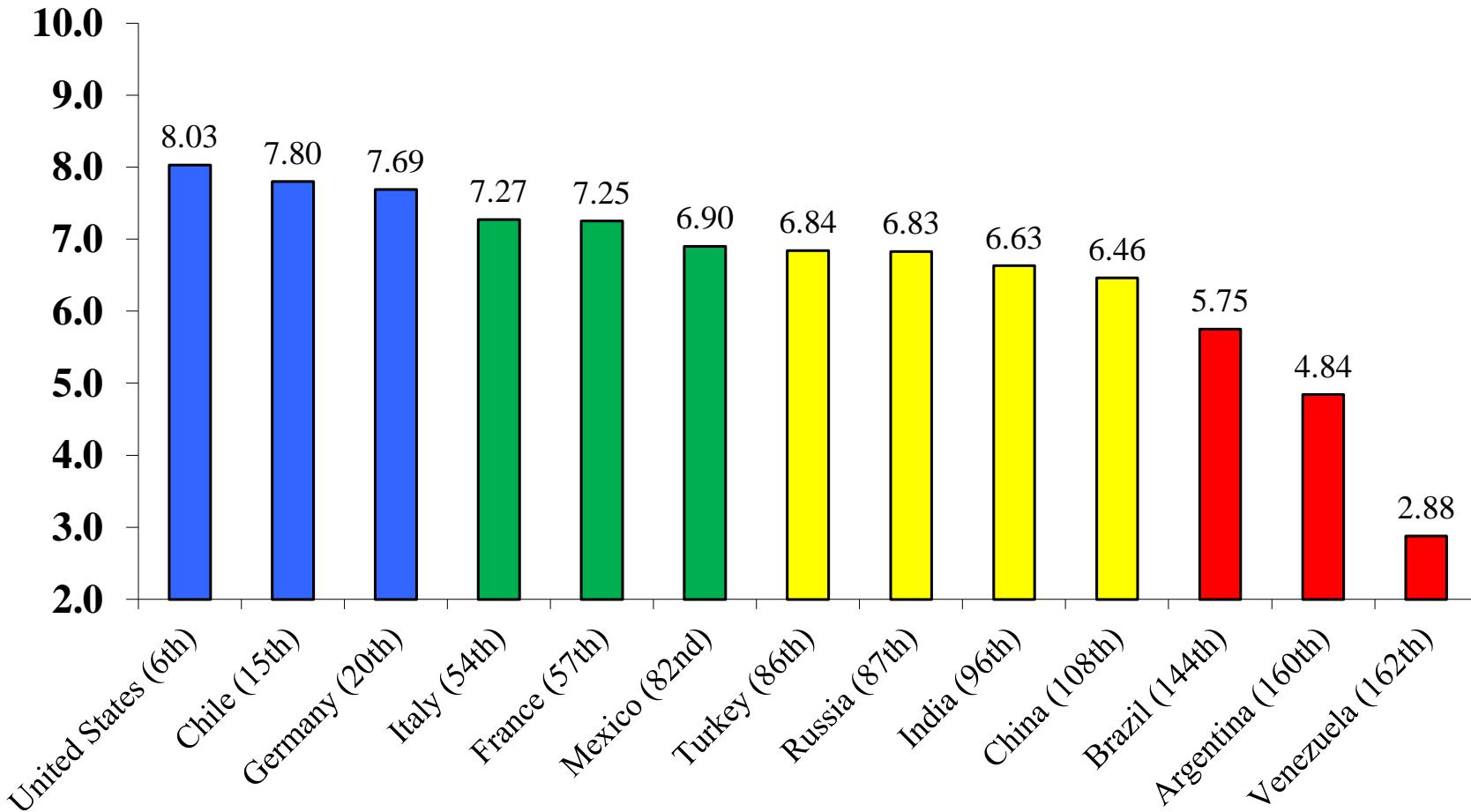
Economic Freedom Ratings, 2016

Top 10



Economic Freedom Ratings, 2016

Select Nations



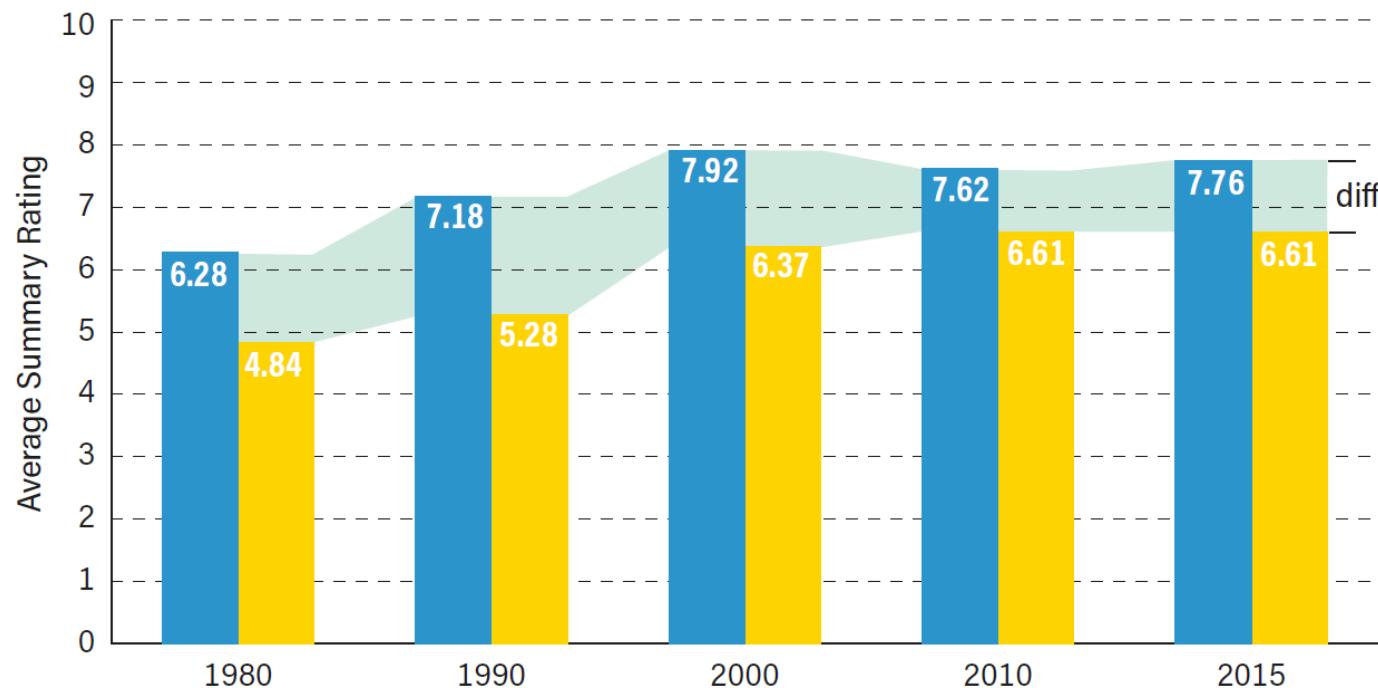
Three Lessons from the EFW Project

1. Economic freedom has increased since 1980
2. Income gap between high-income and developing countries has narrowed (less Income Inequality)
3. Economic freedom matters. Numerous studies indicate that countries with more economic freedom have higher levels of investment, more rapid growth, and higher per capita GDP.

Three Lessons from the EFW Project

1. Economic freedom has increased since 1980

Exhibit 1.9: Difference between the Average EFW Summary Ratings of High-Income Industrial Countries and Developing Economies , 1980–2015

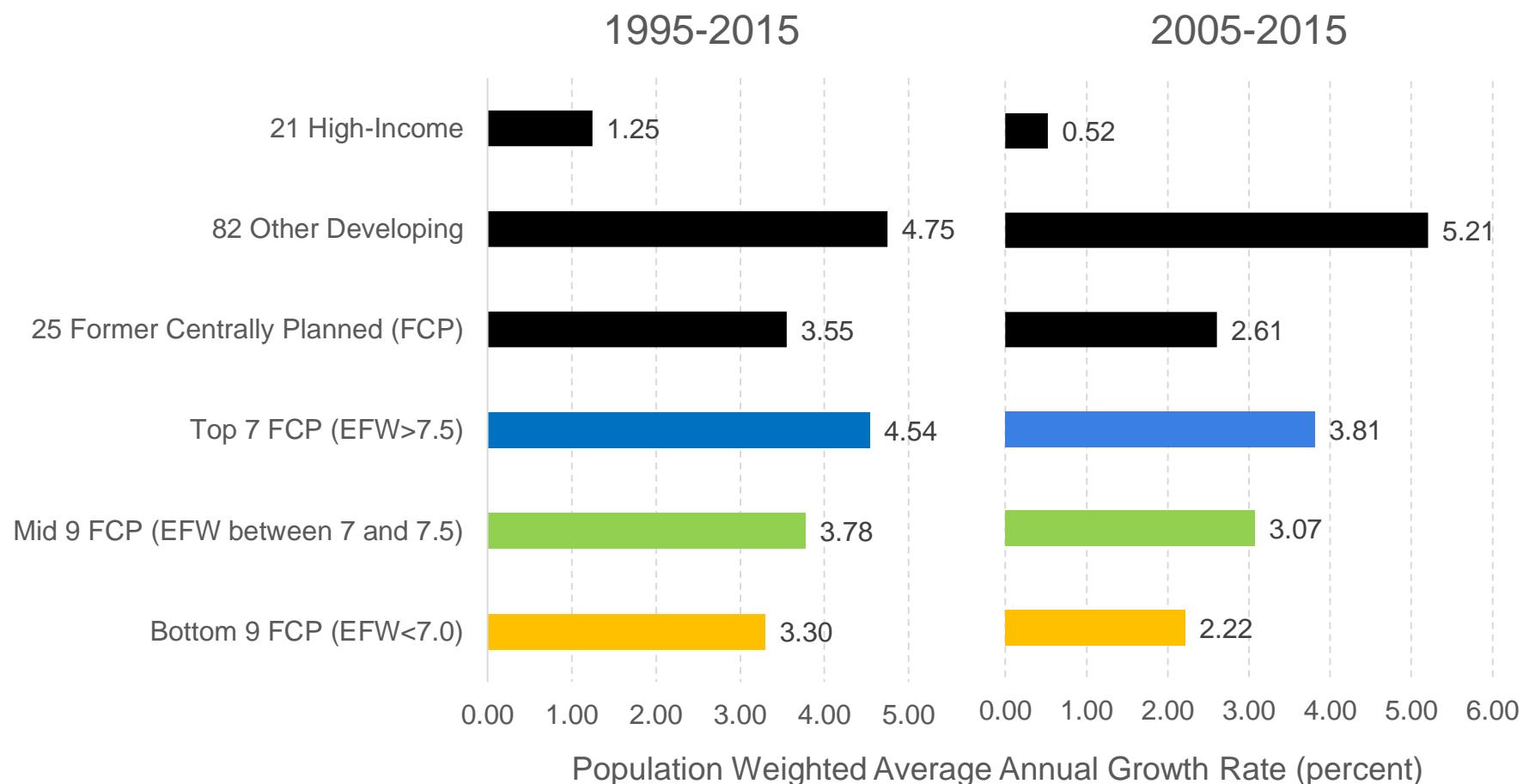


Note: The average EFW summary ratings are derived from the EFW panel dataset. The calculations are for the 102 countries—81 developing and 21 high-income industrial—with continuous data from 1980 to 2015. The following 21 countries are classified as high-income industrial in the World Bank's 1985 classification: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, United Kingdom, and the United States.

Three Lessons from the EFW Project

2. Income gap between high-income and developing countries has narrowed

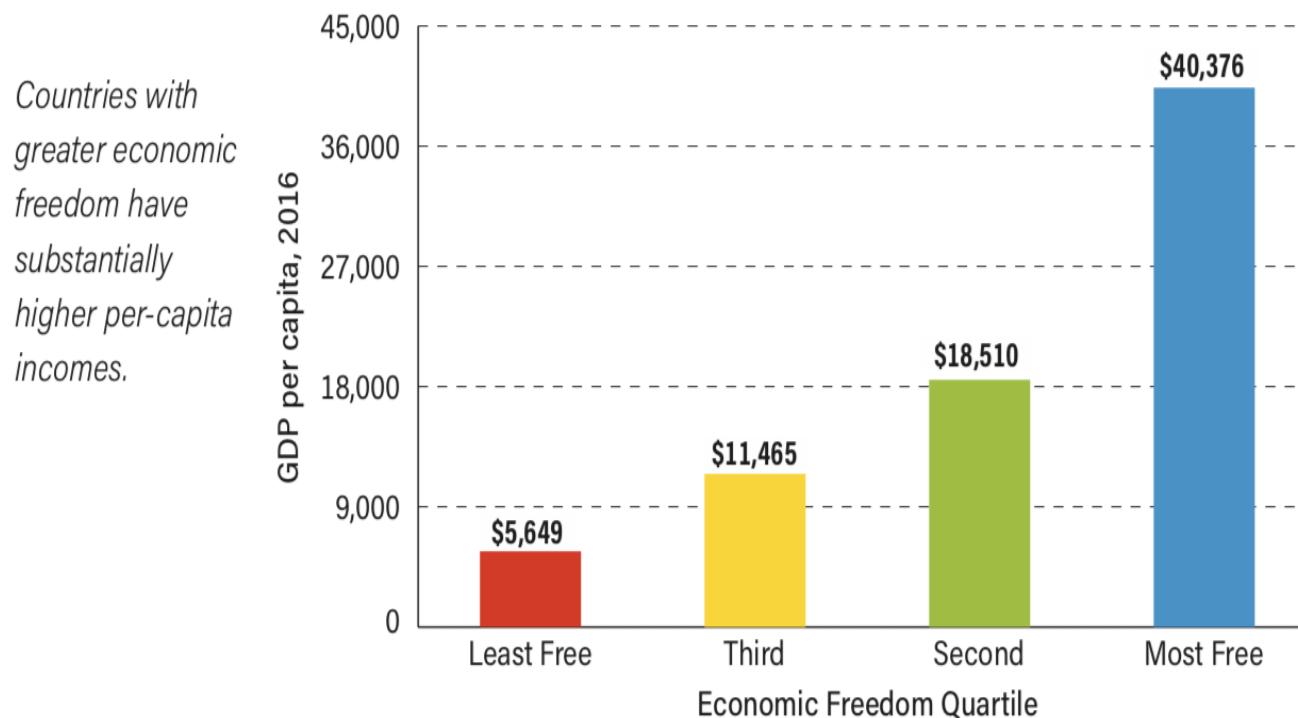
Growth Rates of per capita GDP for Several Groups of Countries
(Periods 1995-2015 and 2005-2015)



Three Lessons from the EFW Project

3. Economic freedom matters. Numerous studies indicate that countries with more economic freedom have higher levels of investment, more rapid growth, and higher per capita GDP.

Exhibit 1.5: Economic Freedom and Income per Capita



Note: Income = GDP per capita, (PPP constant US\$), 2016.

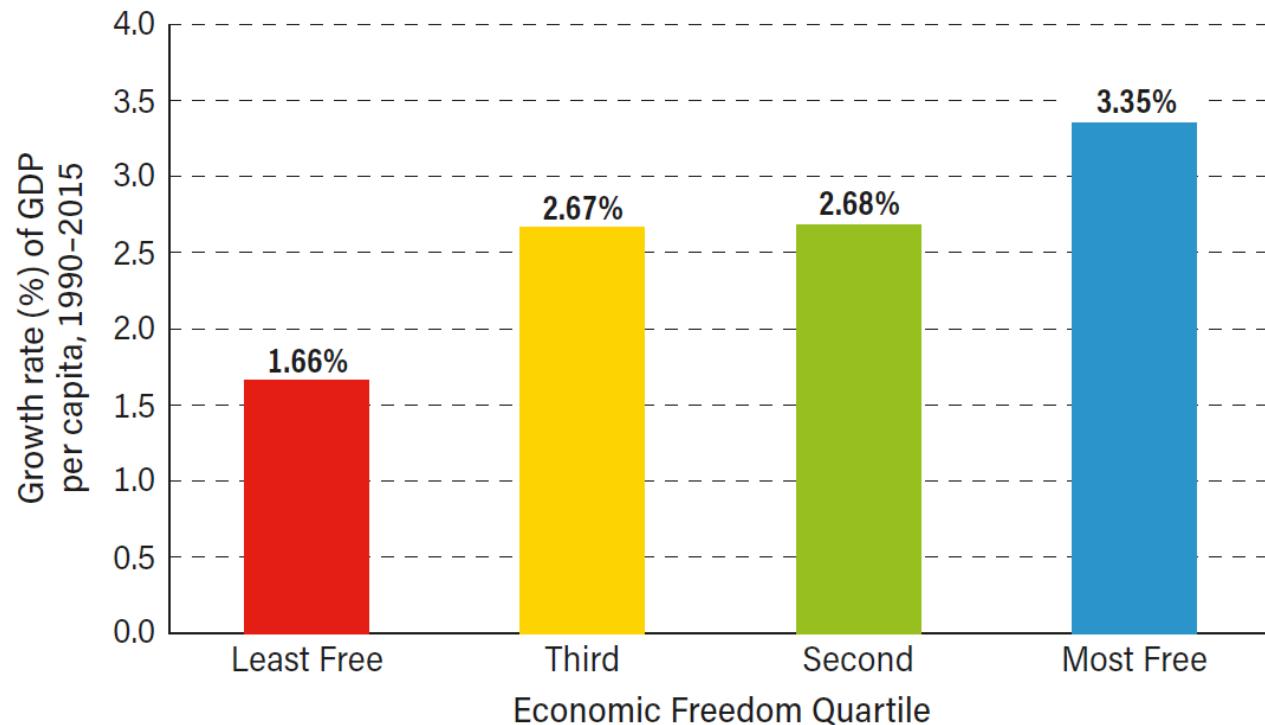
Sources: Average Economic Freedom Panel Score, 1995–2016; World Bank, 2017, *World Development Indicators*.

Three Lessons from the EFW Project

3. Economic freedom matters. Numerous studies indicate that countries with more economic freedom have higher levels of investment, more rapid growth, and higher per capita GDP.

Exhibit 1.12: Economic Freedom and Economic Growth

Countries with greater economic freedom tend to grow more rapidly.



Note: The growth data were adjusted to control for the initial level of income.

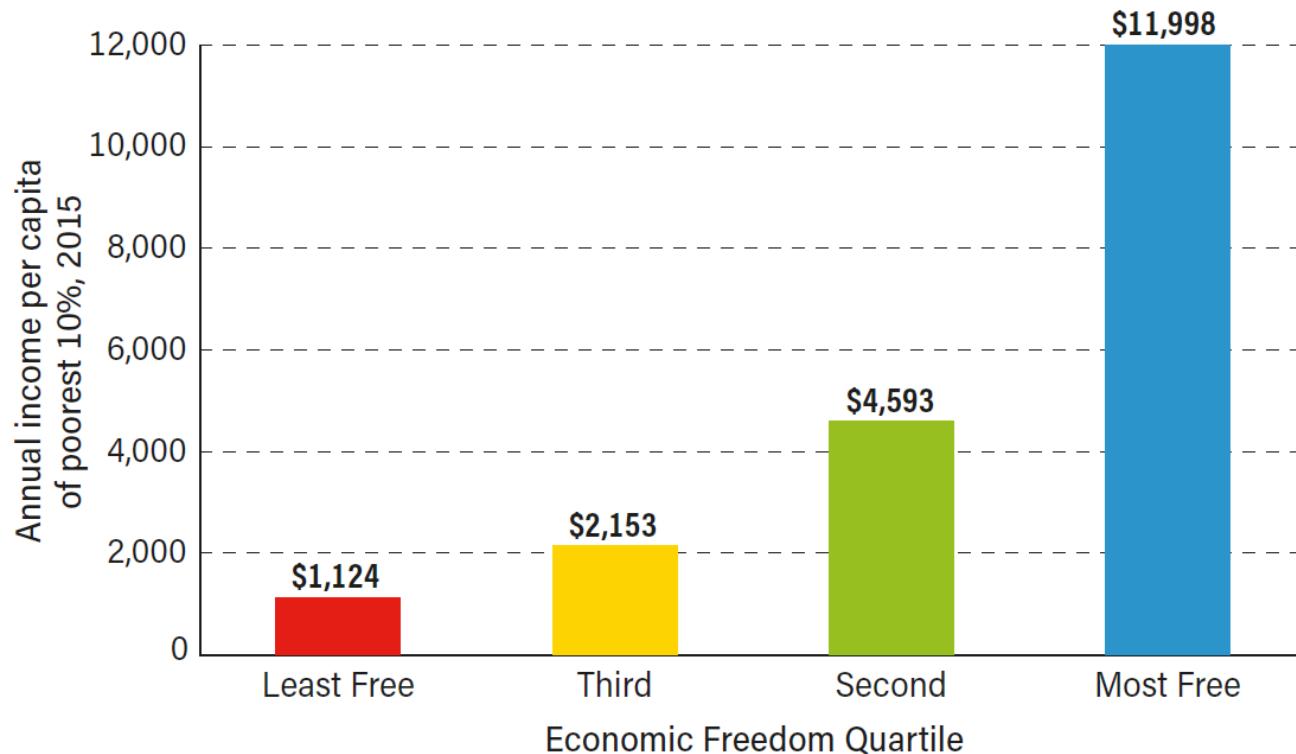
Sources: *Economic Freedom of the World: 2017 Annual Report*; World Bank, 2017, *World Development Indicators*.

Three Lessons from the EFW Project

3. Economic freedom matters. Numerous studies indicate that countries with more economic freedom have higher levels of investment, more rapid growth, and higher per capita GDP.

Exhibit 1.14: Economic Freedom and the Income Earned by the Poorest 10%

The amount of income, as opposed to the share, earned by the poorest 10% of the population is much higher in countries with higher economic freedom.

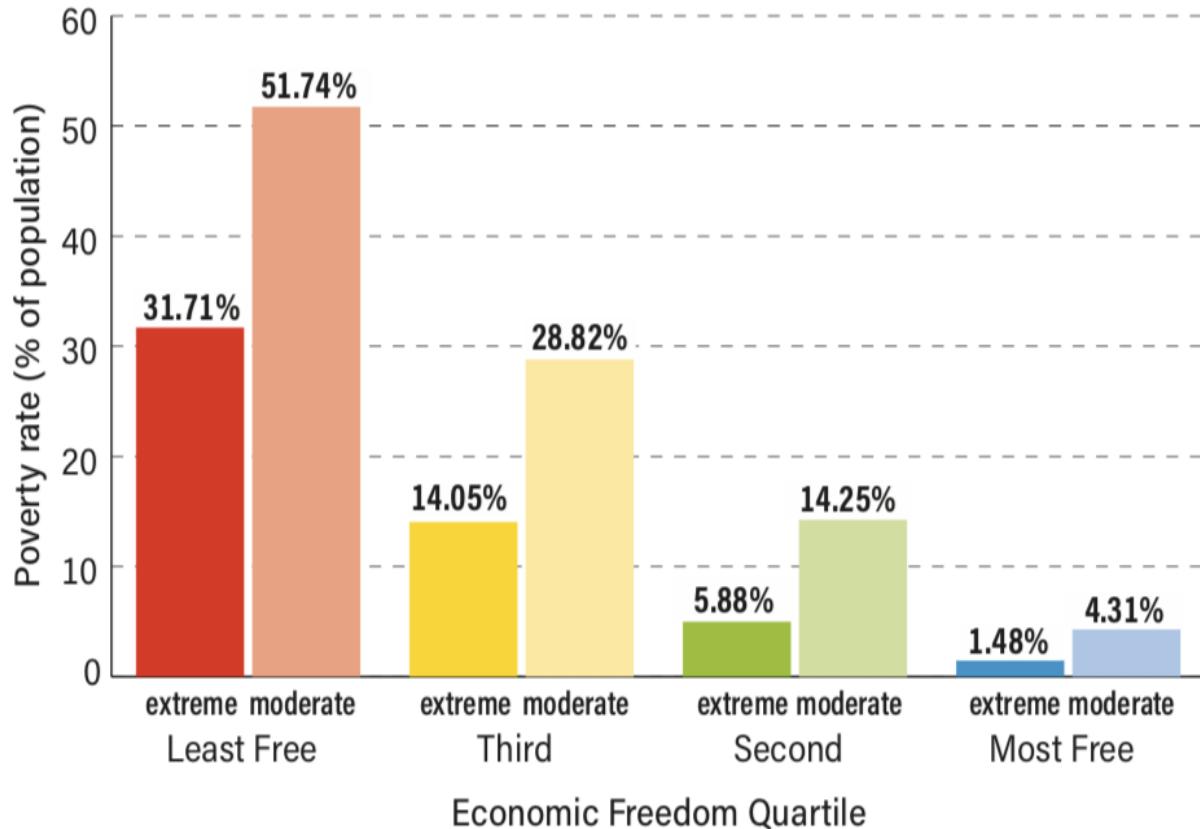


Note: Annual income per capita of poorest 10% (PPP constant 2011 US\$), 2015
Sources: *Economic Freedom of the World: 2017 Annual Report*; World Bank, 2017,
World Development Indicators.

Three Lessons from the EFW Project

Exhibit 1.10: Economic Freedom and Extreme and Moderate Poverty Rates

Extreme and moderate poverty are lower in countries with more economic freedom.



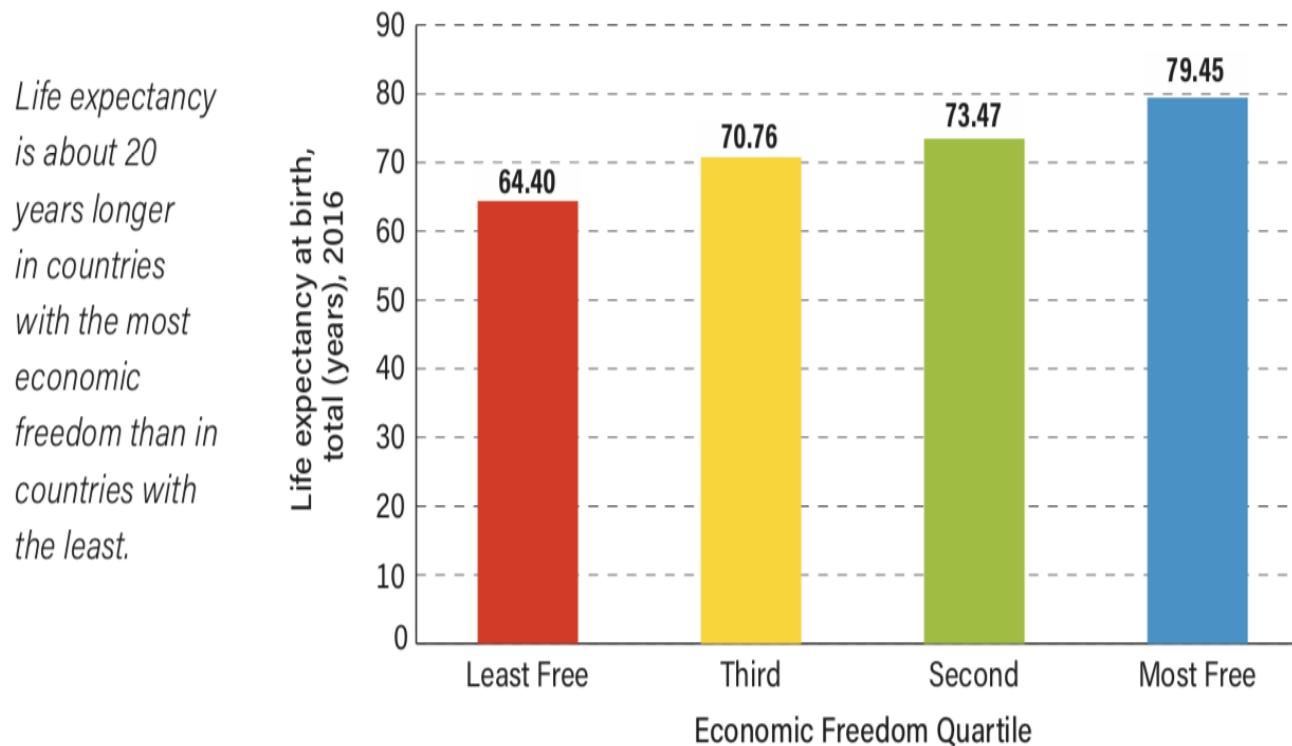
Note: The **extreme** poverty rate is the percentage of a country's population that lives on **\$1.90** per day; the **moderate** poverty rate is the percentage that lives **\$3.20** per day, in 2011 constant PPP-adjusted dollars.

Sources: Average Economic Freedom Panel Score, 1995–2016; World Bank, 2017, *World Development Indicators*; for details, see Connors, 2011.

Three Lessons from the EFW Project

3. Economic freedom matters. Numerous studies indicate that countries with more economic freedom have higher levels of investment, more rapid growth, and higher per capita GDP.

Exhibit 1.8: Economic Freedom and Life Expectancy

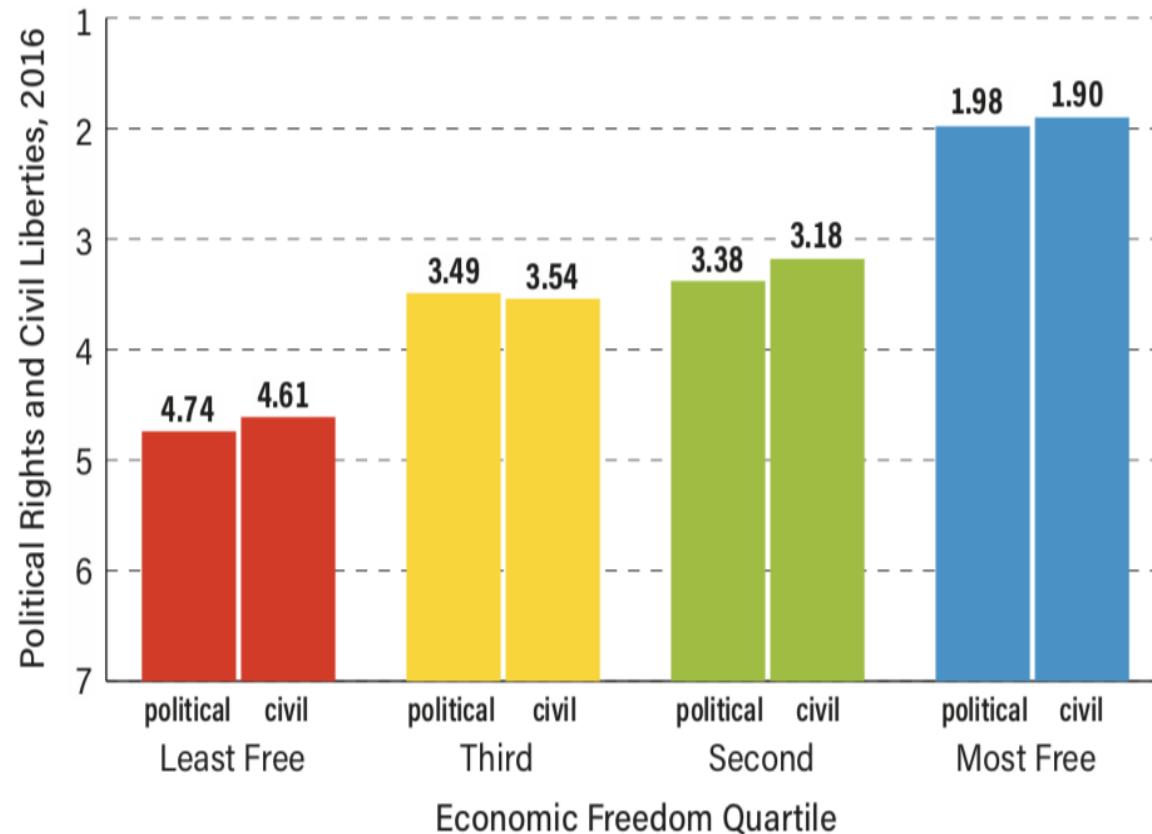


Sources: Average Economic Freedom Panel Score, 1995–2016; World Bank, 2017,
World Development Indicators.

Three Lessons from the EFW Project

Exhibit 1.11: Economic Freedom and Political Rights and Civil Liberties

Greater economic freedom is associated with more political rights and civil liberties.



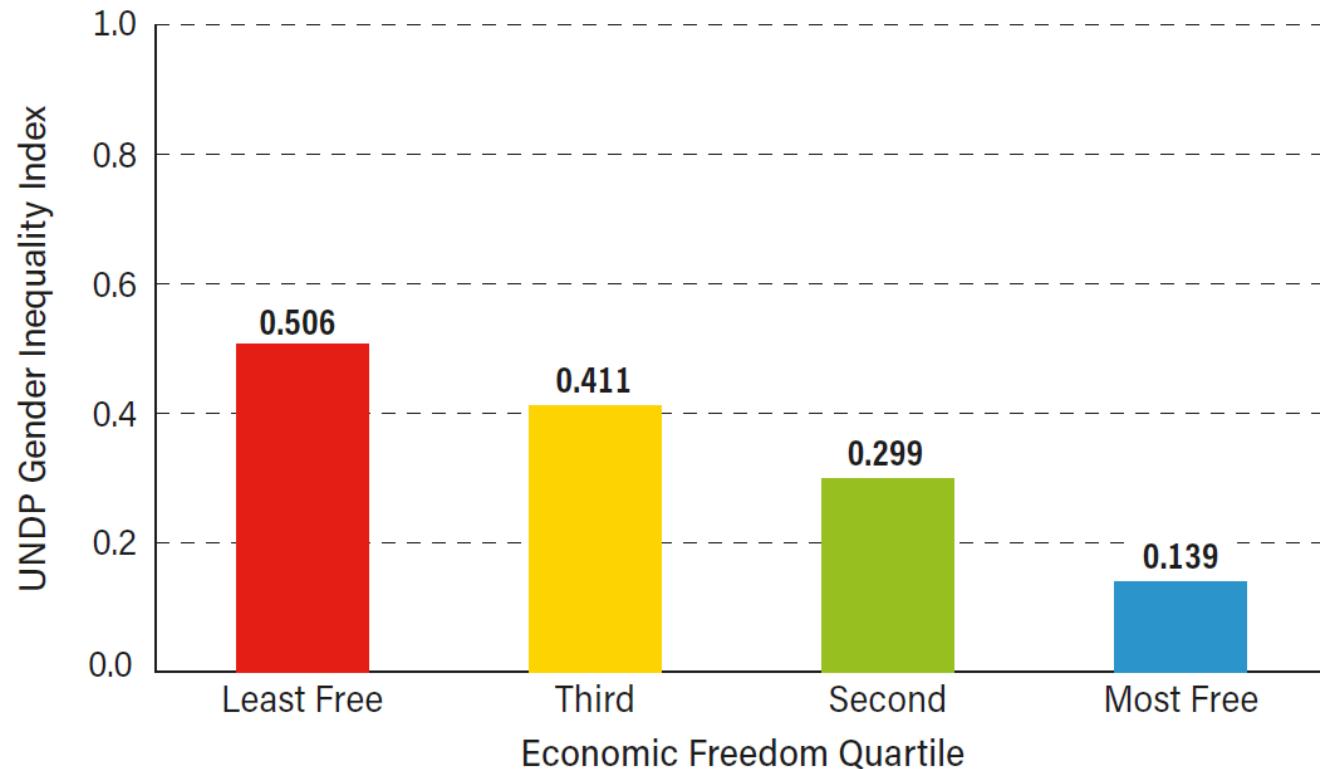
Note: **Political rights** and **civil liberties** are measured on a scale from 1 to 7: 1 = the highest degree of political rights and civil liberties; 7 = the lowest.

Sources: Average Economic Freedom Panel Score, 1995–2016; Freedom House, 2017, *Freedom in the World* 2017.

Three Lessons from the EFW Project

Exhibit 1.18: Economic Freedom and the UN Gender Inequality Index

Men and women tend to fare equally in countries with greater economic freedom



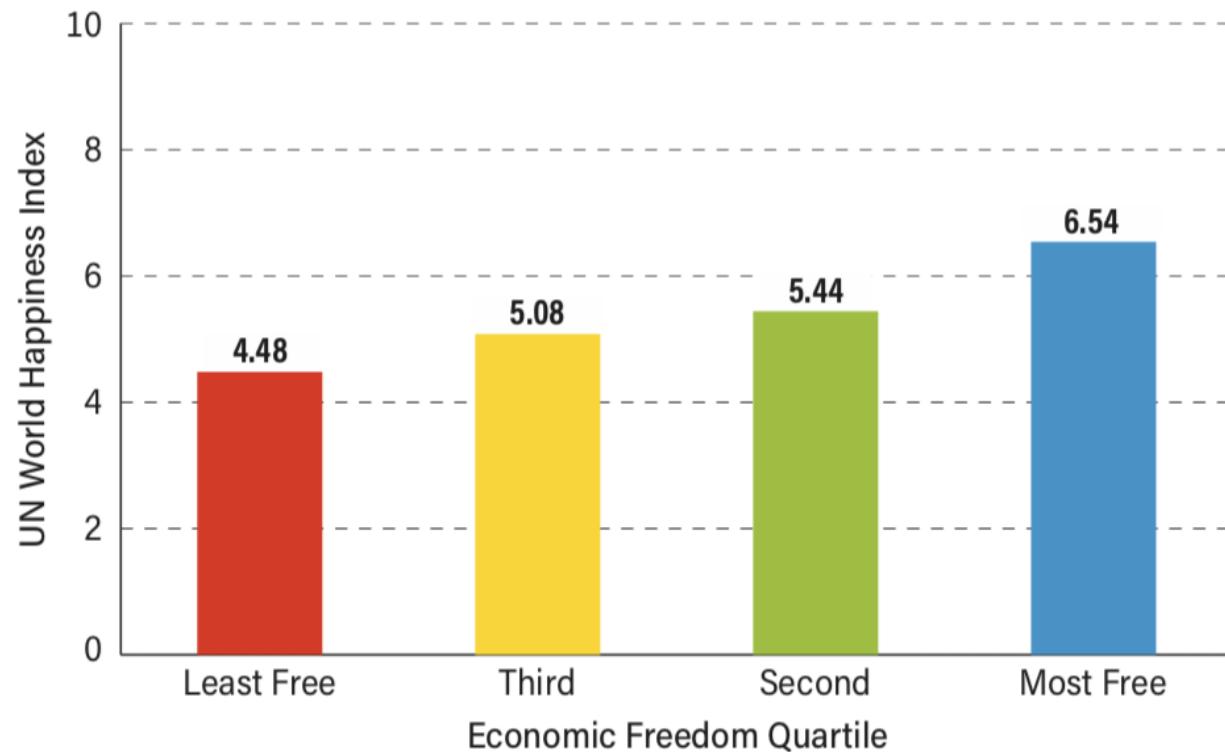
Note: "The Gender Inequality Index (GII) reflects gender-based disadvantage in three dimensions—reproductive health, empowerment and the labour market—for as many countries as data of reasonable quality allow ... It ranges from 0, where women and men fare equally, to 1, where one gender fares as poorly as possible in all measured dimensions." Data is for 2015.

Sources: *Economic Freedom of the World: 2017 Annual Report*; United Nations Development Programme, 2016, *Table 5: Gender Inequality Index*.

Three Lessons from the EFW Project

Exhibit 1.13: Economic Freedom and the UN World Happiness Index

People in countries with greater economic freedom tend to be happier about their lives.



Note: "The rankings are based on answers to the main life evaluation question ... This is called the Cantril ladder: it asks respondents to think of a ladder, with the best possible life for them being a 10, and the worst possible life being a 0. They are then asked to rate their own current lives on that 0 to 10 scale." Data are for 2015.

Sources: Average Economic Freedom Panel Score, 1995–2016; United Nations, 2016, *World Happiness Report 2016 Update*.

Guatemala ranked 23 of 162?

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Mission

Create a unique scholarly environment for the examination and study of economic freedom and social justice and their role in the advancement of human flourishing. The Institute will promote clarity in the understanding of both economic freedom and social justice, communicating their contribution to more purposeful, creative, and satisfying lives. Because of their central role in the interaction among people, social institutions - along with the economic, political, religious, and cultural factors that shape them - will be a central focus of the Institute.

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Blog

Wednesday, June 5, 2019

What's wrong with economic freedom in Guatemala?

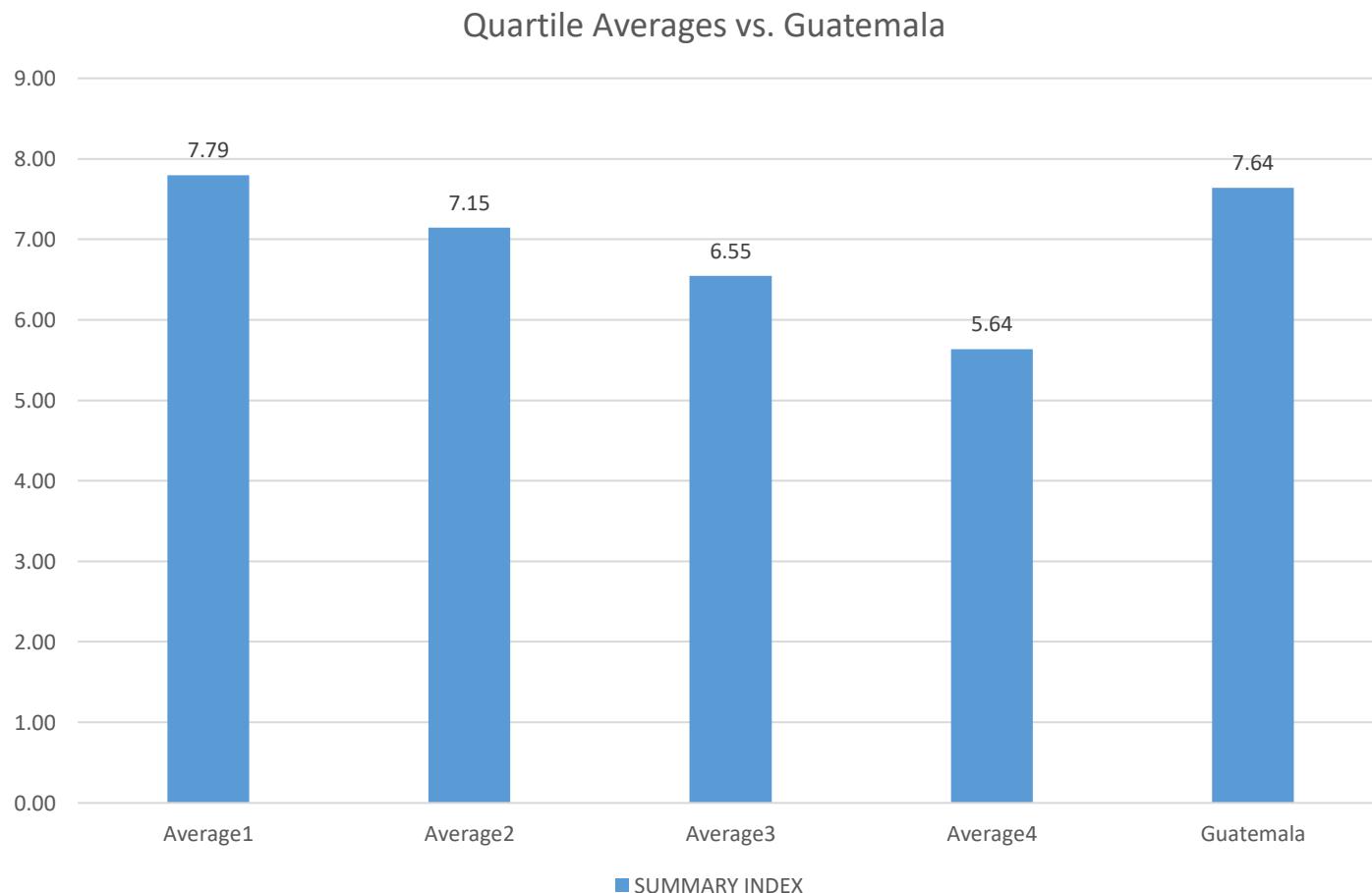
by Russ McCullough

I am excited to be traveling to Guatemala with my wife and son in August! My wife helps run a non-profit called Education and More there where the organization contracts with local indigenous women to produce products that use the hand-woven

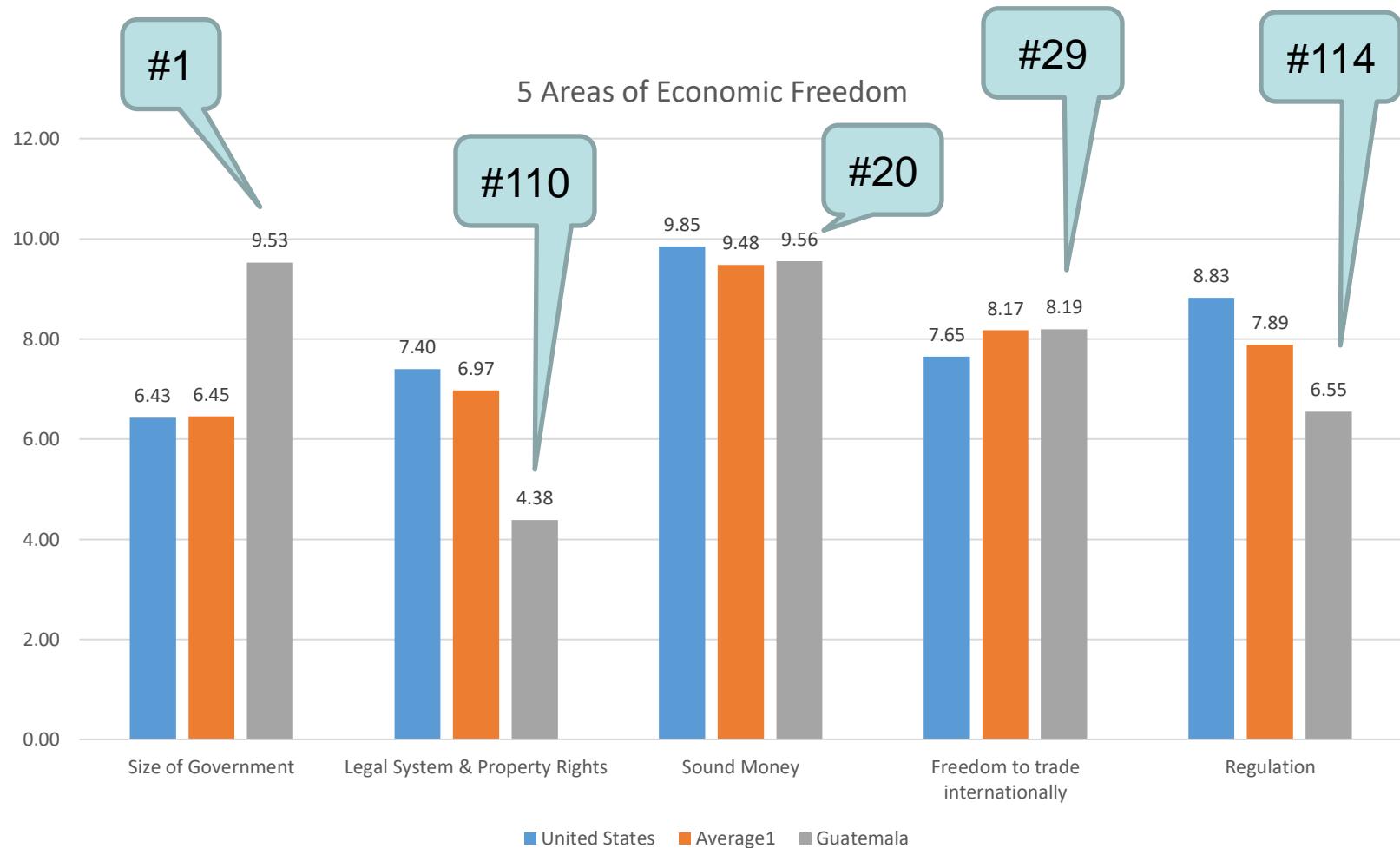
Labels

bitcoin civil rights corporate
welfare disaster response
economic freedom
employment entertainment
GDP health care Herald
columns local market
solutions money parenting
policy population

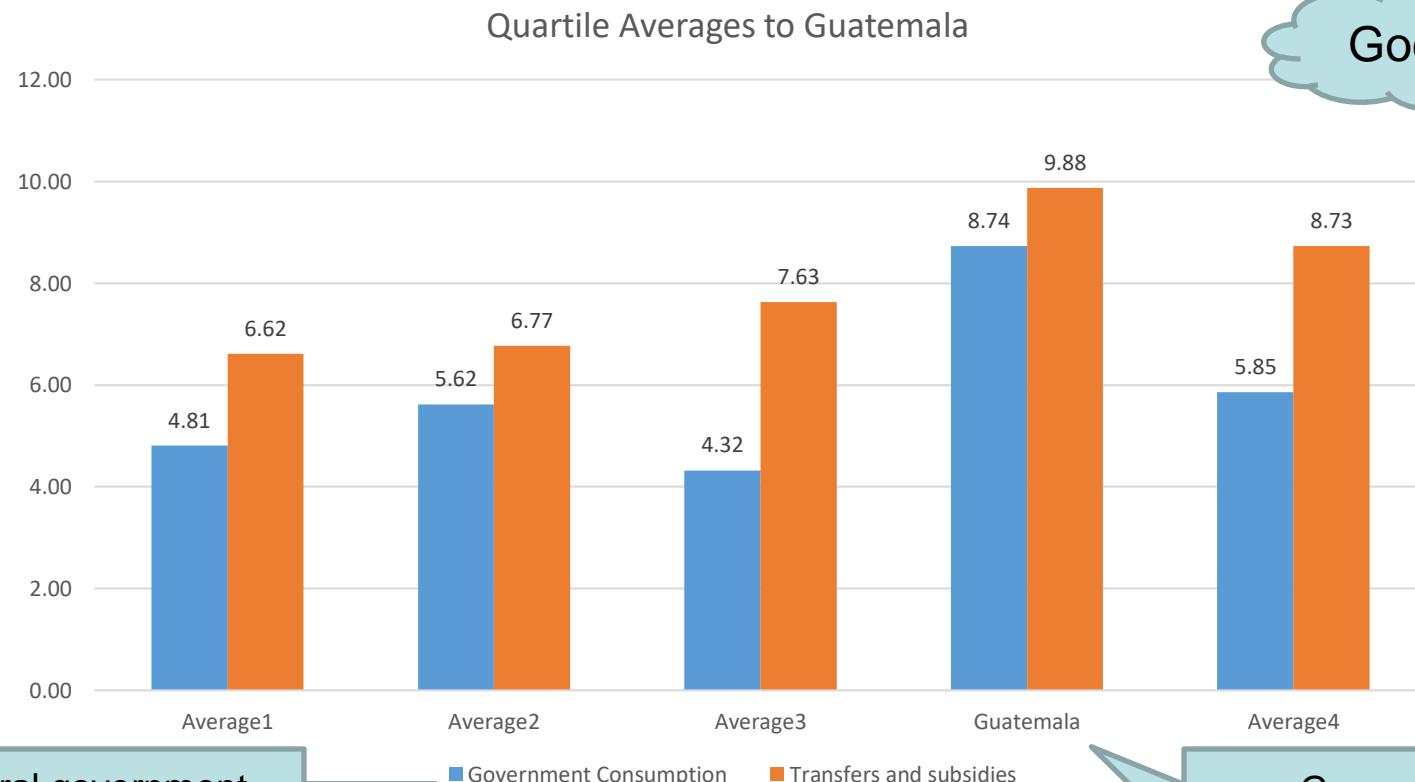
Overall Rank of 23 in the World



Overall score 7.64 (most free?)



Smaller ‘Size of Government’ than all average quartiles .



General government consumption spending as a percentage of total consumption.

■ Government Consumption ■ Transfers and subsidies

General government transfers and subsidies as a share of GDP.

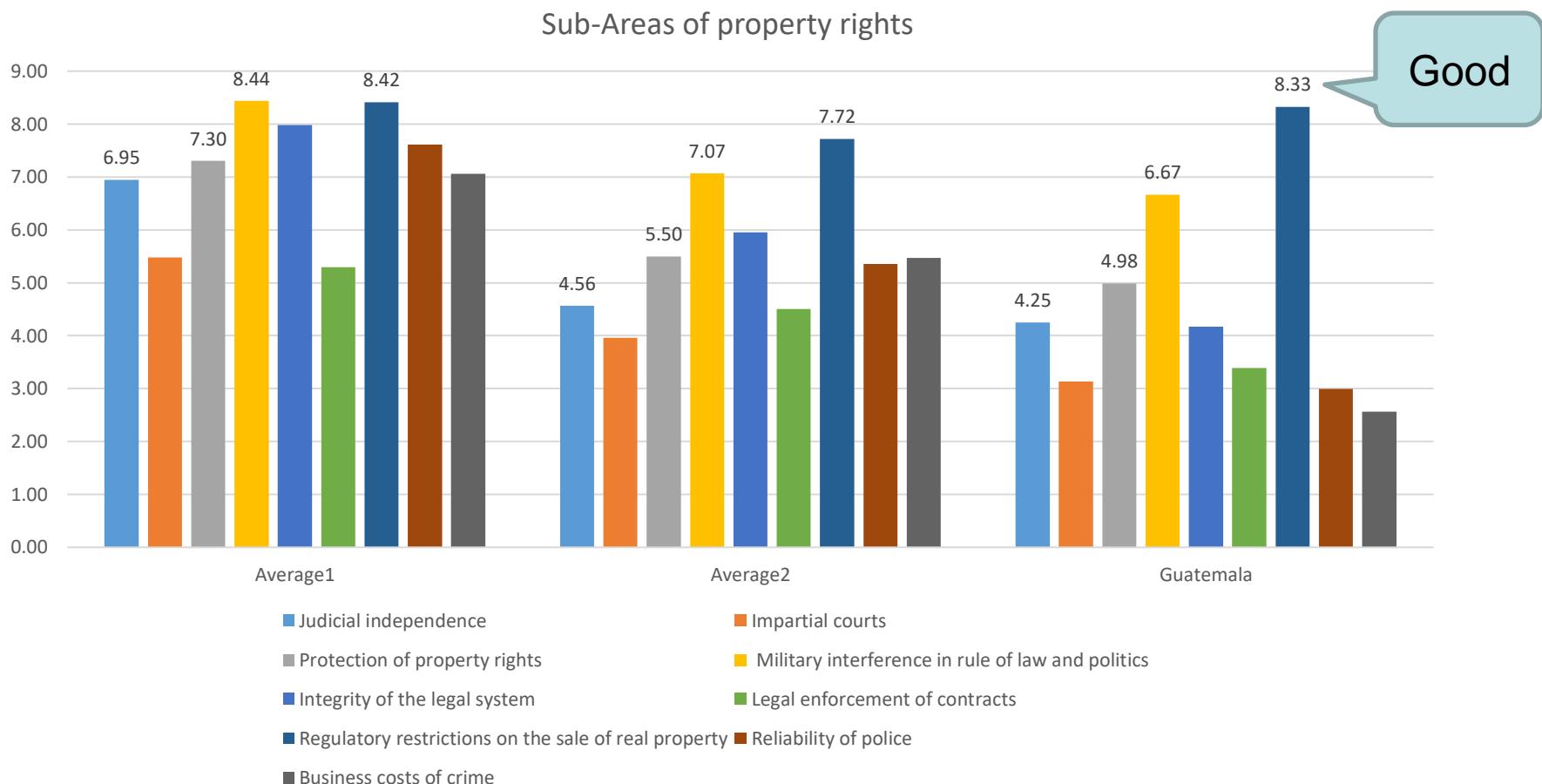
Good?

- 1A Government consumption
 - This component is measured as general government consumption spending as a percentage of total consumption.
- 1B Transfers and subsidies
 - This component is measured as general government transfers and subsidies as a share of GDP.

Overall score 7.64 (most free?)

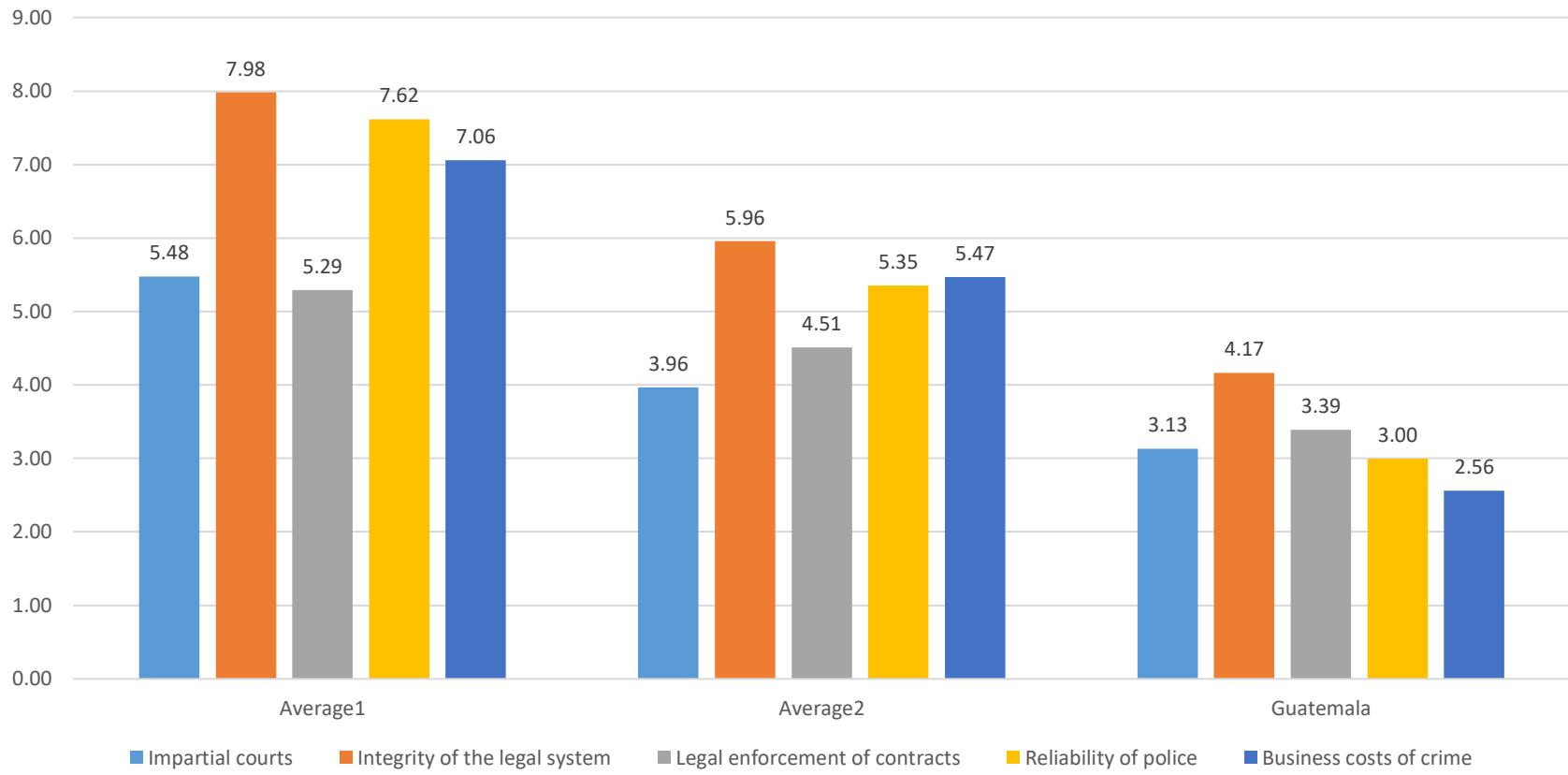


Property rights recommendations



Low hanging fruit

Where to start on property rights



Global Competitiveness Report question:

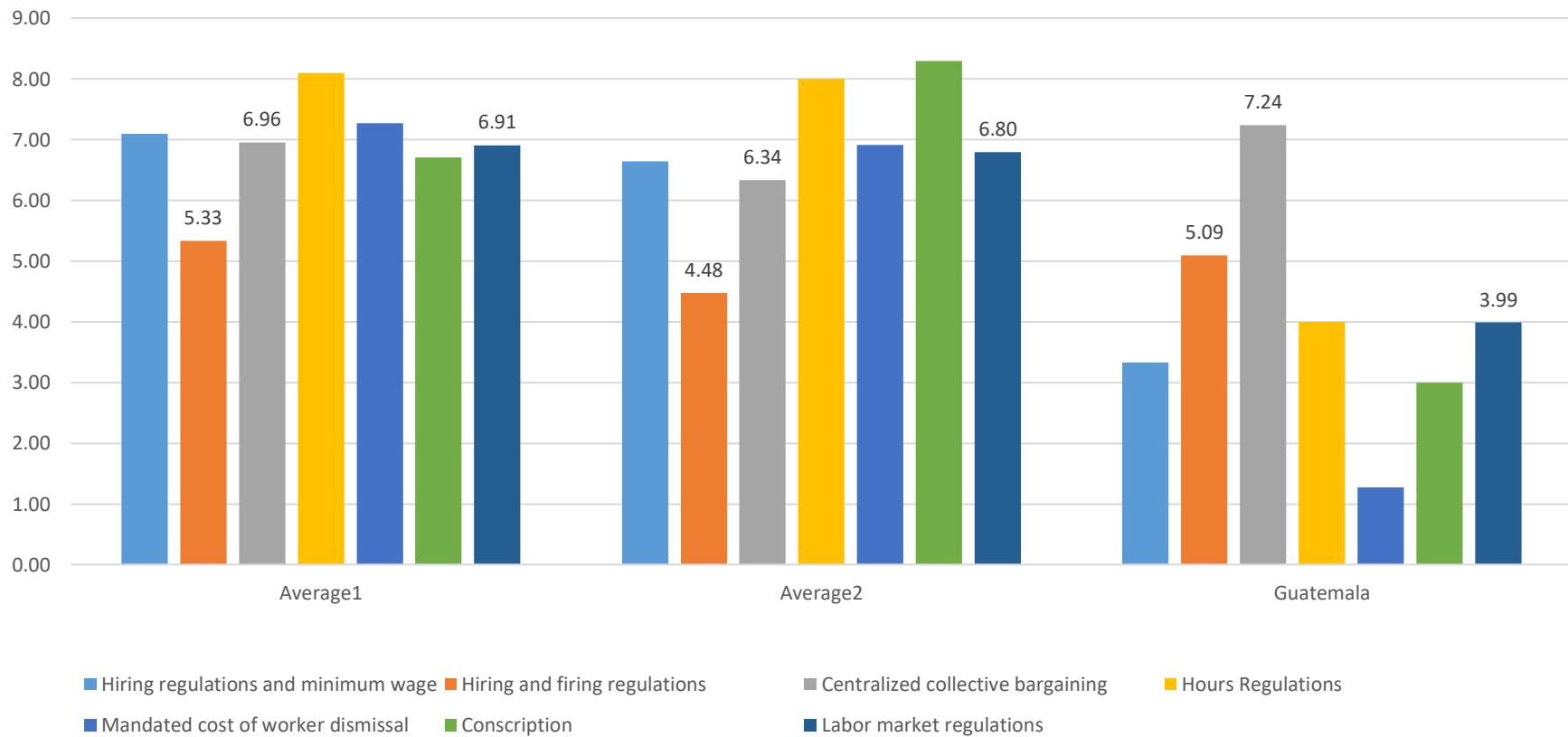
“To what extent does the incidence of crime and violence impose costs on businesses in your country? (1 = To a great extent; 7 = Not at all)”.

Overall score 7.64 (most free?)



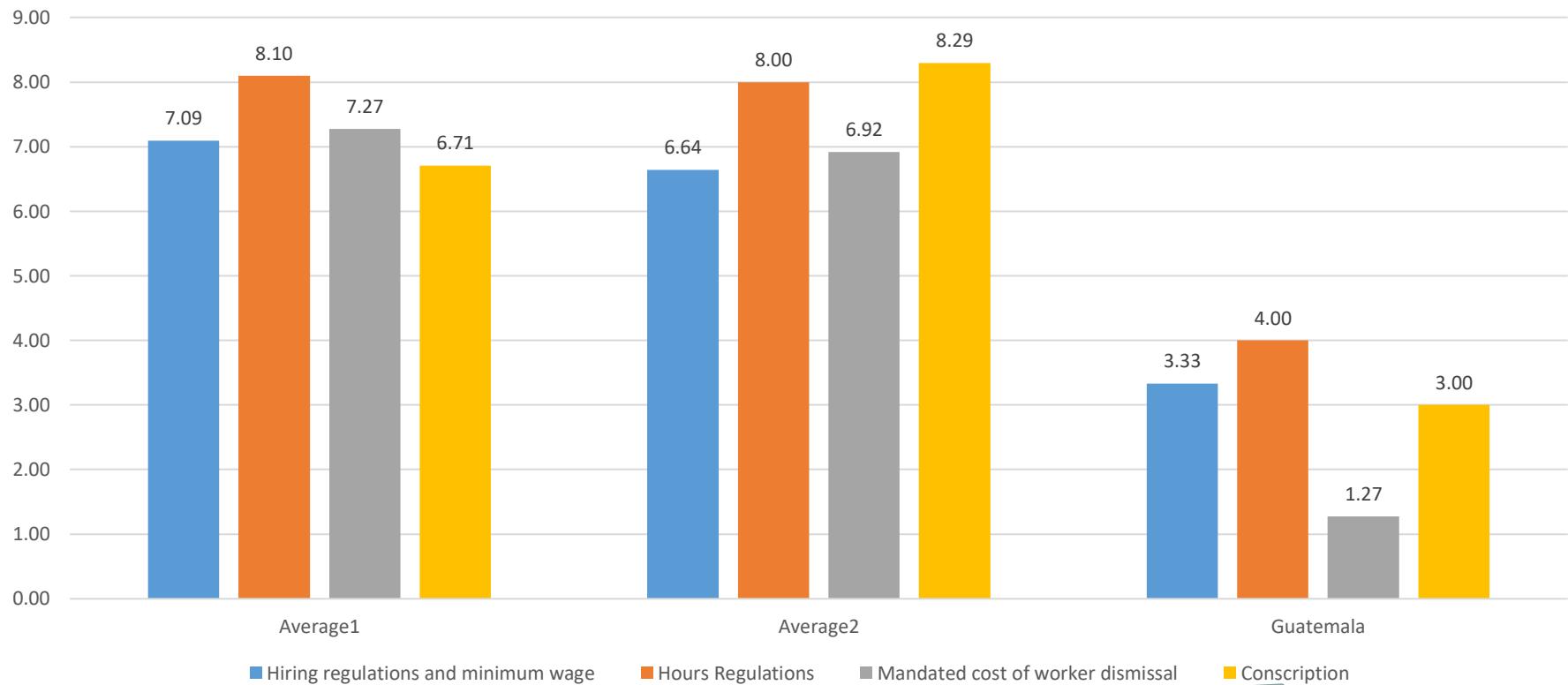
Regulation Recommendations

Labor Market Regulations



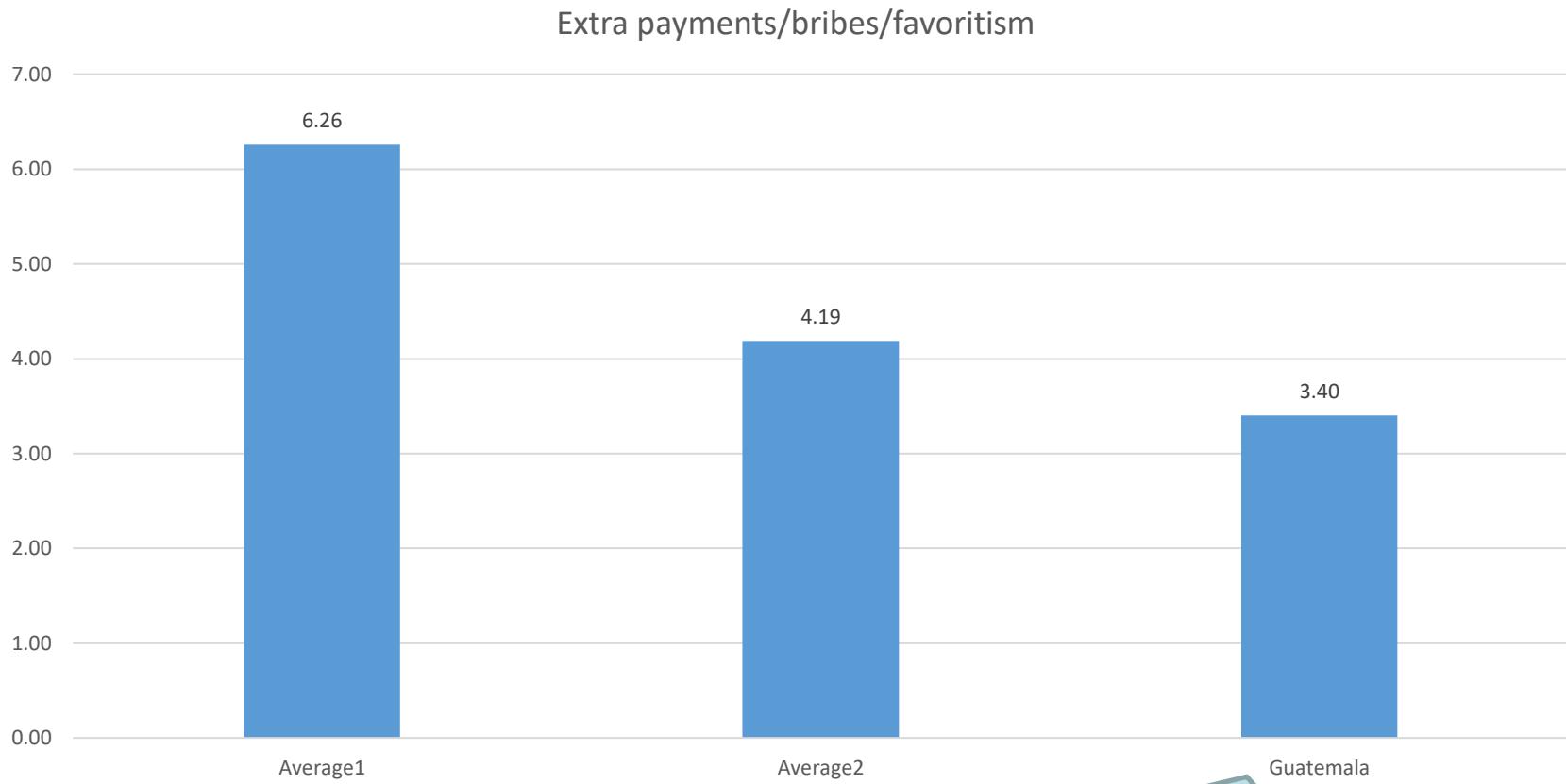
Low Hanging Fruit

Where to start on regulation



- Rating of 10 was assigned to countries without military conscription.
- When length of conscription was more than six months but not more than 12 months, countries were rated at 3.
- If conscription was present but apparently not strictly enforced or the length of service could not be determined, the country was given a rating of 3.

3 ? For Sub-sub area 5c

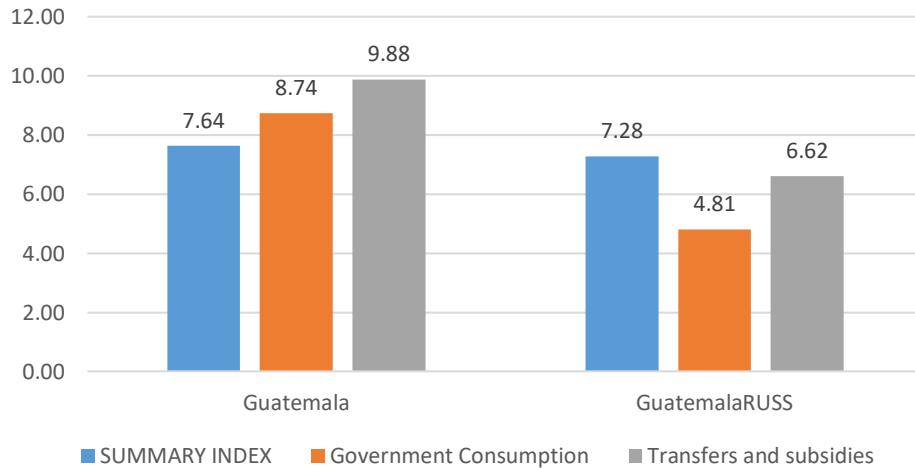


(3) “To what extent do government officials in your country show favoritism to well-connected firms and individuals when deciding upon policies and contracts? 1 = Always show favouritism, 7 = Never show favouritism”. The wording of the questions has varied slightly over the years.

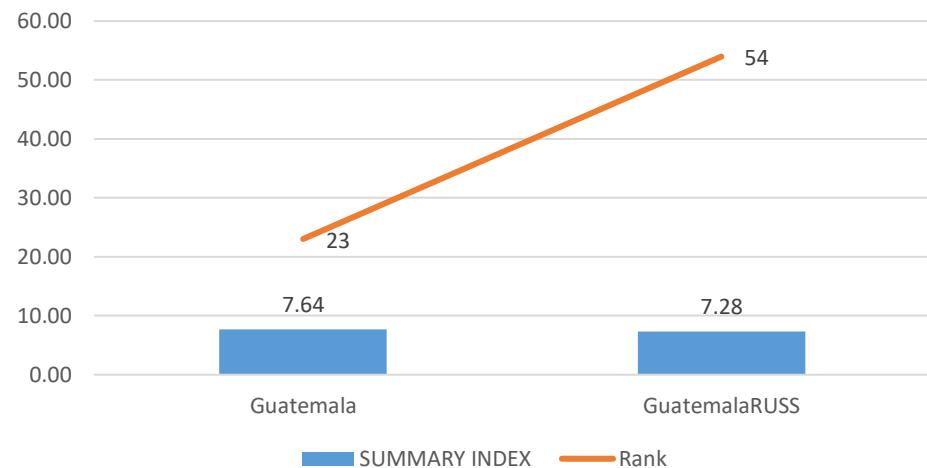
Source World Economic Forum, *Global Competitiveness Report*.

Assumptions

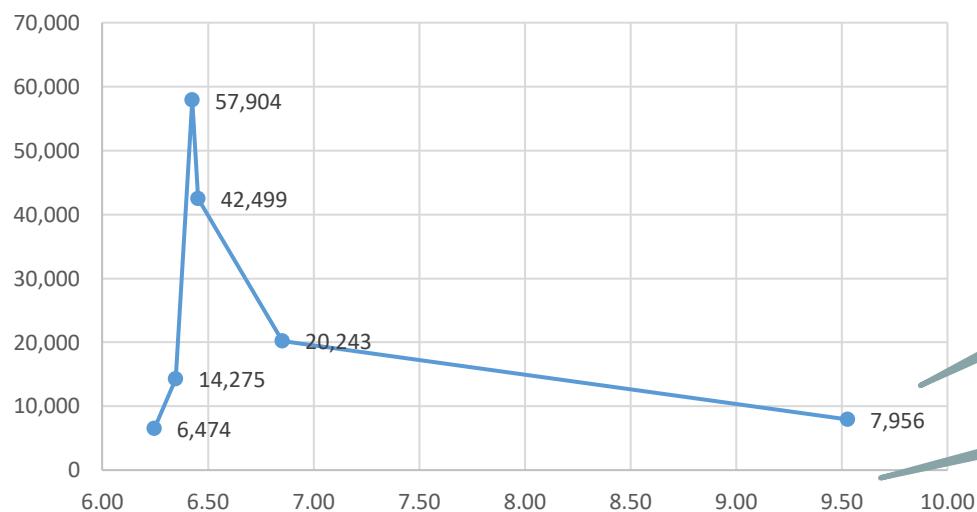
Substituting Q1 average for Guatemala



Change in Rank



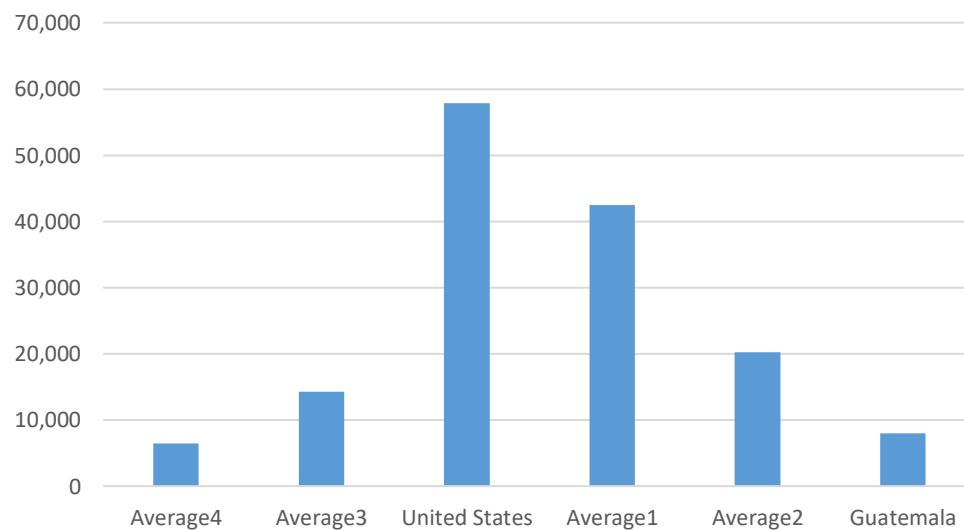
Size of Government and Income



Guatemala
Per Capita
Income

Size Score

Size of Government and Income

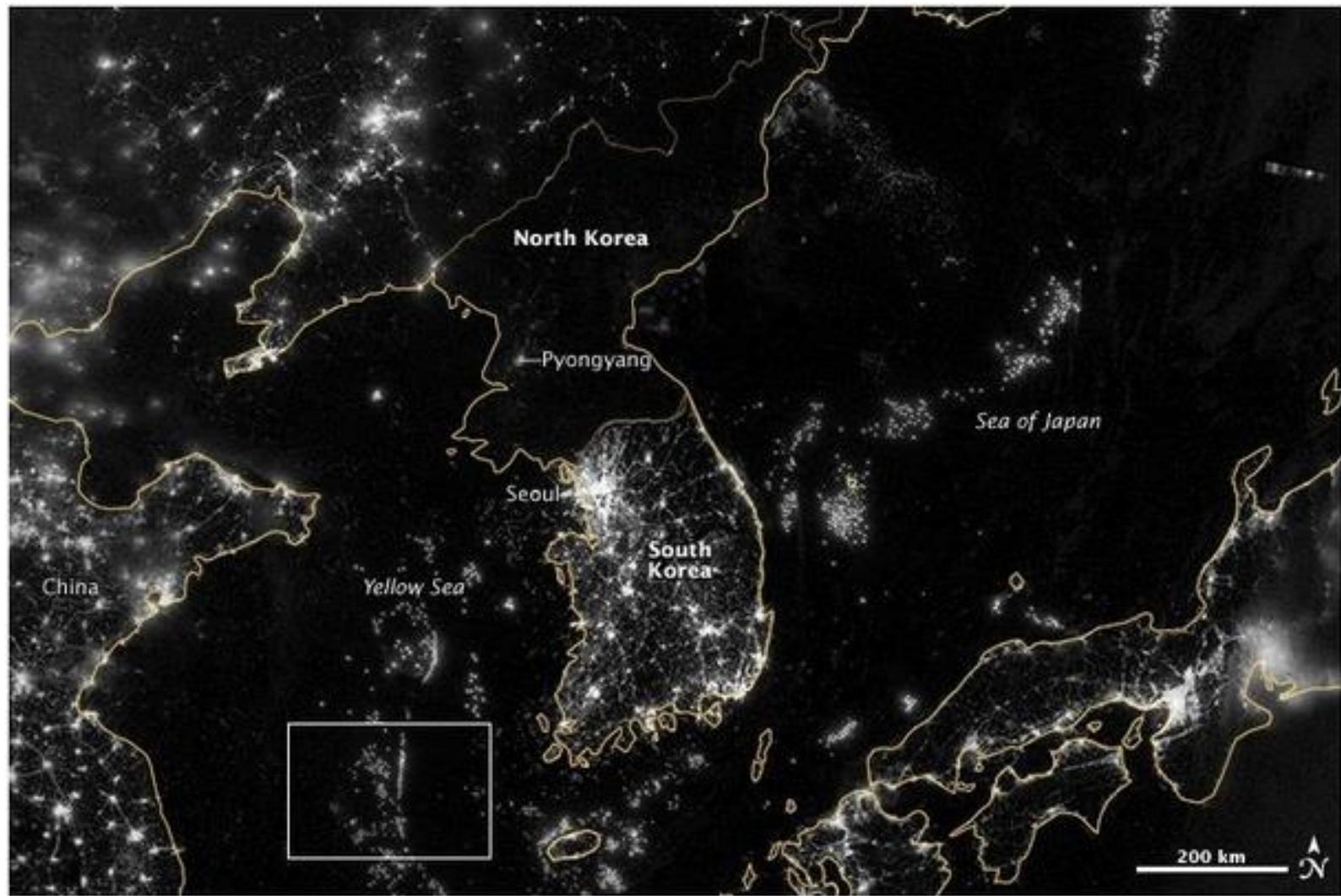


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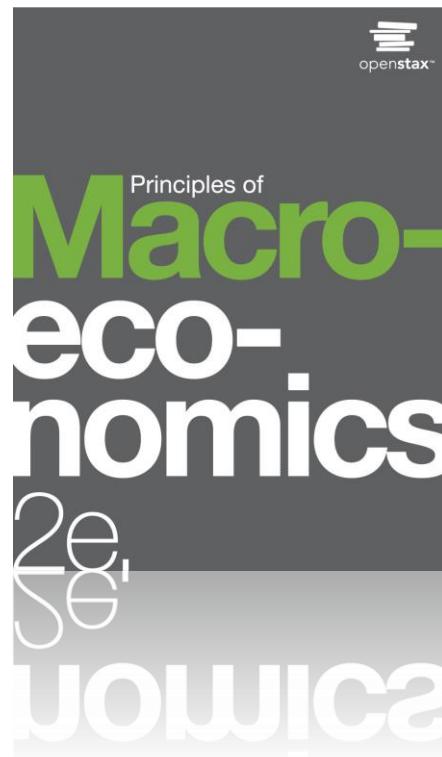
Economic Freedom in the Night



PRINCIPLES OF MACROECONOMICS 2e

Chapter 6 The Macroeconomic Perspective

PowerPoint Image Slideshow



CH.6 OUTLINE

6.1: Measuring the Size of the Economy: Gross Domestic Product

6.2: Adjusting Nominal Values to Real Values

6.3: Tracking Real GDP over Time

6.4: Comparing GDP among Countries

6.5: How Well GDP Measures the Well-Being of Society

The Great Depression



- At times, such as when many people have trouble making ends meet, it is easy to tell how the economy is doing.
- This photograph shows people lined up during the Great Depression, waiting for relief checks.
- At other times, when some are doing well and others are not, it is more difficult to ascertain how the economy of a country is doing.
(Credit: modification of work by the U.S. Library of Congress/Wikimedia Commons)

Macroeconomic Goals, Framework, and Policies



Goals

Economic growth
Low unemployment
Low inflation

Framework

Aggregate demand/
Aggregate supply
Keynesian model
Neoclassical model

Policy Tools

Monetary policy
Fiscal policy

- This chart shows what macroeconomics is about:
 - Goals - a consensus of what are the most important goals for the macro economy.
 - Framework - what economists use to analyze macroeconomic changes (such as inflation or recession).
 - Policy Tools - the tools the federal government uses to influence the macro economy.

6.1 Measuring the Size of the Economy: Gross Domestic Product



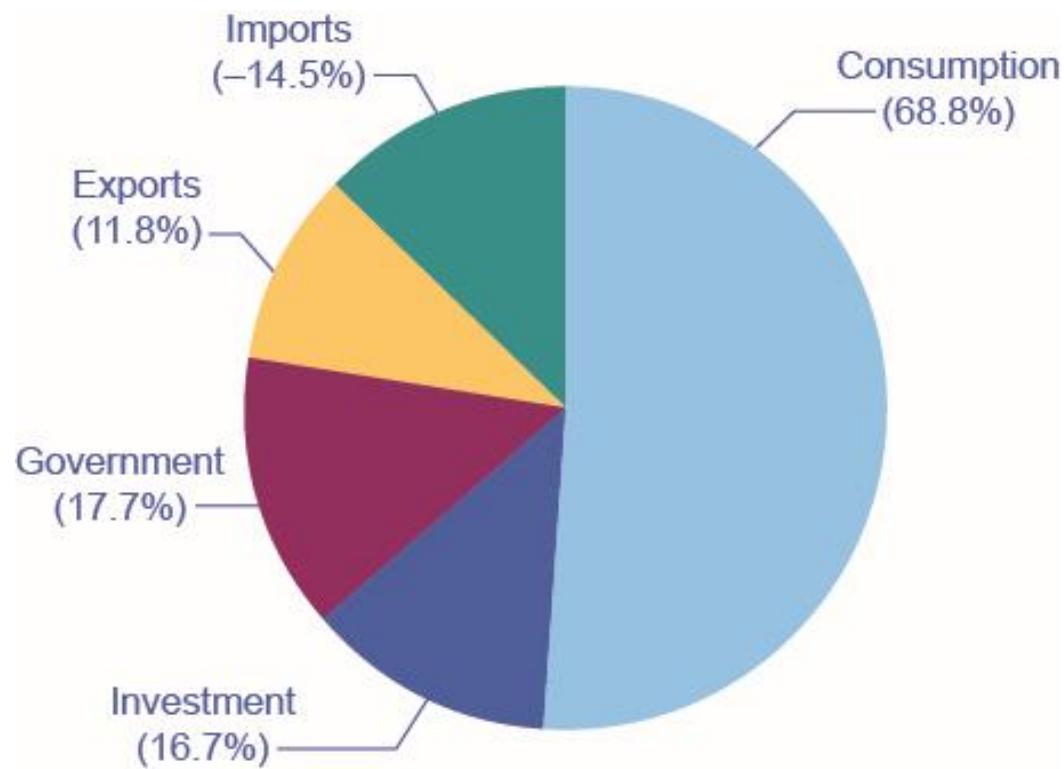
- **Gross domestic product (GDP)** - the value of the output of all final goods and services produced within a country in a given year.
 - Measures the size of a nation's overall economy.
- An economy's GDP can be measured by either:
 - the total dollar value of what consumers purchase in the economy.
 - the total dollar value of what the country produces.

GDP Measured by Components of Demand



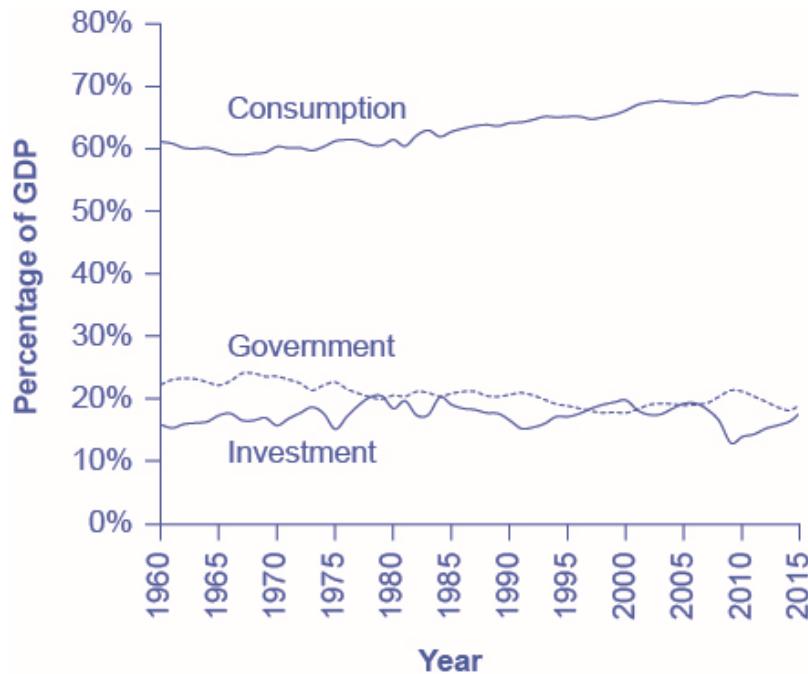
- Who buys all of a country's production?
- Demand for production can be divided into four main parts:
 - consumer spending (consumption)
 - business spending (investment)
 - government spending on goods and services
 - spending on net exports

Percentage of Components of 2016 U.S. GDP on the Demand Side

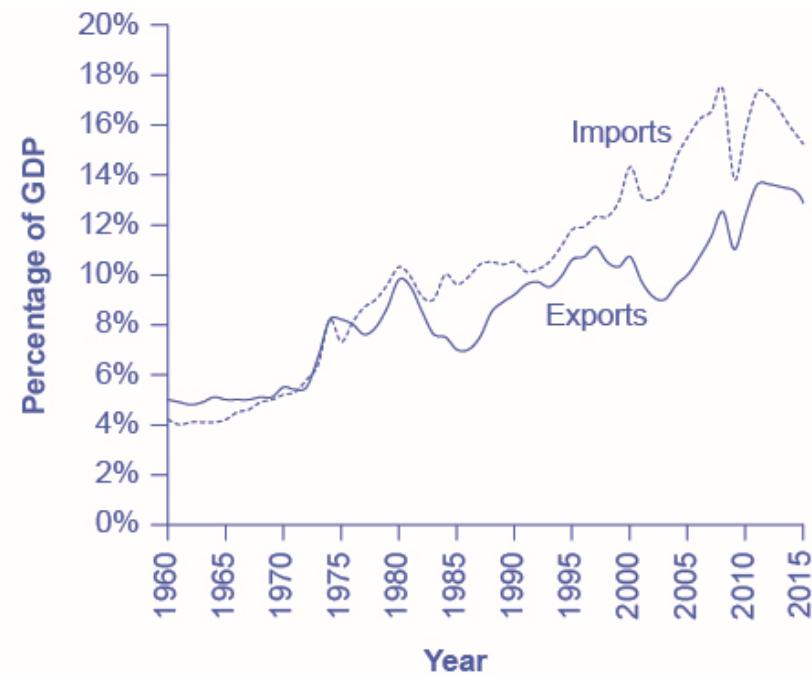


Consumption makes up over half of the demand side components of the GDP. (Source: http://bea.gov/iTable/index_nipa.cfm)

Components of GDP on the Demand Side



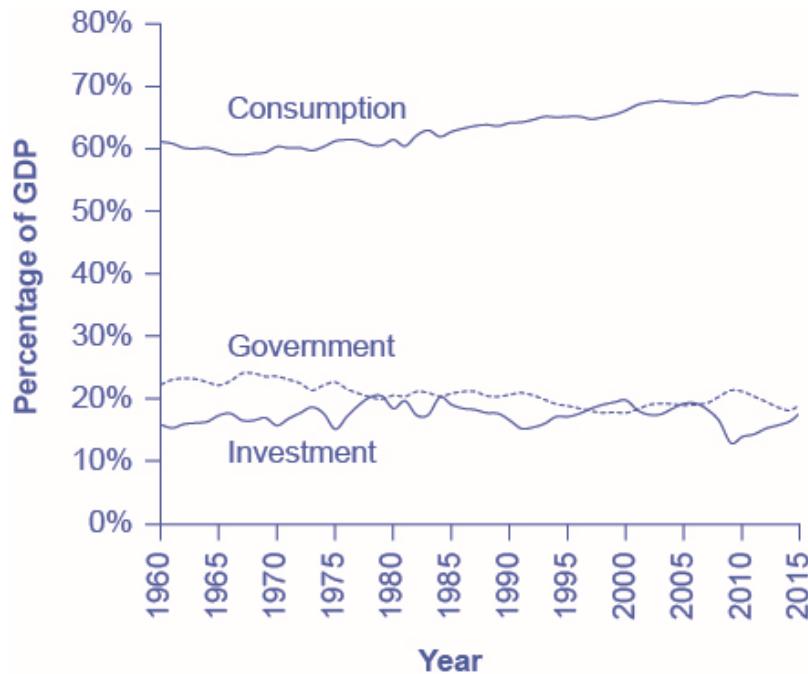
(a) Demand from consumption, investment, and government



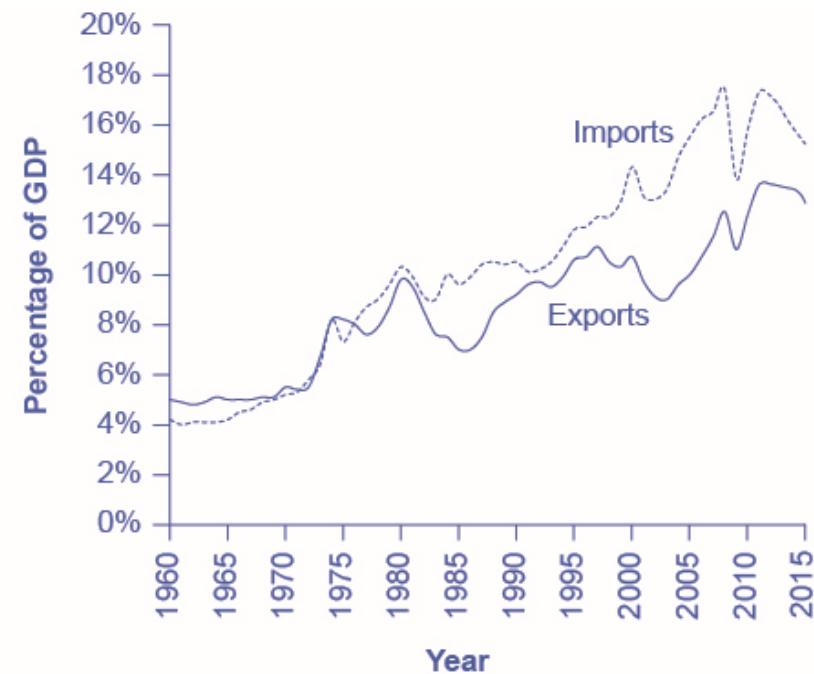
(b) Imports and exports

- For graph (a):
 - Consumption is about two-thirds of GDP, but it moves relatively little over time.
 - Business investment hovers around 15% of GDP, but it increases and declines more than consumption.
 - Government spending on goods and services is around 20% of GDP.

Components of GDP on the Demand Side, Continued



(a) Demand from consumption, investment, and government



(b) Imports and exports

- For graph (b):
 - Exports are added to total demand for goods and services, while imports are subtracted from total demand.
 - If exports exceed imports, as in most of the 1960s and 1970s in the U.S. economy, a trade surplus exists.
 - If imports exceed exports, as in recent years, then a trade deficit exists. (Source: http://bea.gov/iTable/index_nipa.cfm)

Net Export Component

- The GDP net export component, or trade balance, is equal to the dollar value of exports (X) minus the dollar value of imports (M).
- **Trade balance** - the gap between exports and imports.
 - Trade balance = $(X - M)$
- **Trade surplus** - when a country's exports are larger than its imports; calculated as exports – imports.
- **Trade deficit** - when a country's imports exceed exports; calculated as imports – exports.

GDP Using Demand

- Based on the four components of demand, GDP can be measured as:

$\text{GDP} = \text{Consumption} + \text{Investment} + \text{Government} + \text{Trade balance}$

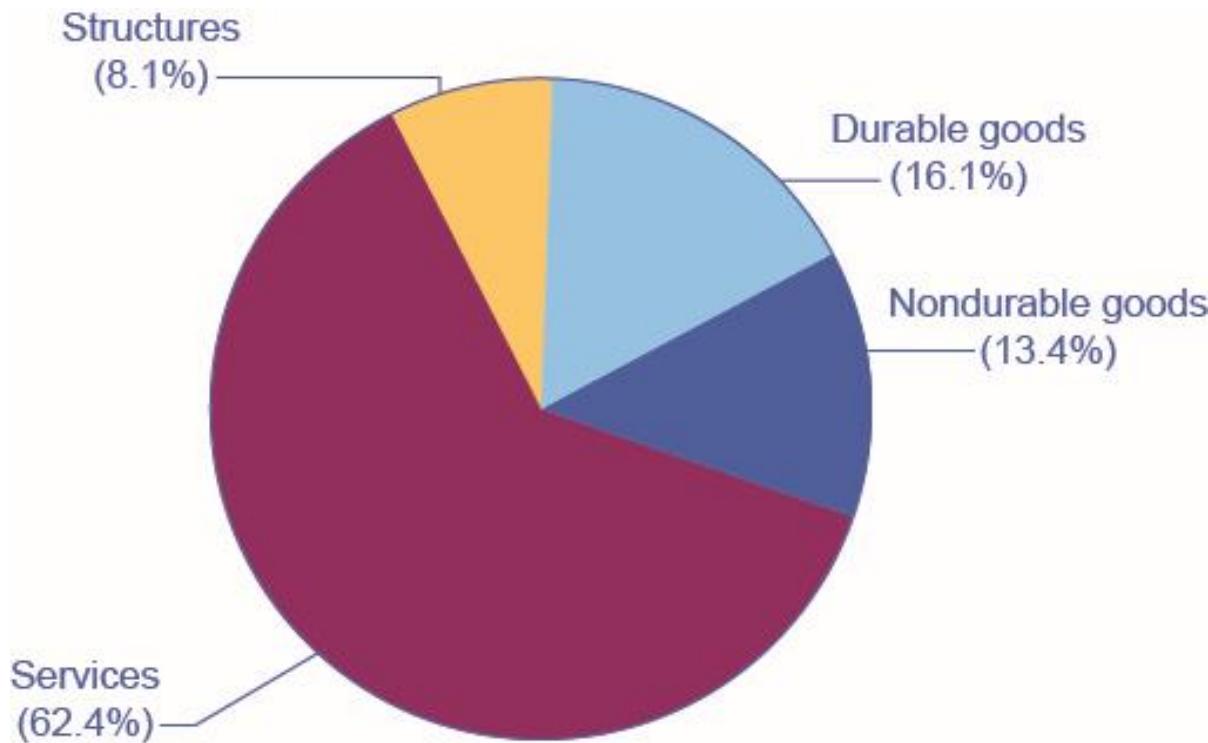
OR

$$\text{GDP} = C + I + G + (X - M)$$

GDP Measured by What is Produced

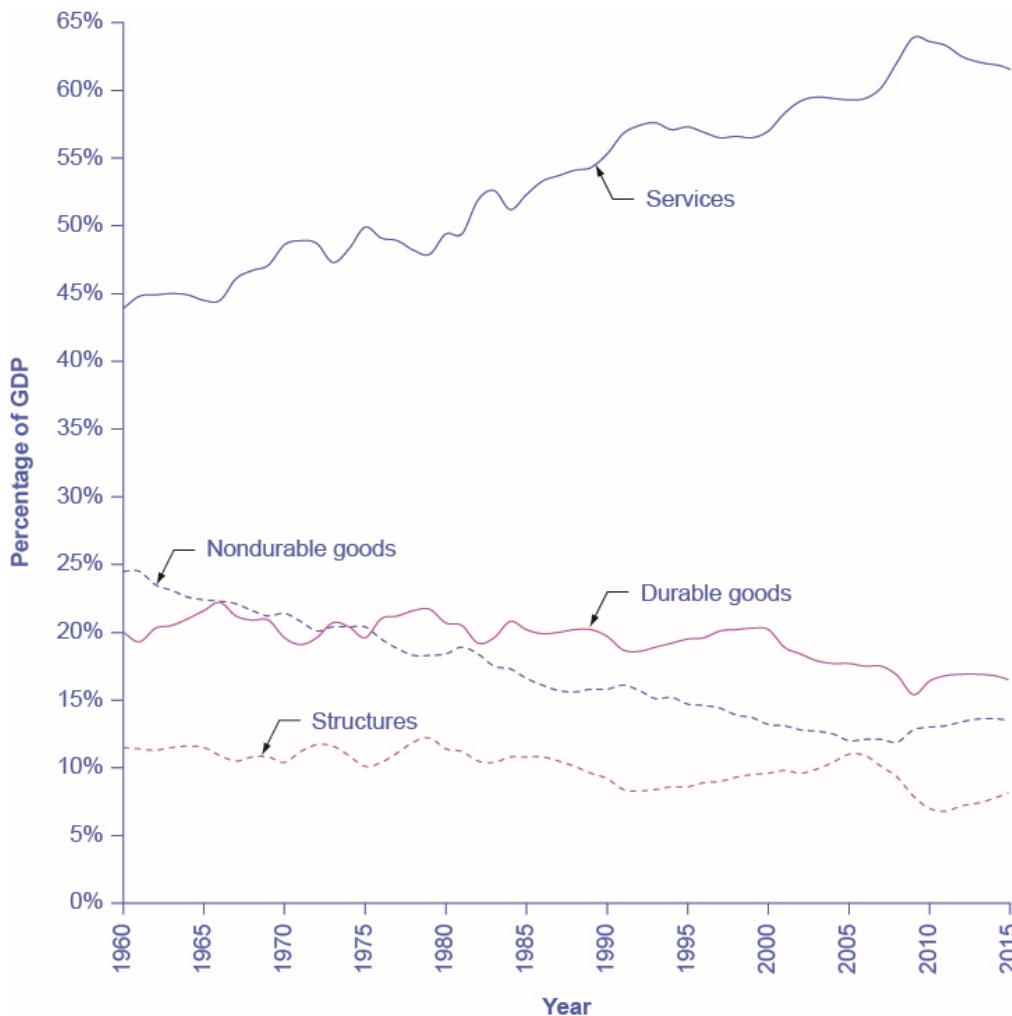
- Production can be divided into five main parts:
 - **Durable goods** - long-lasting good like a car or a refrigerator.
 - **Nondurable goods** - short-lived good like food and clothing.
 - **Services** - product which is intangible (in contrast to goods) such as entertainment, healthcare, or education.
 - **Structures** - building used as residence, factory, office building, retail store, or for other purposes.
 - Change in **inventories** - good that has been produced, but not yet been sold.
- Every market transaction must have both a buyer and a seller, so GDP must be the same whether measured by what is demanded or by what is produced.

Percentage of Components of GDP on the Production Side



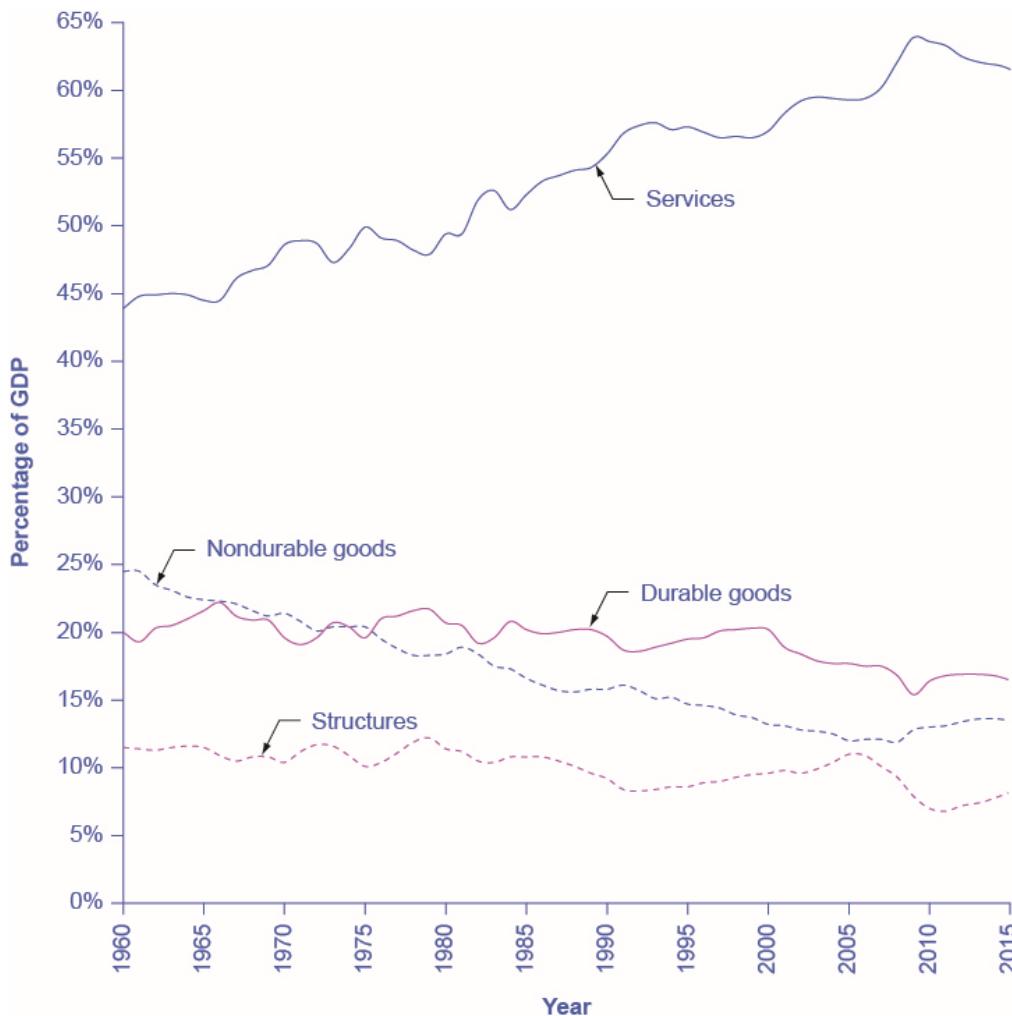
- Services make up over 60 percent of the production side components of GDP in the United States.
- Note that the change in inventories is not shown since it is typically less than 1% of GDP.

Types of Production



- Services are the largest single component of total supply, representing over 60 percent of GDP, up from about 45 percent in the early 1960s.
- Durable and nondurable goods constitute the manufacturing sector, and they have declined from 45 percent of GDP in 1960 to about 30 percent in 2016.

Types of Production, Continued



- Nondurable goods used to be larger than durable goods, but in recent years, nondurable goods have been dropping to below the share of durable goods, which is less than 20% of GDP.
- Structures hover around 10% of GDP.
- The change in inventories is not shown here since it is typically less than 1% of GDP.

The Problem of Double Counting

- **Final goods and services** - output used directly for consumption, investment, government, and trade purposes.
 - Goods at the furthest stage of production at the end of a year.
-vs.-
- **Intermediate goods** - output provided to other businesses at an intermediate stage of production, not for final users.
 - Excluded from GDP calculation.
- **Double counting** - output that is counted more than once as it travels through the stages of production.
 - A potential mistake to avoid in measuring GDP.
- GDP is the dollar value of all final goods and services produced in the economy in a year.

Other Ways to Measure the Economy

- **Gross national product (GNP)** - includes what is produced domestically and what is produced by domestic labor and business abroad in a year.
- **Net national product (NNP)** - GNP minus the value of depreciation.
- **Depreciation** - the process by which capital ages over time and therefore loses its value.
- NNP can be further subdivided into **national income** - includes all income earned: wages, profits, rent, and profit income.

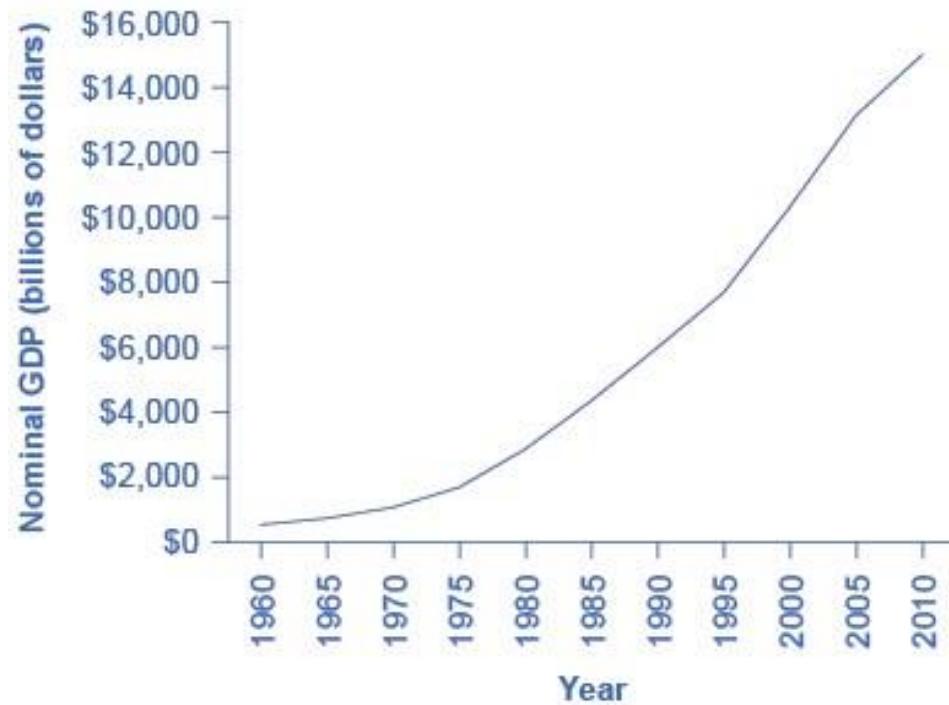
6.2 Adjusting Nominal Values to Real Values



- **Nominal value** - the economic statistic actually announced at that time; not adjusted for inflation.

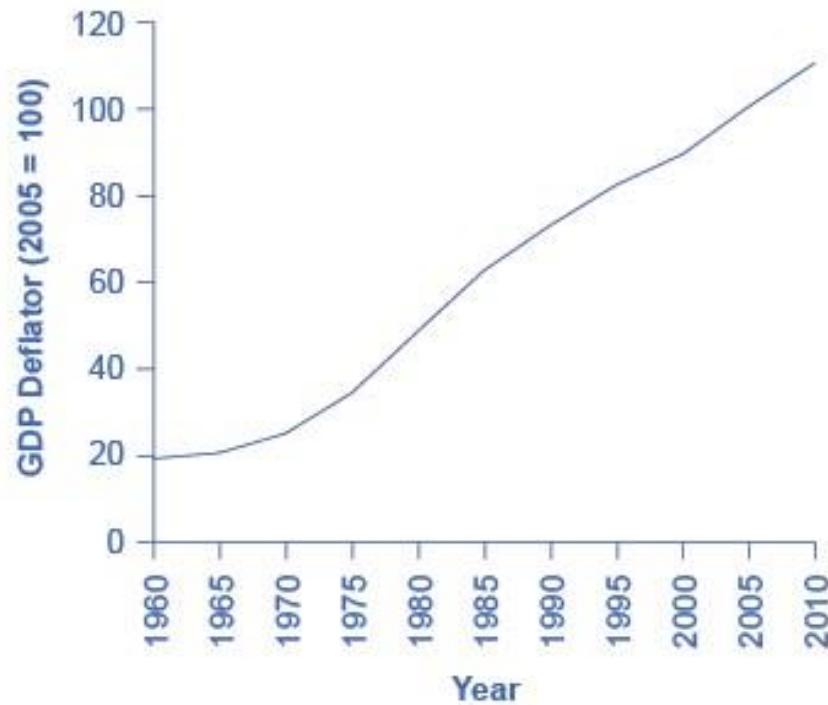
-vs.-
- **Real value** - an economic statistic after it has been adjusted for inflation.
- Generally, the real value is more important.

U.S. Nominal GDP, 1960–2010



- Nominal GDP values have risen exponentially from 1960 through 2010, according to the BEA.

GDP Deflator, 1960–2010



- The GDP deflator is a price index measuring the average prices of all goods and services included in the economy.
- Much like nominal GDP, the GDP deflator has risen exponentially from 1960 through 2010. (Source: BEA)

Calculating Real GDP

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index} / 100}$$

- Notes:
 - Price index is the same as GDP deflator.
 - For simplicity, the price index is traditionally published after being multiplied by 100 in order to get an integer number.
 - So, remember to divide the published price index by 100 when doing the math.
 - Whenever a real statistic is computed, one year (or period) is called the base year (or base period).
 - The base year is the year whose prices we use to compute the real statistic.

Example: Calculating Real GDP

Year	Nominal GDP (billions of dollars)	GDP Deflator (2005 = 100)	Calculations	Real GDP (billions of 2005 dollars)
1960	543.3	19.0	$543.3 / (19.0/100)$	2859.5
2005	13095.4	100.0	[REDACTED]	[REDACTED]
2010	14958.3	110.0	$14,958.3 / (110.0/100)$	13598.5

- To calculate the real GDP in 1960:

$$\begin{aligned}
 \text{Real GDP} &= \frac{\text{Nominal GDP}}{\text{Price Index} / 100} \\
 &= \frac{\$543.3 \text{ billion}}{19 / 100} \\
 &= \$2,859.5 \text{ billion}
 \end{aligned}$$

- 2005 is the base year.
- Question: What will the Real GDP be in 2005? Why?

Example: Calculating Real GDP, Continued



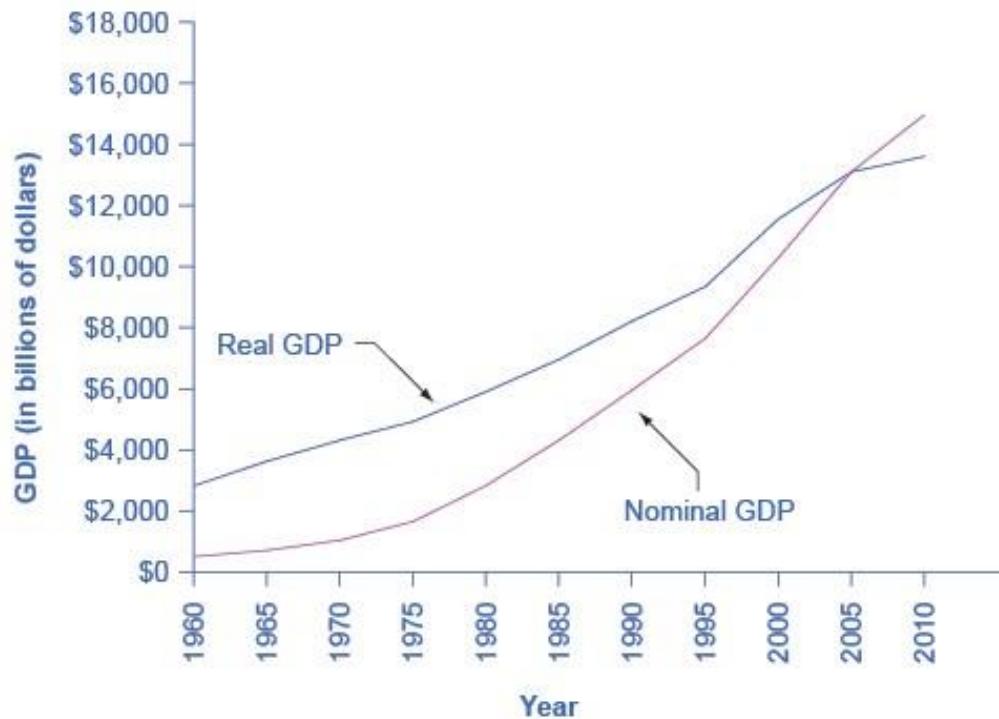
Year	Nominal GDP (billions of dollars)	GDP Deflator (2005 = 100)	Calculations	Real GDP (billions of 2005 dollars)
1960	543.3	19.0	$543.3 / (19.0/100)$	2859.5
2005	13095.4	100.0	$13,095.4 / (100.0/100)$	13095.4
2010	14958.3	110.0	$14,958.3 / (110.0/100)$	13598.5

- To calculate the real GDP in 2010:

$$\begin{aligned}\text{Real GDP} &= \frac{\text{Nominal GDP}}{\text{Price Index} / 100} \\ &= \frac{\$14,958.3 \text{ billion}}{110 / 100} \\ &= \$13,598.5 \text{ billion}\end{aligned}$$

- As long as inflation is positive (prices increase on average from year to year) real GDP should be less than nominal GDP in any year *after* the base year.

U.S. Nominal and Real GDP, 1960–2012



- The black line measures U.S. GDP in real dollars, where all dollar values are converted to 2005 dollars.
- Since we express real GDP in 2005 dollars, the two lines cross in 2005.
- Real GDP will appear higher than nominal GDP in the years before 2005, because dollars were worth less in 2005 than in previous years.
- Conversely, real GDP will appear lower in the years after 2005, because dollars were worth more in 2005 than in later years.

Example: Calculating Real GDP Growth Rate



Year	Nominal GDP (billions of dollars)	GDP Deflator (2005 = 100)	Calculations	Real GDP (billions of 2005 dollars)
1960	543.3	19.0	$543.3 / (19.0/100)$	2859.5
2005	13095.4	100.0	$13,095.4 / (100.0/100)$	13095.4
2010	14958.3	110.0	$14,958.3 / (110.0/100)$	13598.5

- What was the real GDP growth rate from 1960 to 2010?

$$\frac{2010 \text{ real GDP} - 1960 \text{ real GDP}}{1960 \text{ real GDP}} \times 100$$

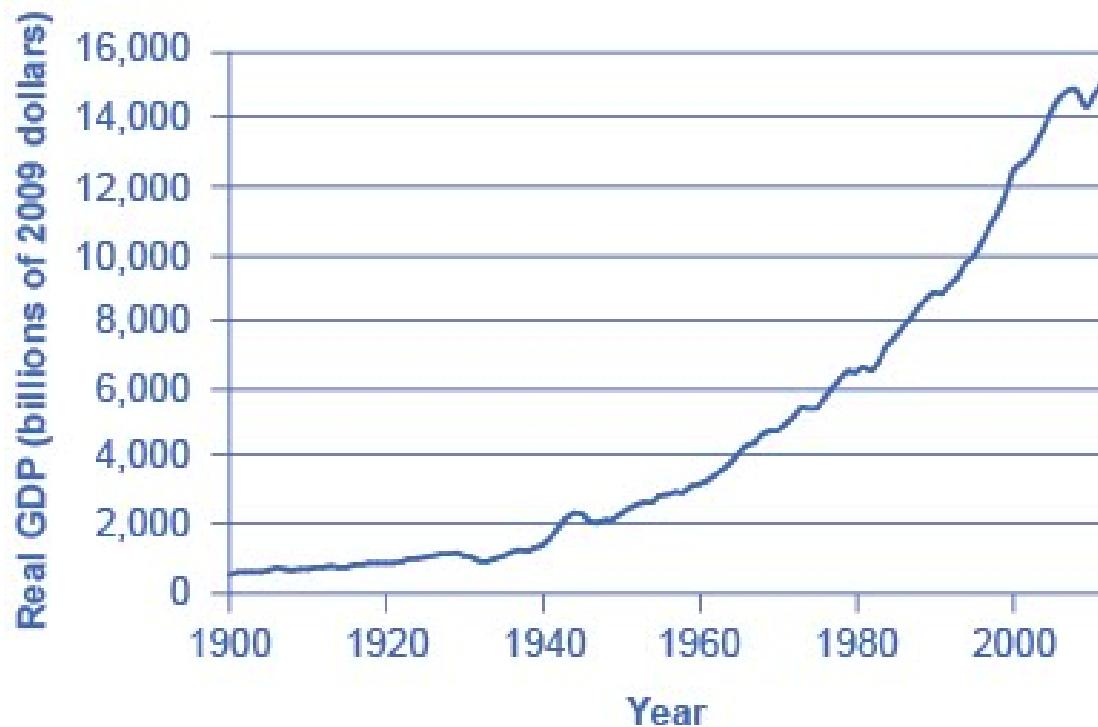
$$\frac{13,598.5 - 2,859.5}{2,859.5} \times 100 = 376\%$$

- The U.S. economy increased real production of goods and services by nearly a factor of four since 1960.

6.3 Tracking Real GDP over Time

- Governments report GDP growth as an annualized rate.
 - When analyzing growth in a quarter, the calculated growth in real GDP for the quarter is multiplied by four when it is reported (as if the economy were growing at that rate for a full year).
- **Recession** - a significant decline in national output/GDP.
- **Depression** - an especially lengthy and deep decline in output.

U.S. GDP, 1900–2016



- Real GDP in the United States in 2016 (in 2009 dollars) was about \$16.7 trillion.
- After adjusting to remove the effects of inflation, this represents a roughly 20-fold increase in the economy's production of goods and services since the start of the twentieth century. (Source: bea.gov)

Patterns of Recessions and Expansions

- **Peak** - during the business cycle, the highest point of output before a recession begins.
- **Trough** - during the business cycle, the lowest point of output in a recession, before a recovery begins.
- A recession lasts from peak to trough, and an economic upswing runs from trough to peak.
- **Business cycle** - the economy's relatively short-term movement in and out of recession

6.4 Comparing GDP among Countries

- To compare the GDP of countries with different currencies, it is necessary to convert to a “common denominator” using an exchange rate.
- **Exchange rate** - the value or price of one currency in terms of another currency.

Example: Converting GDP to a Common Currency



- Example: Compare Brazil's GDP in 2013 of 4.8 trillion reals with the U.S. GDP of \$16.6 trillion for the same year.
 - In 2013, the exchange rate was 2.157 reals = \$1.
 - Convert Brazil's GDP into U.S. dollars:

$$\begin{aligned}\text{Brazil's GDP in U.S.} &= \frac{\text{Brazil's GDP in reals}}{\text{Exchange rate (reals/\$ U.S.)}} \\ &= \frac{\underline{4.845 \text{ trillion reals}}}{2.157 \text{ reals per \$ U.S.}} \\ &= \$2.246 \text{ trillion GDP}\end{aligned}$$

- Compare this value to the GDP in the United States in the same year.
- The U.S. GDP was \$16.6 trillion in 2013, which is nearly eight times that of GDP in Brazil.

GDP Per Capita

- The U.S. economy has the largest GDP in the world, and is also a populous country.
- Is its economy also larger on a per-person basis?
- **GDP per capita** - the GDP divided by the population.

$$\text{GDP per capita} = \frac{\text{GDP}}{\text{population}}$$

6.5 How Well GDP Measures the Well-Being of Society



- **Standard of living** - all elements that affect people's happiness and well-being, whether they are bought and sold in the market or not.
- Difference between GDP and standard of living.
 - GDP does not include:
 - leisure time
 - actual levels of environmental cleanliness, health, and learning
 - production that is not exchanged in the market
 - the level of inequality in society
 - what technology and products are available

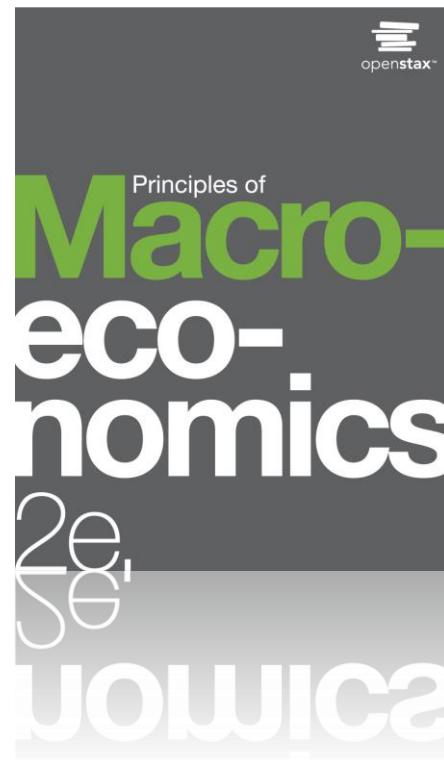


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PRINCIPLES OF MACROECONOMICS 2e

Chapter 8 Unemployment

PowerPoint Image Slideshow



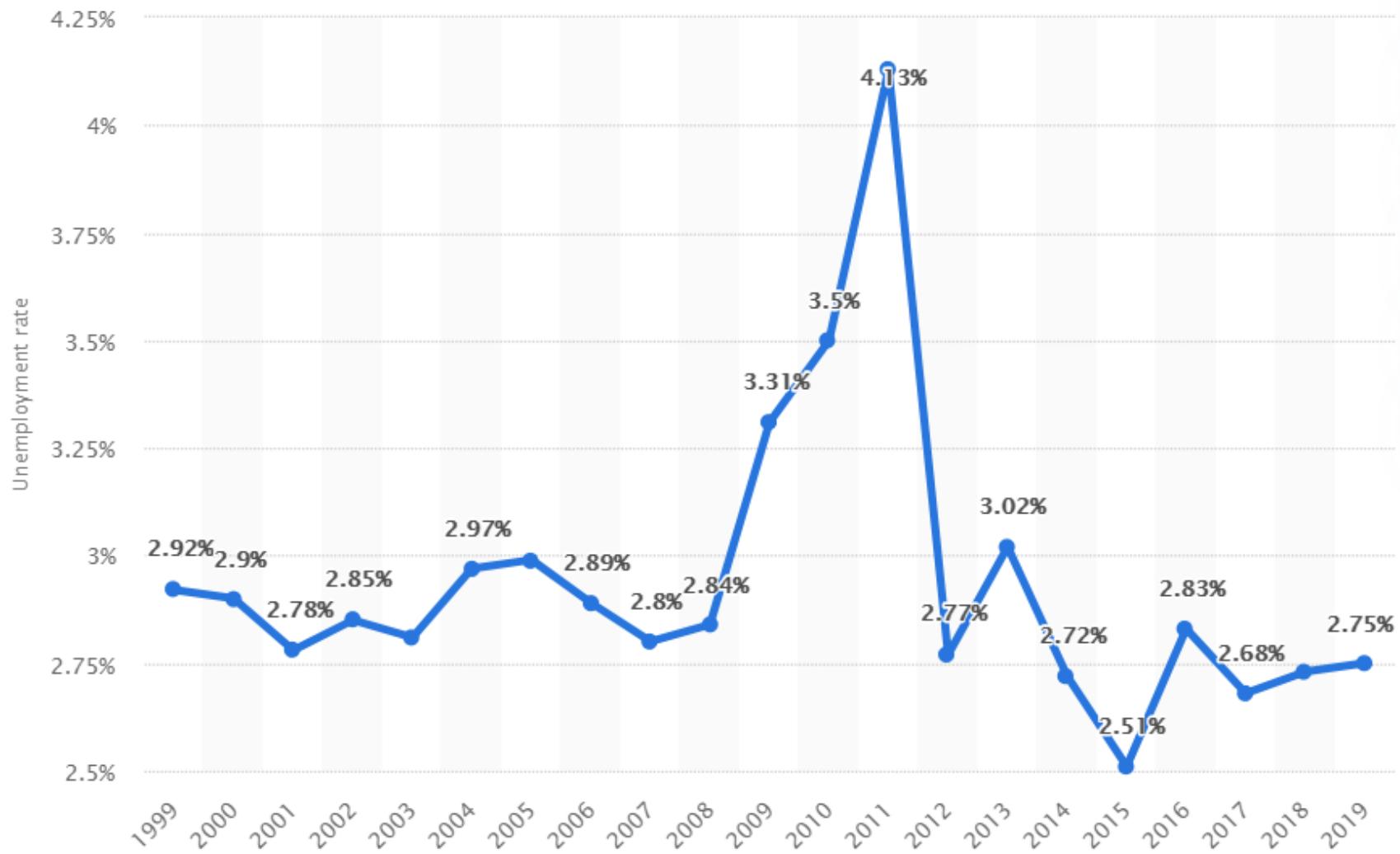
8.1 How the Unemployment Rate is Defined and Computed



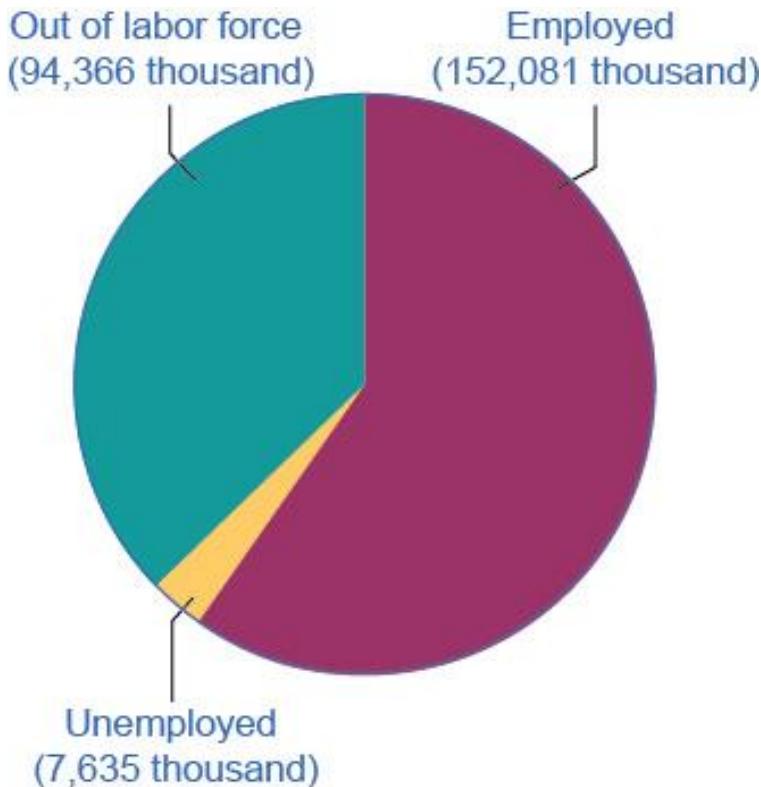
- The adult population consists of:
 - Employed - currently working for pay.
 - Unemployed - out of work and actively looking for a job.
 - **Out of the labor force** - those who are not working and not looking for work, whether they want employment or not.
 - also termed “not in the labor force”
- Labor force - the number of employed plus the unemployed.
- **Unemployment rate** - the percentage of adults who are in the labor force and thus seeking jobs, but who do not have jobs.

$$\text{Unemployment rate} = \frac{\text{Unemployed people}}{\text{Total labor force}} \times 100$$

Guatemala: Unemployment rate from 1999 to 2019



Employed, Unemployed, and Out of the Labor Force Distribution of Adult Population (16 and older), January 2017



- The total adult, working-age population in January 2017 was 254.1 million.
- Out of this total population, 152.1 million were classified as employed, and 7.6 million were classified as unemployed.
- The remaining 94.4 million were classified as out of the labor force.
- As you will learn, however, this seemingly simple chart does not tell the whole story.
- **Discussion Question:** What is the unemployment rate?

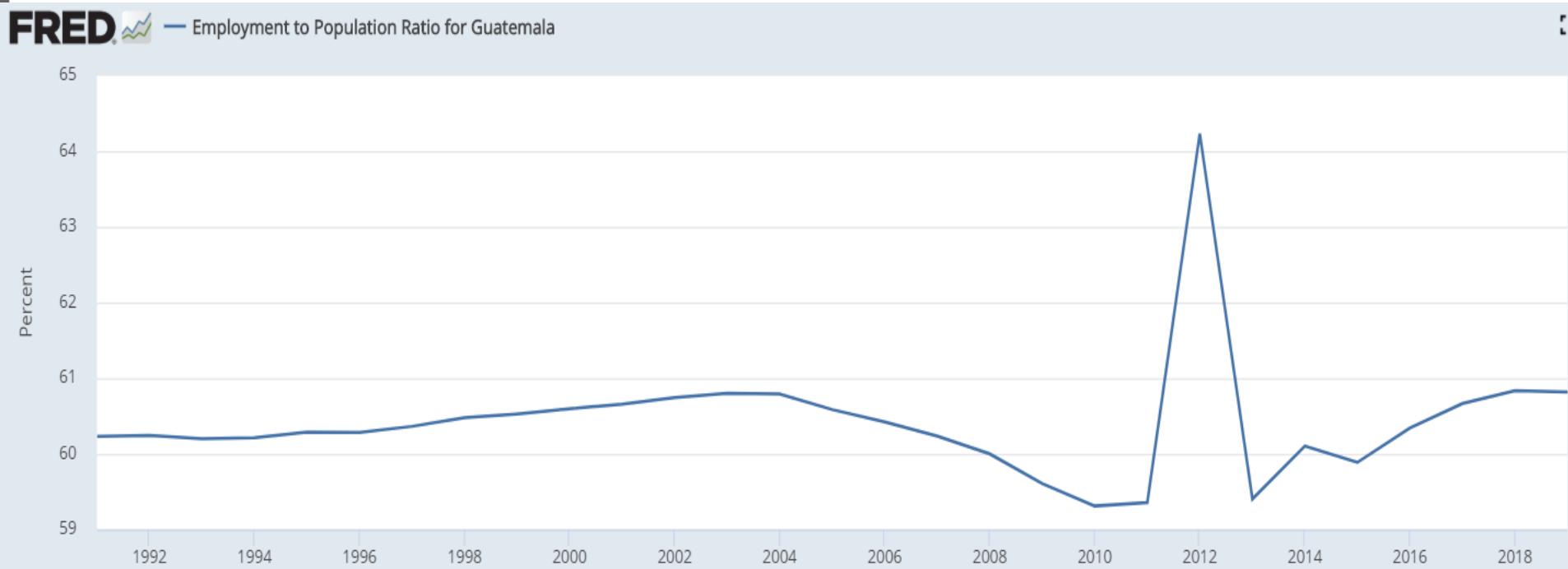
Hidden Unemployment

- “Hidden unemployment” - people who are mislabeled in the categorization of employed, unemployed, or out of the labor force.
 - Part-time or temporary workers looking for full-time or permanent work.
 - **Underemployed** - individuals who are employed in a job that is below their skills.
 - **Discouraged workers** - those who have stopped looking for employment due to the lack of suitable positions available.

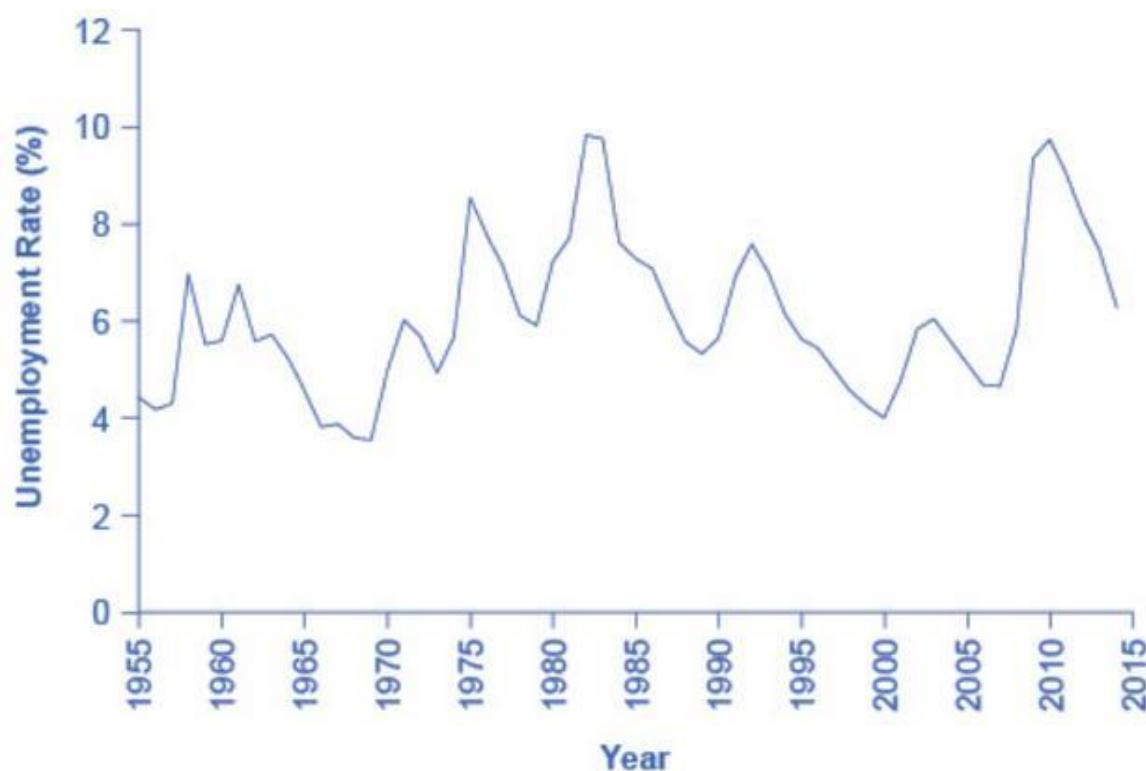
Labor Force Participation Rate

- **Labor force participation rate** - the percentage of adults in an economy who are either employed or who are unemployed and looking for a job.

$$\text{Labor force participation rate} = \frac{\text{Total labor force}}{\text{Total adult population}} \times 100$$

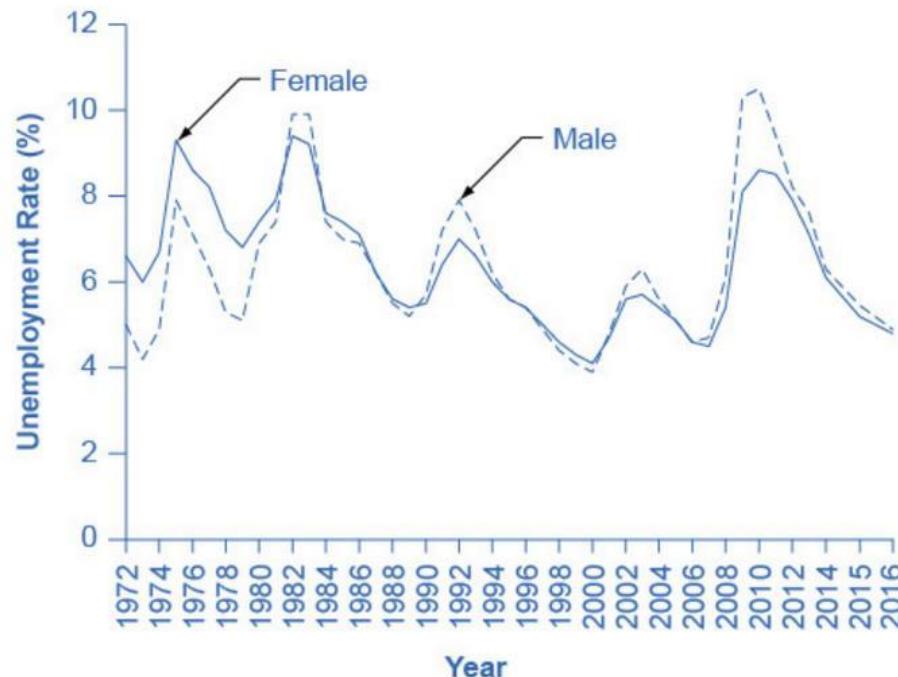


8.2 Patterns of Unemployment



- The U.S. unemployment rate moves up and down as the economy moves in and out of recessions.
- However, over time, the unemployment rate seems to return to a range of 4% to 6%.
- There does not seem to be a long-term trend toward the rate moving generally higher or generally lower. (Source: Federal Reserve Economic Data (FRED) <https://research.stlouisfed.org/fred2/series/LRUN64TTUSA156S0>)

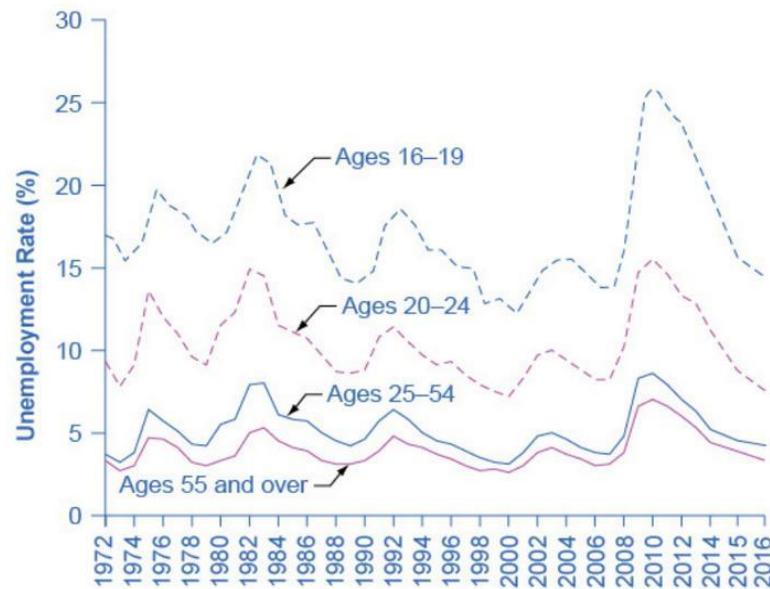
Unemployment Rates by Group - Gender



(a) Unemployment rates by gender

- Unemployment rates for men used to be lower than unemployment rates for women.
- In recent decades, the two rates have been very close, often with the unemployment rate for men somewhat higher. (Source: www.bls.gov)

Unemployment Rates by Group - Age



★ Youth Unemployment Rate for Guatemala (SLUEM1524ZGTM)

DOWNLOAD

Observation:
2019: 4.98500 (+ more)
Updated: Apr 10, 2020

Units:
Percent,
Not Seasonally Adjusted

Frequency:
Annual

1Y | 5Y | 10Y | Max

1991-01-01 to 2019-01-01

EDIT GRAPH

FRED — Youth Unemployment Rate for Guatemala

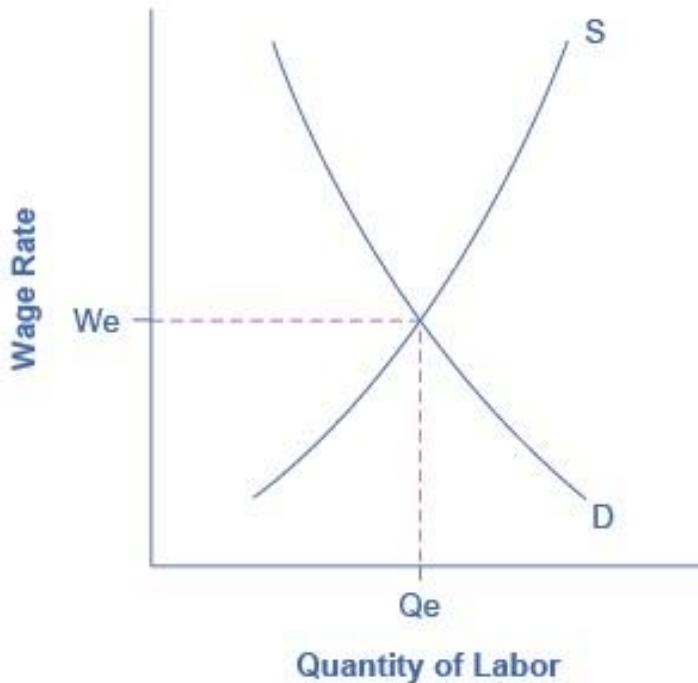


8.3 What Causes Changes in Unemployment over the Short Run



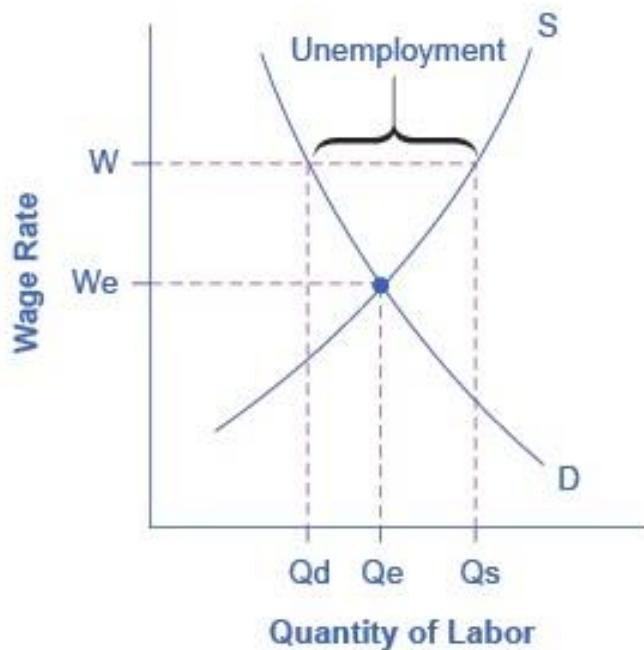
- **Cyclical unemployment** - unemployment closely tied to the business cycle, like higher unemployment during a recession.
- From the standpoint of the supply-and-demand model of competitive and flexible labor markets, unemployment represents something of a puzzle.

Unemployment and Equilibrium in the Labor Market



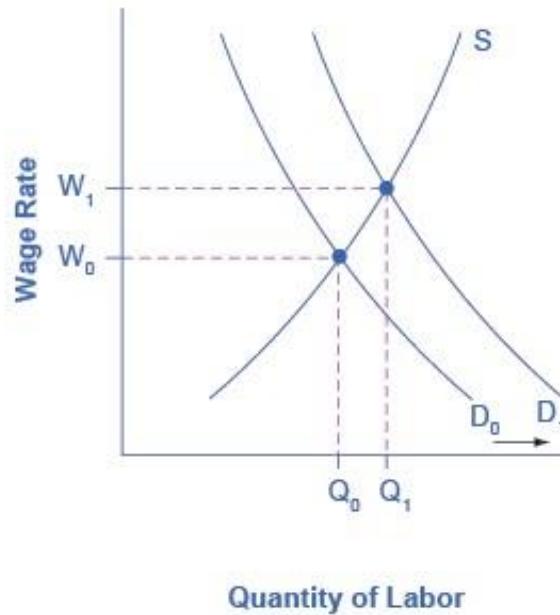
- In a labor market with flexible wages, the equilibrium will occur at wage W_e and quantity Q_e ,
- Here the number of people who want jobs (shown by S) equals the number of jobs available (shown by D).

Sticky Wages in the Labor Market

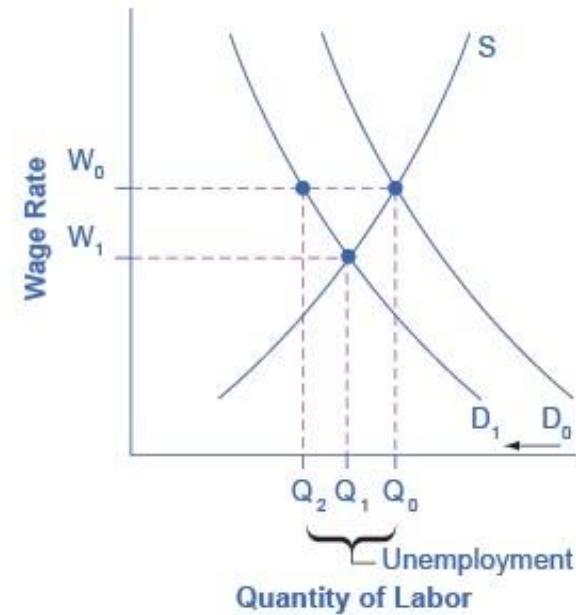


- Because the wage rate is stuck at W , above the equilibrium, the number of those who want jobs (Q_s) is greater than the number of job openings (Q_d).
- The result is unemployment, shown by the bracket in the figure.

Rising Wage and Low Unemployment: Where Is the Unemployment in Supply and Demand?



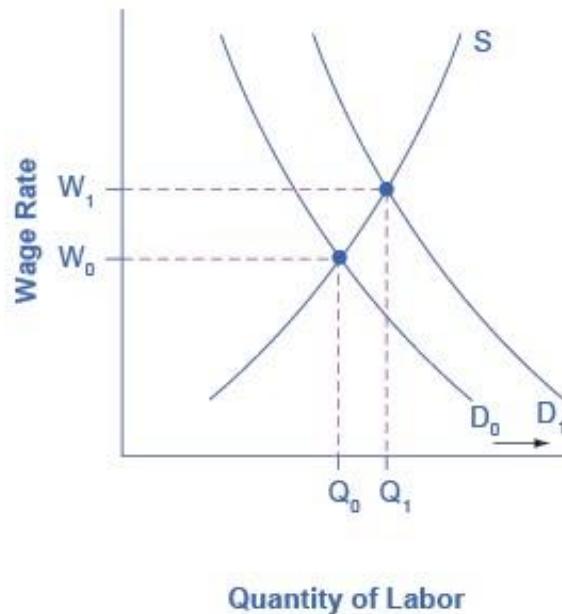
(a) Rising demand for labor, wages rise



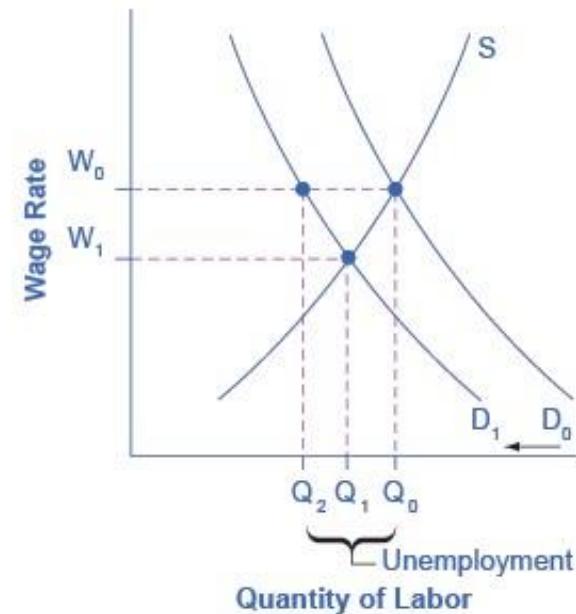
(b) Falling demand for labor, sticky wages,
and unemployment

- (a) In a labor market where wages are able to rise, an increase in the demand for labor from D_0 to D_1 leads to an increase in equilibrium quantity of labor hired from Q_0 to Q_1 and a rise in the equilibrium wage from W_0 to W_1 .

Rising Wage and Low Unemployment: Where Is the Unemployment in Supply and Demand?



(a) Rising demand for labor, wages rise



(b) Falling demand for labor, sticky wages,
and unemployment

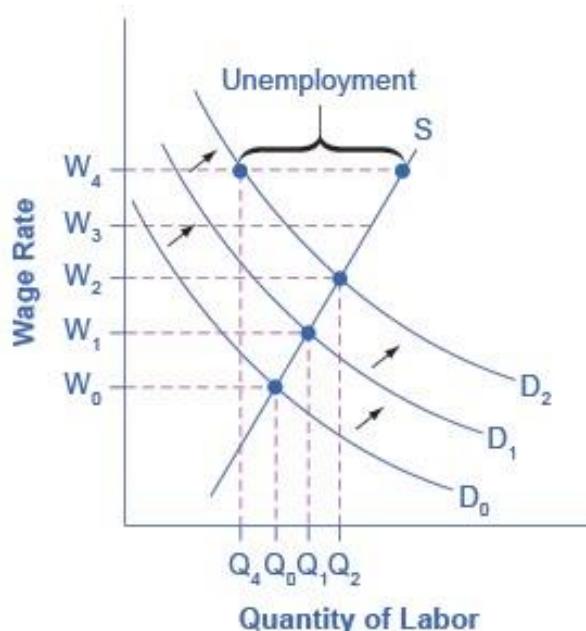
- (a) In a labor market where wages do not decline, a fall in the demand for labor from D_0 to D_1 leads to a decline in the quantity of labor demanded at the original wage (W_0) from Q_0 to Q_2 . These workers will want to work at the prevailing wage (W_0), but will not be able to find jobs.

8.4 What Causes Changes in Unemployment over the Long Run

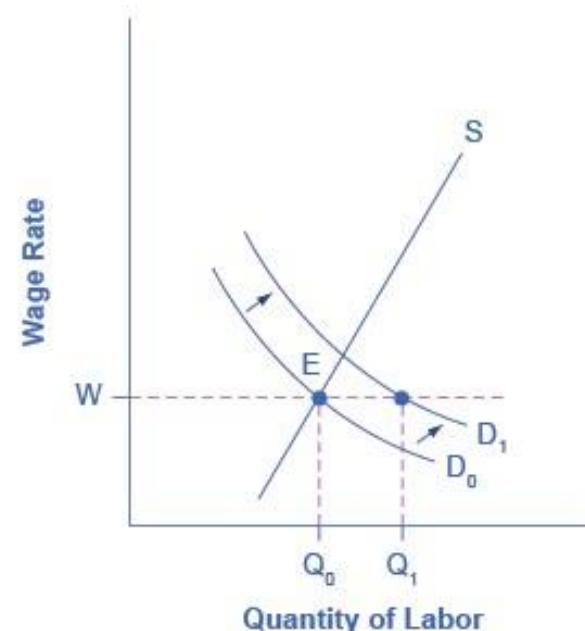


- **Natural rate of unemployment** - the unemployment rate that would exist in a growing and healthy economy from the combination of economic, social, and political factors that exist at a given time.
 - **Frictional unemployment** - unemployment that occurs as workers move between jobs.
 - **Structural Unemployment** - unemployment that occurs because individuals lack skills valued by employers.
- Economists consider the economy to be at full employment when the actual unemployment rate is equal to the natural unemployment rate.

Productivity Shifts and the Natural Rate of Unemployment



(a) Productivity rises, and then stops rising



(b) Productivity doesn't change, and then rises

- a)
- Productivity is rising, increasing the demand for labor. Employers and workers become used to the pattern of wage increases.
 - Then productivity suddenly stops increasing.
 - The expectations of employers and workers for wage increases do not shift immediately, so wages keep rising as before.
 - However, the demand for labor has not increased, so at wage W_4 , unemployment exists where the quantity supplied of labor exceeds the quantity demanded.

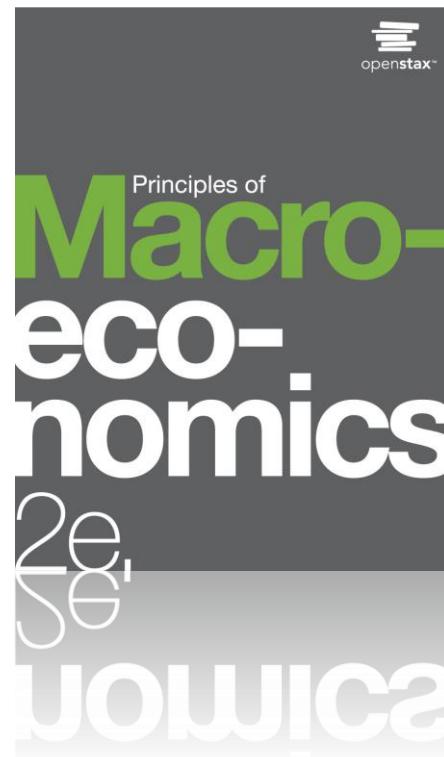


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PRINCIPLES OF MACROECONOMICS 2e

Chapter 9 Inflation

PowerPoint Image Slideshow



Big Bucks in Zimbabwe



- This bill was worth 100 billion Zimbabwean dollars when issued in 2008.
- There were even bills issued with a face value of 100 trillion Zimbabwean dollars. The bills had \$100,000,000,000,000 written on them.
- Unfortunately, they were almost worthless.
- At one point, 621,984,228 Zimbabwean dollars were equal to one U.S. dollar.
- Eventually, the country abandoned its own currency and allowed people to use foreign currency for purchases. (Credit: modification of work by Samantha Marx/Flickr Creative Commons)

9.1 Tracking Inflation

- **Inflation** - a general and ongoing rise in the level of prices in an entire economy.
 - Inflation does not refer to a change in relative (individual) prices.
 - There is pressure for prices to rise in most markets in the economy.
- **Basket of goods and services** - a hypothetical group of different items, with specified quantities of each one meant to represent a “typical” set of consumer purchases.
 - Used to calculate the price level, by looking at how the prices of those items change over time.
 - Computed using a weighted average.

Index Numbers

- **Index number** - a unit-free number derived from the price level over a number of years, which makes computing inflation rates easier, since the index number has values around 100.
 - no dollar signs or other units attached.
- **Base year** - arbitrary year whose value as an index number economists define as 100.
- Indexing allows easier eyeballing of the inflation numbers between different years.
- Inflation Calculation:

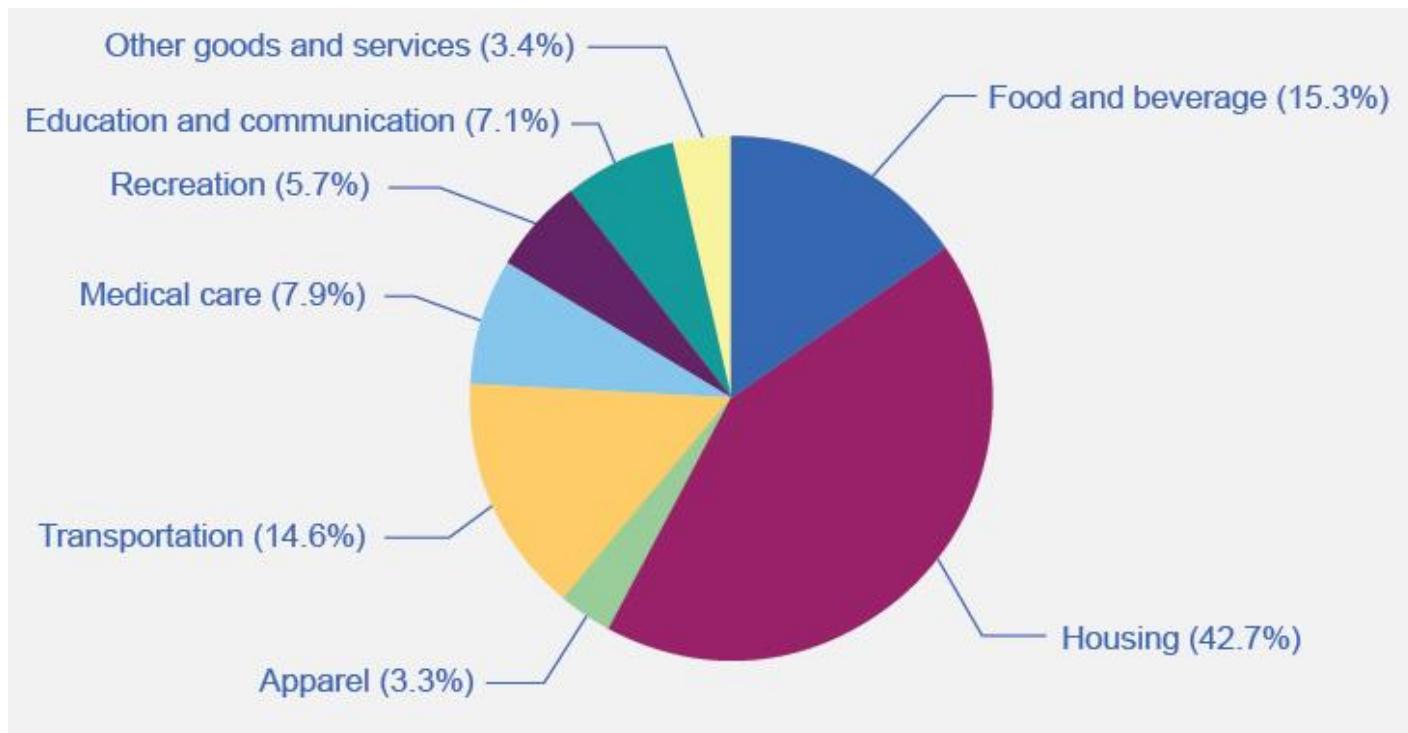
$$\frac{(\text{Level in new year} - \text{Level in prior year})}{\text{Level in prior year}} \times 100 = \text{Percentage change}$$

9.2 How to Measure Changes in the Cost of Living



- **Consumer Price Index (CPI)** - a measure of inflation that U.S. government statisticians calculate based on the price level from a fixed basket of goods and services that represents the average consumer's purchases.
 - Change in fixed basket of goods and services vs. change in cost of living
- **Substitution bias** - an inflation rate calculated using a fixed basket of goods over time tends to overstate the true rise in the cost of living, because it does not take into account that the person can substitute away from goods whose prices rise considerably.
- **Quality/new goods bias** - inflation calculated using a fixed basket of goods over time tends to overstate the true rise in cost of living, because it does not account for improvements in the quality of existing goods or the invention of new goods.

The Weighting of CPI Components



- Of the eight categories used to generate the Consumer Price Index, housing is the highest at 42.7%.
- The next highest category, food and beverage at 15.3%, is less than half the size of housing.
- Other goods and services, and apparel, are the lowest at 3.4% and 3.3%, respectively. (Source: www.bls.gov/cpi)

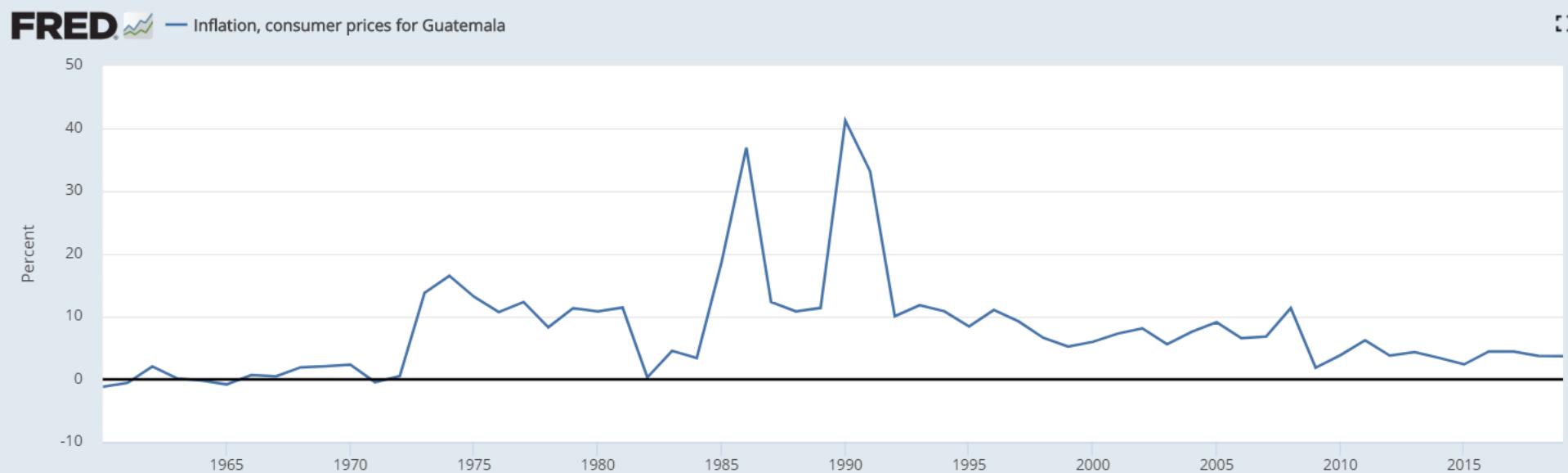
The CPI and Core Inflation Index

- **Core inflation index** - takes the CPI and excludes volatile economic variables, like energy and food prices.
 - Economists can have a better sense of the underlying trends in prices that affect the cost of living.
 - A preferred gauge from which to make important government policy changes.

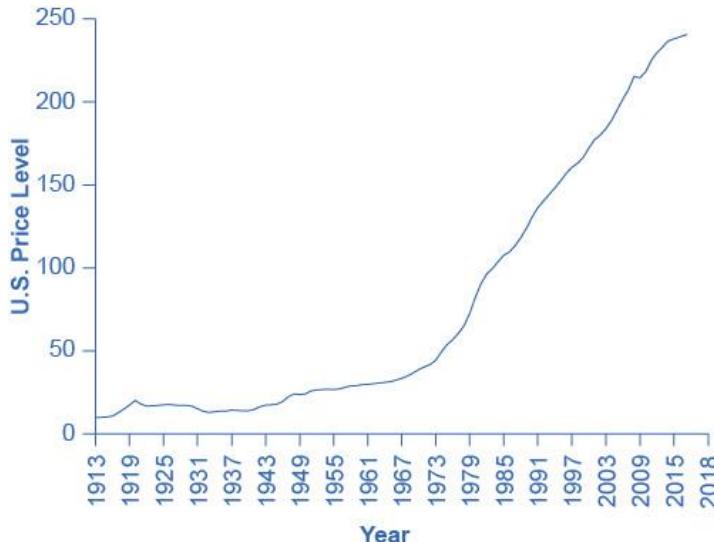
Additional Price Indices

- **Producer Price Index (PPI)** - a measure of inflation based on prices paid for supplies and inputs by producers of goods and services.
 - Different industries, commodities, and stages of processing.
- **International Price Index** - a measure of inflation based on the prices of merchandise that are exported or imported.
- **Employment Cost Index** - a measure of inflation based on wages paid in the labor market.
- **GDP deflator** - a measure of inflation based on the prices of all the GDP components (consumption, investment, government, exports minus imports).

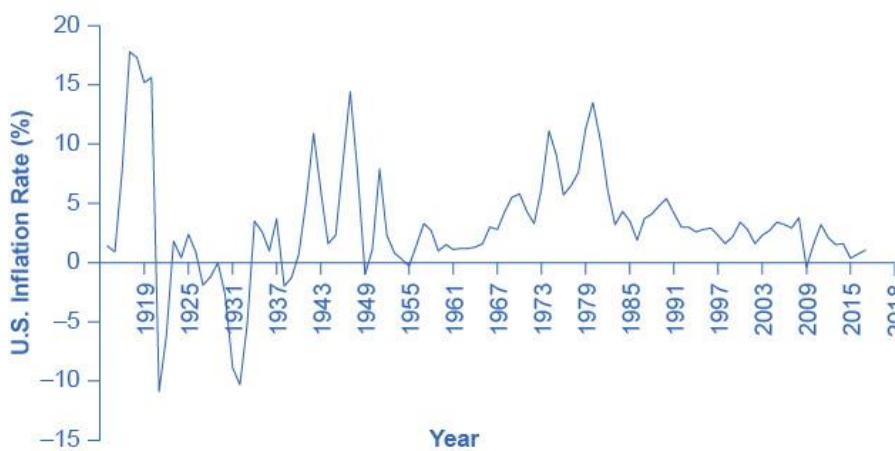
CPI and Inflation for Guatemala



U.S. Price Level and Inflation Rates



(a) U.S. price level 1913–2016

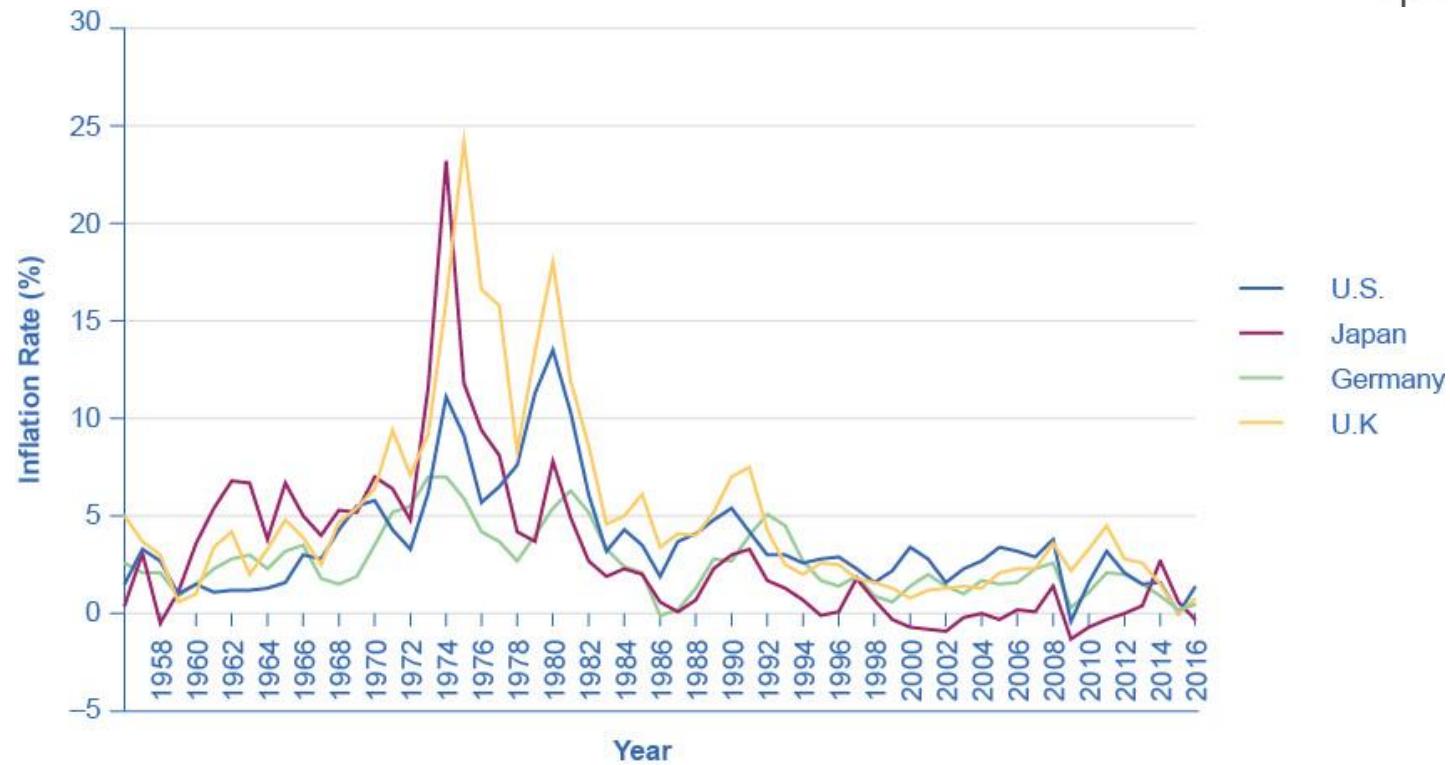


(b) U.S. inflation rate 1913–2016

(a) The U.S. price level rose relatively little over the first half of the twentieth century. Afterwards, it gradually increases until about 1973, then increases more rapidly through the remainder of the 1970s and beyond, with periodic dips, until 2016, when it reached around 240.

(b) In 1916, the graph starts out with inflation at almost 8%, jumps to about 17% in 1917, drops drastically to close to -11% in 1921, goes up and down periodically, with peaks in the 1940s and the 1970s, until settling to around 1.3% in 2016.

Countries with Relatively Low Inflation Rates, 1960–2016



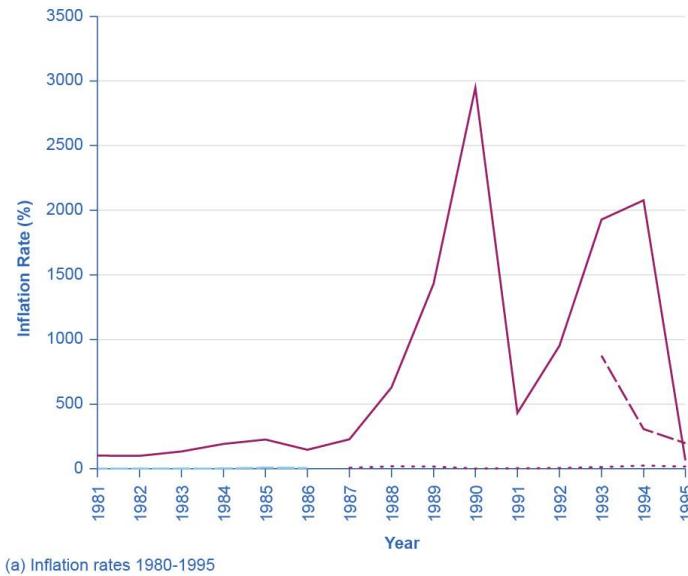
- This chart shows the annual percentage change in consumer prices compared with the previous year's consumer prices in the United States, the United Kingdom, Japan, and Germany.

Countries with Relatively High Inflation Rates, 1980–2016

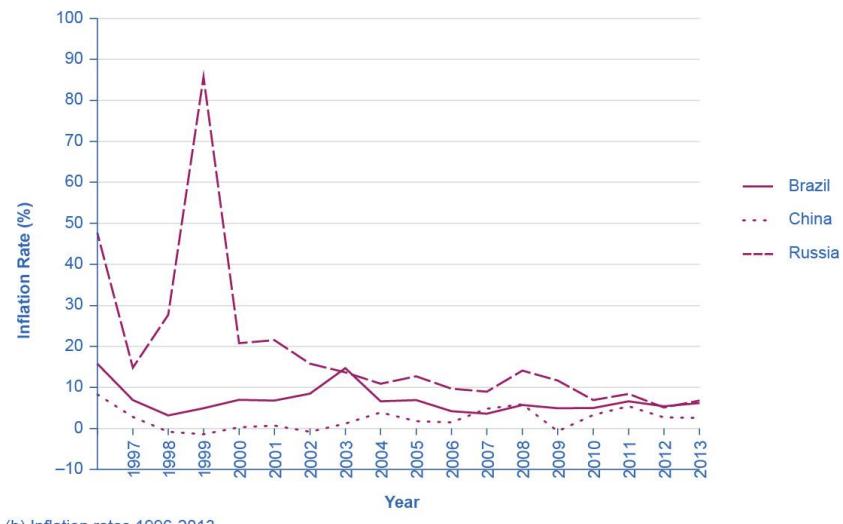


These charts show inflation rates in Brazil, China, and Russia.

- (a) Of these, Brazil and Russia experienced hyperinflation at some point between the mid-1980s and mid-1990s.
- (b) Though not as high, China and Nigeria also had high inflation rates in the mid-1990s. Even though their inflation rates have come down over the last two decades, several of these countries continue to see significant inflation rates. (Sources: <http://research.stlouisfed.org/fred2/series/PCPITOTLZGBRA>; <http://research.stlouisfed.org/fred2/series/CHNCPIALLMINMEI>; <http://research.stlouisfed.org/fred2/series/PCPITOTLZGRUS>)



(a) Inflation rates 1980-1995



(b) Inflation rates 1996-2013

9.4 The Confusion Over Inflation

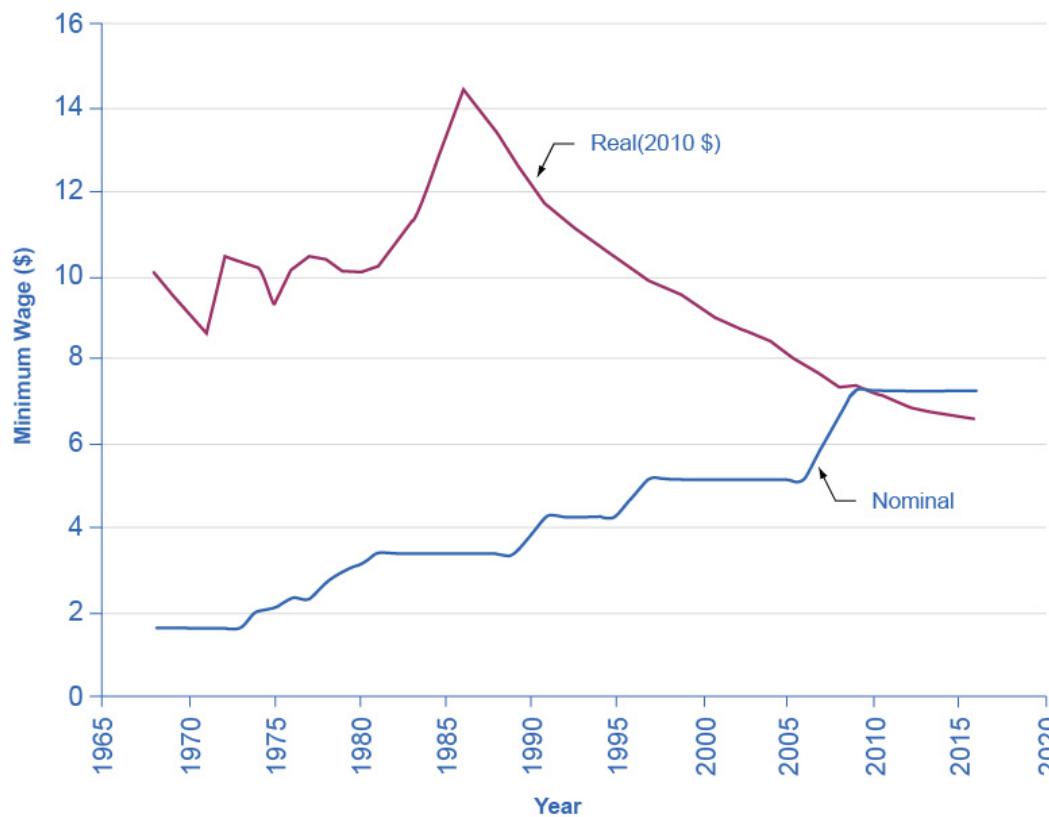
- If other economic variables (prices, wages, and interest rates) do not move in sync with inflation, or if they adjust for inflation only after a time lag, then inflation can cause three types of problems:
 - unintended redistributions of purchasing power
 - blurred price signals
 - difficulties in long-term planning

Unintended Redistributions of Purchasing Power



- People are hurt by inflation when:
 - they are holding cash
 - they have financial asset investments where the nominal return does not keep up with inflation (also can be exacerbated by taxes)
 - wages lag behind inflation
 - wage adjustments are often somewhat sticky and occur only once or twice a year.
 - they are a retiree receiving a private company defined pension
- Ordinary people can sometimes benefit from inflation.
 - A borrower paying a fixed interest rate can end up better off, because they can repay their loans in dollars that are worth less than originally expected.

U.S. Minimum Wage and Inflation



- After adjusting for inflation, the federal minimum wage dropped more than 30 percent from 1967 to 2010, even though the nominal figure climbed from \$1.40 to \$7.25 per hour.
- Increases in the minimum wage between 2008 and 2010 kept the decline from being worse - as it would have been if the wage had remained the same as it did from 1997 through 2007. (Sources:
<http://www.dol.gov/whd/minwage/chart.htm>; <http://data.bls.gov/cgi-bin/surveymost?cu>)

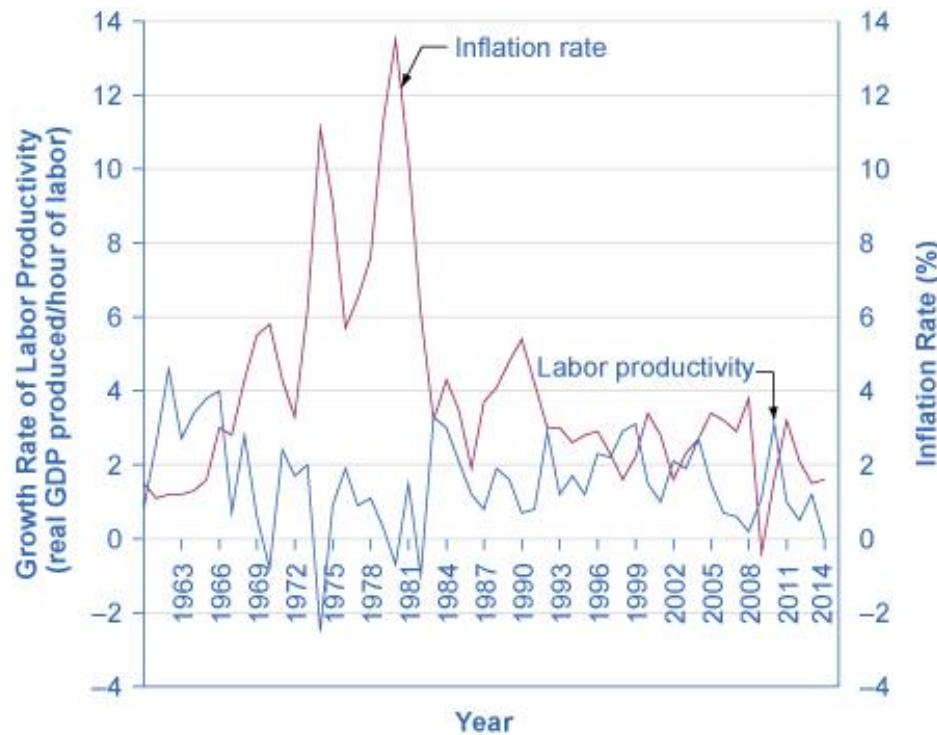
Blurred Price Signals

- Prices are the messengers in a market economy, conveying information about conditions of demand and supply.
- Inflation blurs those price messages.
- Inflation means that we perceive price signals more vaguely, like static on the radio .
- When the levels and changes of prices become uncertain, businesses and individuals find it harder to react to economic signals.

Problems of Long-Term Planning

- Inflation can make long-term planning difficult.
 - Planning for retirement in unknown future dollar levels.
 - More time spent by businesses finding ways of profiting from inflation vs. less time spent on productivity, innovation, or quality of service.

U.S. Inflation Rate and U.S. Labor Productivity, 1961–2014



- Over the last several decades in the United States, there have been times when rising inflation rates have been closely followed by lower productivity rates and lower inflation rates have corresponded to *increasing productivity* rates.
- As the graph shows, however, this correlation does not always exist.

9.5 Indexing and Its Limitations

- **Indexed** - a price, wage, or interest rate is adjusted automatically for inflation.
- Examples of indexing arrangements in private markets:
 - **Cost-of-living adjustments (COLAs)** - a contractual provision that wage increases will keep up with inflation.
 - **Adjustable-rate mortgage (ARM)** - a type of loan a borrower uses to purchase a home in which the interest rate varies with market interest rates.

Indexing in Government Programs

- Examples of indexing arrangements in government programs:
 - The U.S. income tax code is designed so income levels where higher tax rates kick in are indexed to rise automatically with inflation.
 - The level of Social Security benefits increases each year along with the Consumer Price Index.
 - An indexed increase in the Social Security tax base accompanies the indexed rise in the benefit level.
 - U.S. government offers indexed bonds promising to pay a certain real rate of interest above whatever inflation rate occurs.

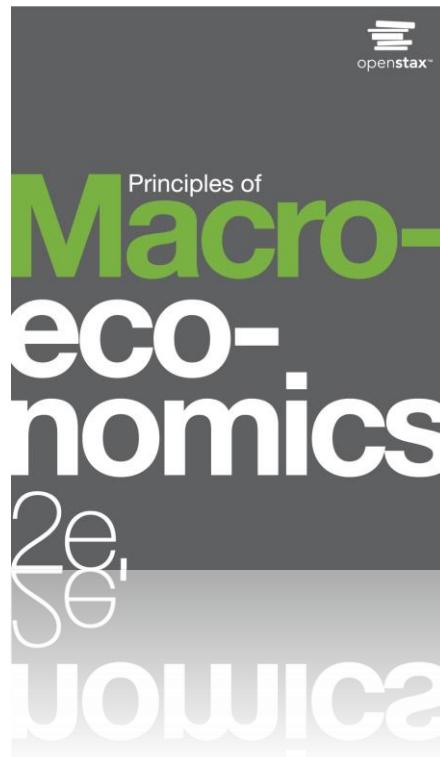


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PRINCIPLES OF MACROECONOMICS 2e

Chapter 14 Money and Banking

PowerPoint Image Slideshow



CH.14 OUTLINE

14.1: Defining Money by Its Functions

14.2: Measuring Money: Currency, M1, and M2

14.3: The Role of Banks

14.4: How Banks Create Money

Cowrie Shell or Money?



- Is this an image of a cowrie shell or money?
- The answer is: Both.
- For centuries, people used the extremely durable cowrie shell as a medium of exchange in various parts of the world.

(Credit: modification of work by “prilfish”/Flickr Creative Commons)

14.1 Defining Money by Its Functions

- What the world would be like without money?
- **Barter** - trading one good or service for another, without using money.
- **Double coincidence of wants** - a situation in which two people each want some good or service that the other person can provide.

Functions for Money

- **Money** - whatever serves society in four functions:
 - **Medium of exchange** - whatever is widely accepted as a method of payment.
 - **Store of value** - something that serves as a way of preserving economic value that one can spend or consume in the future.
 - **Unit of account** - the common way in which we measure market values in an economy.
 - **Standard of deferred payment** - money must also be acceptable to make purchases today that will be paid in the future.

Commodity versus Fiat Money

- **Commodity money** - an item that is used as money, but which also has value from its use as something other than money.
- **Commodity-backed currencies** - dollar bills or other currencies with values backed up by gold or another commodity.
- During much of its history, gold and silver backed the money supply in the United States.

Commodity versus Fiat Money, Continued



- Now, by government decree, if you owe a debt, then legally speaking, you can pay that debt with the U.S. currency, even though it is not backed by a commodity.
- Fiat money** - has no intrinsic value, but is declared by a government to be the country's legal tender.
- The only backing of our money is universal faith and trust that the currency has value, and nothing more.

A Silver Certificate and a Modern U.S. Bill



- Until 1958, silver certificates were commodity-backed money - backed by silver, as indicated by the words “Silver Certificate” printed on the bill, pictured at bottom.
- Today, The Federal Reserve backs U.S. bills, but as fiat money (inconvertible paper money made legal tender by a government decree). (Credit: “The.Comedian”/Flickr Creative Commons)

14.2 Measuring Money: Currency, M1, and M2



- The Federal Reserve Bank:
 - The central bank of the United States,
 - Bank regulator and responsible for monetary policy,
 - Defines money according to its liquidity.
- The Federal Reserve Bank has two definitions of money:
 - **M1 money supply** - a narrow definition of the money supply that includes currency and checking accounts in banks, and to a lesser degree, traveler's checks.
 - **M2 money supply** - a definition of the money supply that includes everything in M1, but also adds savings deposits, money market funds, and certificates of deposit.

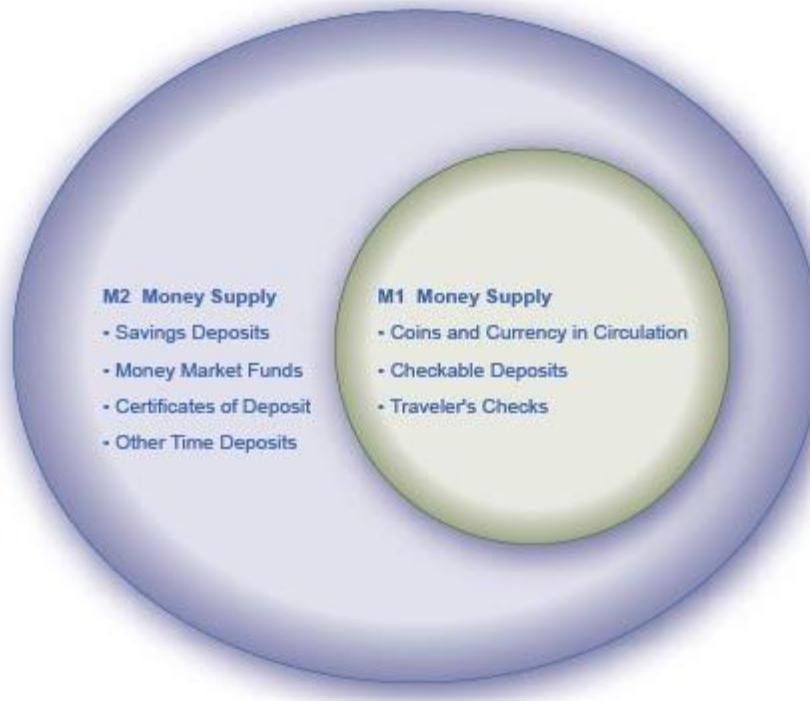
M1 Money

- M1 money supply includes:
 - **Coins and currency in circulation** - the coins and bills that circulate in an economy that are not held by the U.S Treasury, at the Federal Reserve Bank, or in bank vaults.
 - **Checkable (demand) deposits** - checkable deposit in banks that is available by making a cash withdrawal or writing a check.
 - Traveler's checks

M2 Money

- M2 money supply includes:
 - All M1 types
 - **Savings deposits** - bank account where you cannot withdraw money by writing a check, but can withdraw the money at a bank - or can transfer it easily to a checking account.
 - **Money market fund** - the deposits of many investors are pooled together and invested in a safe way like short-term government bonds.
 - **Certificates of Deposit (CD's) and other time deposits** - account that the depositor has committed to leaving in the bank for a certain period of time, in exchange for a higher rate of interest.

The Relationship between M1 and M2 Money



- M1 and M2 money have several definitions, ranging from narrow to broad.
- M1 = coins and currency in circulation + checkable (demand) deposits + traveler's checks.
- M2 = M1 + savings deposits + money market funds + certificates of deposit + other time deposits.

Where Does “Plastic Money” Fit In?

- **Debit card** - like a check, is an instruction to the user’s bank to transfer money directly and immediately from your bank account to the seller.
- **Credit card** - immediately transfers money from the credit card company’s checking account to the seller, and at the end of the month the user owes the money to the credit card company.
 - A credit card is a short-term loan.
 - Not considered money.
- **Smart card** - stores a certain value of money on a card and then one can use the card to make purchases.
 - Examples: long-distance phone calls or making purchases at a campus bookstore and cafeteria
- Credit cards, debit cards, and smart cards are different ways to move money when you make a purchase.

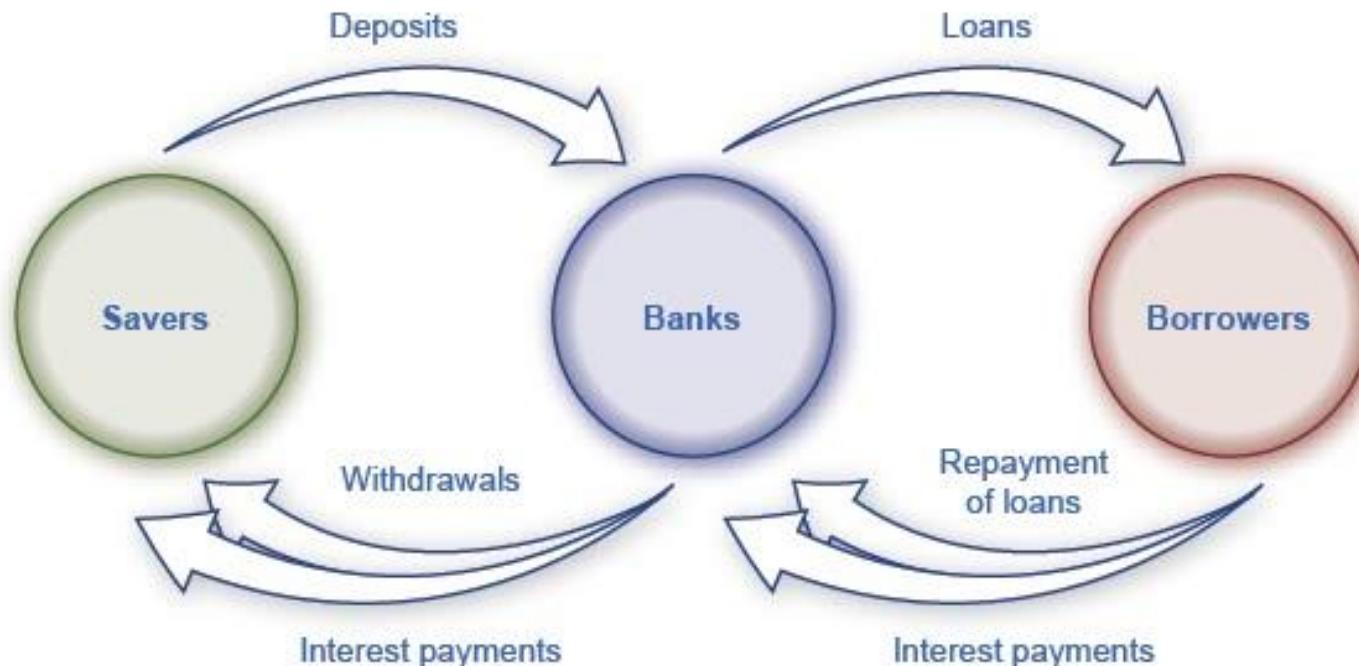
Banks as Financial Intermediaries

Financial intermediary - an institution that operates between a saver with financial assets to invest and an entity who will borrow those assets and pay a rate of return.

Depository institution - institution that accepts money deposits and then uses these to make loans.

- Discussion Question: How do banks make a **profit**?
What does a bank's balance sheet look like?

Banks as Financial Intermediaries, Illustrated



- Banks act as financial intermediaries because they stand between savers and borrowers.
- Savers place deposits with banks, and then receive interest payments and withdraw money.
- Borrowers receive loans from banks and repay the loans with interest.
- In turn, banks return money to savers in the form of withdrawals, which also include interest payments from banks to savers.

A Bank's Balance Sheet

- **Balance sheet** - an accounting tool that lists assets and liabilities.
- **Asset** - item of value that a firm or an individual owns.
- **Liability** - any amount or debt that a firm or an individual owes.
- **Net worth** - the excess of the asset value over and above the amount of the liability; total assets minus total liabilities.
- **Bank capital** - a bank's net worth.

A Bank's Balance Sheet



Assets	Liabilities + Net Worth	
Loans	\$5 million	Deposits
U.S. Government Securities (USGS)	\$4 million	
Reserves	\$2 million	Net Worth

- This figure shows a hypothetical and simplified balance sheet for the Safe and Secure Bank.
- **T-account** - a balance sheet with a two-column format, with the T-shape formed by the vertical line down the middle and the horizontal line under the column headings for “Assets” and “Liabilities”.
- The “T” in a T-account has:
 - the assets of a firm, on the left
 - its liabilities, on the right.

Reserves and Bankruptcy

- **Reserves** - funds that a bank keeps on hand and that it does not loan out or invest in bonds.
- The Federal Reserve requires that banks keep a certain percentage of depositors' money on "reserve".
- We define net worth of a bank as its total assets minus its total liabilities.
 - For a financially healthy bank, the net worth will be positive.
 - If a bank has negative net worth and depositors tried to withdraw their money, the bank would not be able to give all depositors their money.

How Banks Go Bankrupt

- Potential problems for a bank:
 - High rate of loan defaults
 - **Asset-liability time mismatch** - the ability for customers to withdraw bank's liabilities in the short term while customers repay its assets in the long term.
- Strategies to reduce risk:
 - **Diversify** - making loans or investments with a variety of firms, to reduce the risk of being adversely affected by events at one or a few firms.
 - Sell some of the loans they make in the secondary loan market.
 - Hold a greater share of assets (government bonds or reserves).

14.4 How Banks Create Money, Part 1

- The banking system can create money through the process of making loans.

Assets		Singelton Bank Balance Sheet	
		Liabilities + Net Worth	
Reserves	\$10 million	Deposits	\$10 million

- In the T-account balance sheet above, Singelton Bank is simply storing money for depositors, and not making loans.
 - It cannot earn any interest income and cannot pay its depositors an interest rate.

Assets		Singelton Bank Balance Sheet	
		Liabilities + Net Worth	
Reserves	\$1 million	Deposits	\$10 million
Loan to Hank's Auto Supply	\$9 million		

- Now, by loaning out \$9 million and charging interest, it will be able to make interest payments to depositors.
- This alters Singelton Bank's balance sheet:
 - It now has \$1 million in (required 10%) reserves and a loan to Hank's Auto Supply of \$9 million.

How Banks Create Money, Part 2

First National Balance Sheet	
Assets	Liabilities + Net Worth
Reserves + \$9 million	Deposits + \$9 million

- Singleton Bank issues Hank's Auto Supply a cashier's check for the \$9 million.
- Hank deposits the loan in his regular checking account with First National Bank.
- The deposits at First National Bank rise by \$9 million and its reserves also rise by \$9 million.
- Bank lending has expanded the money supply by \$9 million.

First National Balance Sheet	
Assets	Liabilities + Net Worth
Reserves \$90,000	Deposits + \$9 million
Loans \$8.1 million	

- Now, First National Bank must hold some required reserves (\$900,000) but can lend out the other amount (\$8.1 million) in a loan to Jack's Chevy Dealership.

How Banks Create Money, Part 3

		Second National Balance Sheet	
Assets		Liabilities + Net Worth	
Reserves	+ \$8.1 million	Deposits	+ \$8.1 million

- If Jack's Chevy Dealership deposits the loan in its checking account at Second National, the money supply just increased by an *additional \$8.1 million*.
- Making loans that are then deposited into a demand deposit account increases the M1 money supply.
- This money creation is possible because there are multiple banks in the financial system.
 - They are required to hold only a fraction of their deposits,
 - loans end up deposited in other banks,
 - which increases deposits and the money supply.

The Money Multiplier and a Multi-Bank System



- If all banks loan out their excess reserves, the money supply will expand.
- In a multi-bank system, institutions determine the amount of money that the system can create by using the money multiplier.
- The **money multiplier formula** = $1 / \text{Reserve Requirement}$
- By multiplying the *money multiplier* by the *excess reserves*, we can determine the total amount of M1 money supply created in the banking system.
- Discussion Question: If the reserve requirement is 10%, and a bank's excess reserves are \$9 million, what is the change in the M1 money supply?

Cautions about the Money Multiplier

- The quantity of money in an economy is closely linked to the quantity of lending or credit in the economy.
- All the money in the economy, except for the original reserves, is a result of bank loans that institutions repeatedly re-deposit and loan.
- A bank can also choose to hold extra reserves, *above* the required amount.
- Banks may decide to vary how much they hold in reserves for two reasons:
 - macroeconomic conditions
 - government rules

Cautions about the Money Multiplier, Continued



- In a recession, banks are likely to hold a higher proportion of reserves due to fear that customers are less likely to repay loans.
- The Federal Reserve may also raise or lower the required reserves held by banks as a policy move to affect the quantity of money in an economy.
- Additionally, if people do not deposit cash, banks cannot recirculate the money in the form of loans.



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Central Bank in Guatemala

Bank Structure

- Objective: garantizar la estabilidad monetaria, cambiaria y crediticia del pais.
- Governed by the “Junta Monetaria”
 - President (Named by the president, 4-year period)
 - MINFIN, NINECO and MAGA
 - Member elected by congress
 - Member elected by Business Associations
 - Member elected by the banking sector
 - Member elected by USAC (Public University)

Macroeconomic Statistics

- www.banguat.gob.gt
- Medio Circulante – M1
- Medios de pago – M2
- Tasa de Encaje Bancario gt – 14.6%

Medio Circulante (M1)

