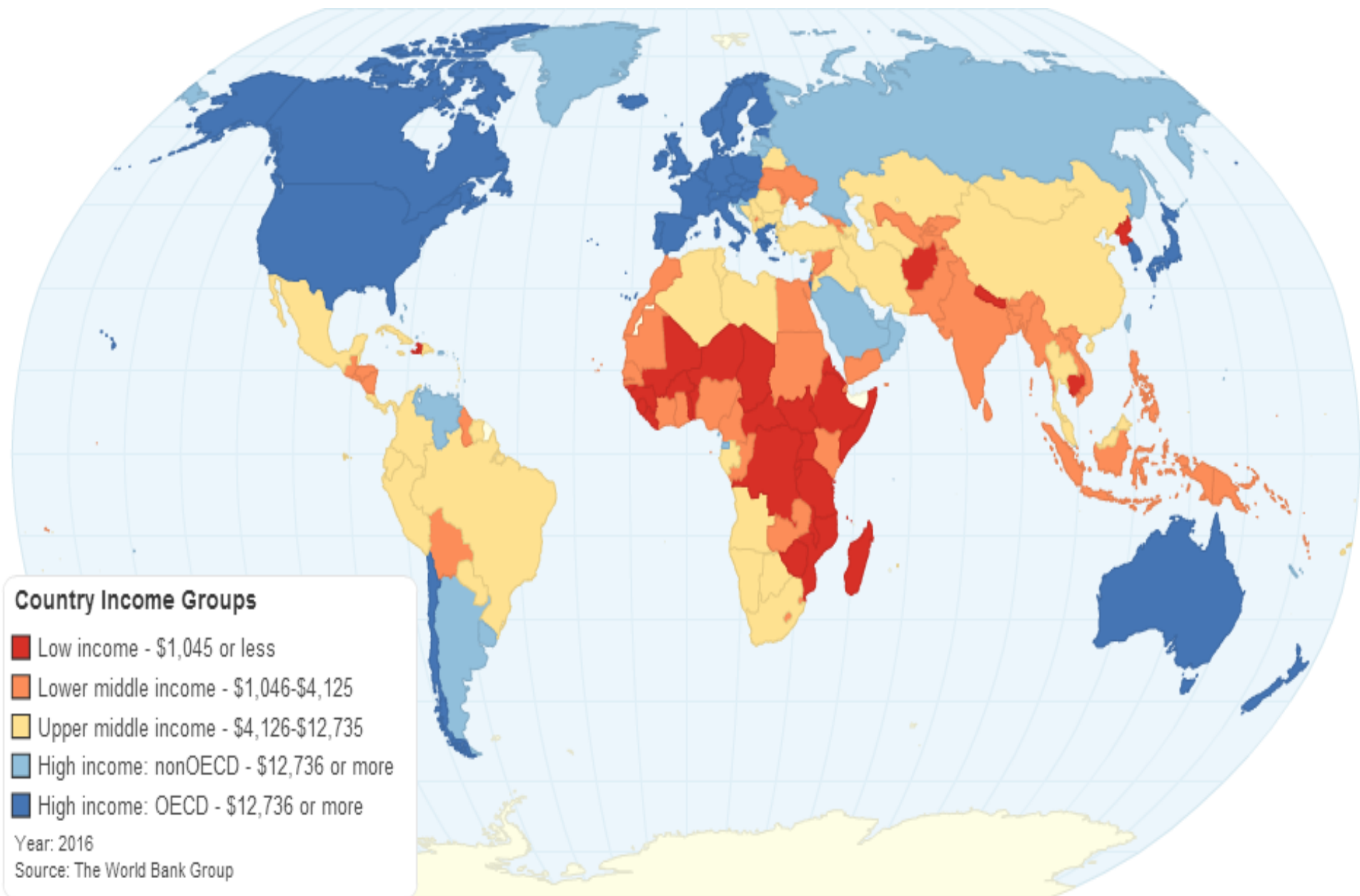


Introduction to Economics

DR. PARUL MATHUR

IIIT - HYDERABAD





What is Economics?

-Understanding the discipline

- Why are some countries rich and some countries poor?
- Why do women earn less than men?
- What causes recessions/crises?
- Why popcorn costs so much in the movie theatre?
- What do schoolteachers and sumo wrestlers have in common?
- How did the legalization of abortion affect the rate of violent crime?

"The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them it is hard to think of anything else." Robert Lucas

Top-10 most concerning world issues, according to Millennial's - World Economic Forum

10. Lack of economic opportunity and employment (12.1%)
9. Safety / security / wellbeing (14.1%)
8. Lack of education (15.9%)
7. Food and water security (18.2%)
6. Government accountability and transparency / corruption (22.7%)
5. Religious conflicts (23.9%)
4. Poverty (29.2%)
3. Inequality (income, discrimination) (30.8%)
2. Large scale conflict / wars (38.9%)
1. Climate change / destruction of nature (48.8%)

Sustainable Development Goals - UN

The 17 Sustainable Development Goals address the **root causes of poverty and the universal need for development** that works for all people.

Sustainable development - development that meets the needs of the present **without compromising the ability of future generations** to meet their own needs.

The goals cover the three dimensions of sustainable development: **economic growth, social inclusion and environmental protection.**



SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



Glimpse of exciting economic research, 2017

“Interpreting Signals in the Labor Market: Evidence from Medical Referrals”

by Heather Sarsons

Specialization: Behavioral economics

Main finding: After a bad outcome, female surgeon’s referrals went down much more than male surgeons.

Glimpse of exciting economic research, 2017

“The aggregate and distributional effects of financial globalization: evidence from macro and sectoral data”

by Davide Furceri, Prakash Loungani and Jonathan D. Ostry

Specialization: Globalization and economic development

Main finding: Foreign finance has led to more inequality.

Glimpse of exciting economic research, 2017

Cycling to School: Increasing Secondary School Enrollment for Girls in India

By Karthik Muralidharan, Nishith Prakash

Authors study the impact of an **innovative program** in the Indian state of Bihar

- that **aimed to reduce the gender gap in secondary school enrollment**
- by **providing girls who continued to secondary school with a bicycle that would improve access to school.**
- They also find that the **Cycle program was much more cost effective** at increasing girls' secondary school enrollment than comparable conditional cash transfer programs in South Asia.

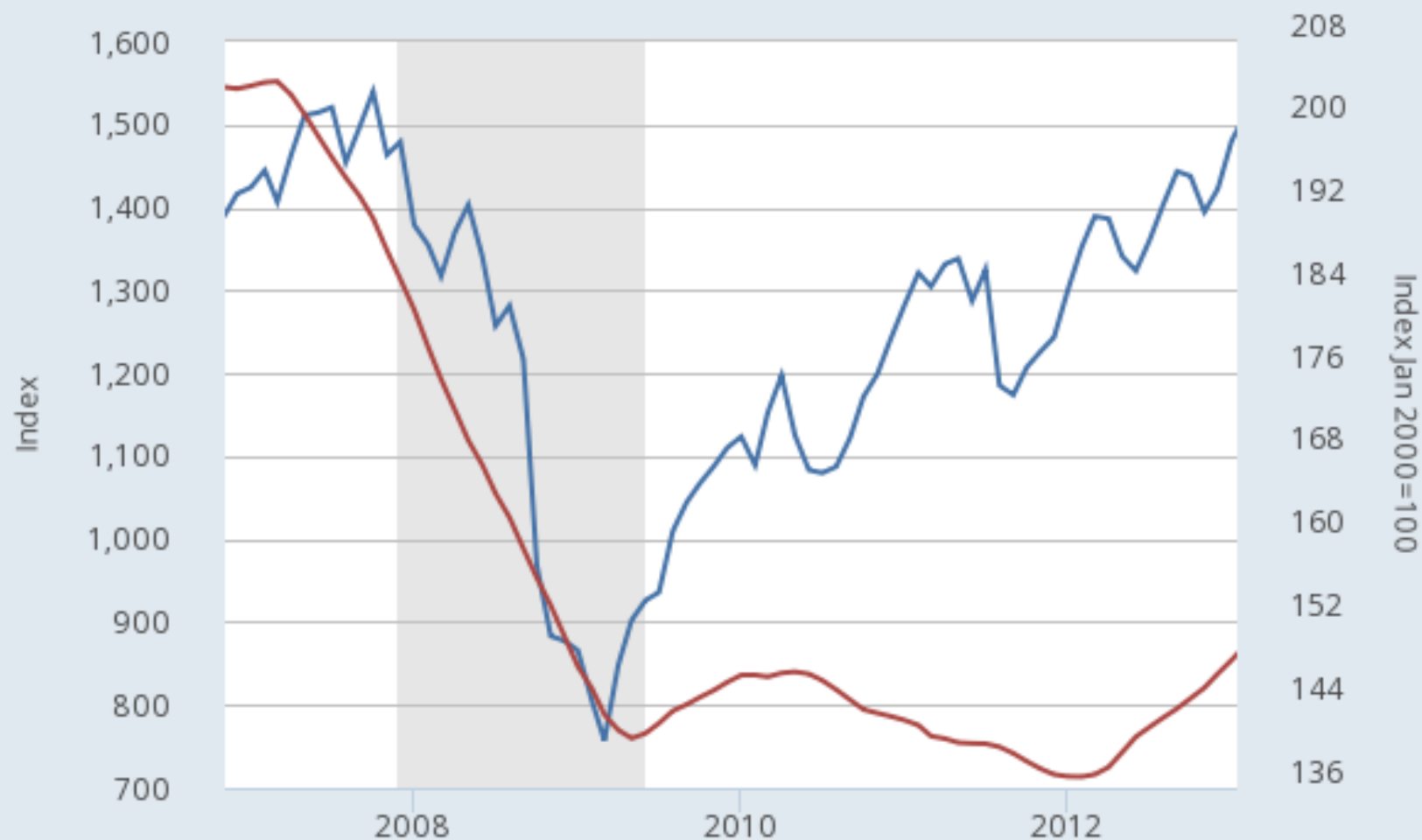
Growth of the Discipline

- "We are pattern-seeking, story-telling animals."

Over the last 25 years—

- the rise of **experimental economics and behavioral economics**
- that economics has become more **scientific**
- economists have become **more aware of flaws in economic theory.**

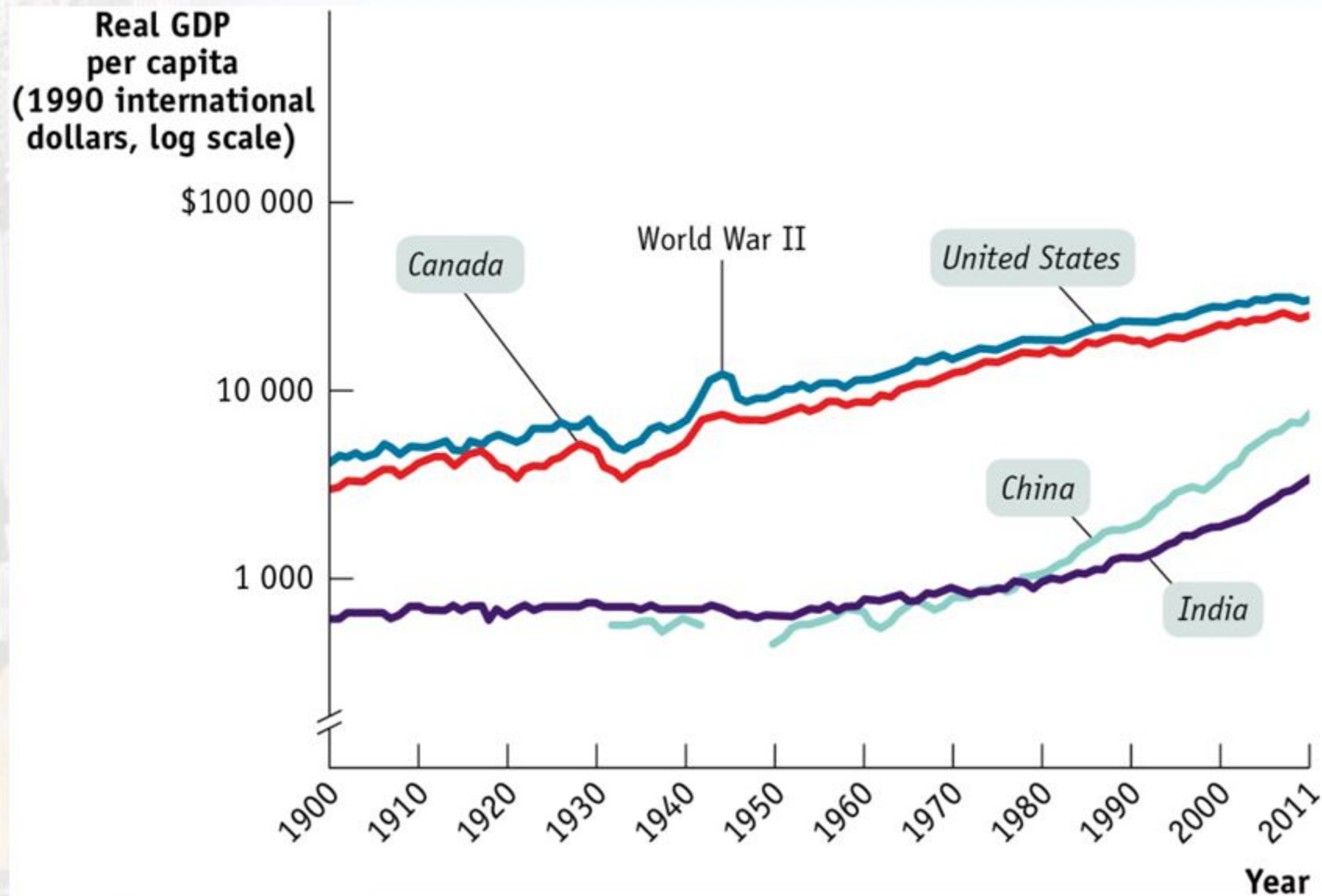
— S&P 500® (left)
 — S&P/Case-Shiller 20-City Composite Home Price Index® (right)



What is the study of Economics about?

- Economics is about **making choices**.
- Economics has been called the '**dismal science**' because it studies the most fundamental of all problems, **Scarcity**.
- Because of scarcity we all face the dismal reality that there are limits to what we can do.
- Is it really that dismal as Malthus predicted?

Economic Growth Across Time and Space



Thinking like an Economist

- Scientific method of inquiry
- Work with models
 - Assumptions
 - Test theory with data for evidence
- Policy evaluations : Cost –Benefit analysis

Economics of Recycling:

- About 56 percent of paper and cardboard was recycled in 2000.
- In contrast, only about 9 percent of plastic packaging is recycled.

- Cardboard - Low collection costs ; Economically more rewarding

- Plastics - High separation costs ; cheaper substitutes making it economically less rewarding

Cost benefit analysis
When Should Governments Subsidize Health?
:The Case of Mass Deworming

Should the WHO withdraw support for mass deworming?

What is the appropriate subsidy level for health products, focusing on the specific case of deworming?

Although intestinal worm infections can be treated using **safe, low-cost drugs**,

Some have challenged the view that mass school-based deworming should be a policy priority.

When Should Governments Subsidize Health? :The Case of Mass Deworming

The existing evidence shows,

- **Consistent positive impacts on**
 - school participation in the short run
 - academic test scores, employment, and income in the long run
- while suggesting that most parents will not pay for deworming treatment that is not fully subsidized.
- There is also evidence for a fiscal externality through higher future tax revenue, which may exceed the cost of the program.
- Their analysis suggests that the **economic benefits of school-based deworming programs are likely to exceed their costs in places where worm infestations are endemic.**

Cost benefit analysis :Teacher Absenteeism in India

- A nationwide representative sample of public schools in rural India found **teacher absence rate of 23.6%**.
- **Increases in school monitoring** were strongly correlated with reductions in teacher absence rates.
- Investing in reducing teacher absence through better monitoring could be over **ten times more cost effective** than investing in hiring more teachers.
- Thus, policies that decrease the inefficiency of public education spending **are likely to yield substantially higher marginal returns** than those that augment inputs.

Thinking like an Economist

:Opportunity cost

- What is the biggest cost of your going to college ?
- iswhat you could otherwise earn by working.
- On average, **three-fourths** of the private cost of a college education--the cost borne by the student and the student's family--is the income that college students give up by not working.
- A good measure of this "opportunity cost" is the income that a newly minted high school graduate could earn by working full-time.

Thinking like an Economist

:Opportunity cost

- In United States, A study of the economic returns to college since the 1970s showed:
 - that the benefits of both a bachelor's degree and an associate's degree **still tend to outweigh the costs**, with both degrees earning a return of about 15 percent over the past decade.
 - The return has remained high in spite of rising tuition and falling earnings **because the wages of those without a college degree have also been falling,**
 - keeping **the college wage premium near an all-time high while reducing the opportunity cost of going to school.**

Thinking like an Economist :

Incentives matter

- ~~What parents do affects their child's incentives~~
- Incentives provided by parents:
- Parent-onomics 101: Can Economics Help You Be a Better Parent?, by Donald Cox
- Mr. Sharma providing just a bit too much help with homework--thereby diluting his child's work incentives.
- "Crowding out," -situation where outside help merely supplants private efforts to solve a problem
- Examples of social security and retirement savings, welfare payments and work effort, or public safety nets and charitable giving....

Thinking like an Economist : Incentives matter

- In the late 1960s Becker wrote a trail-blazing article whose working assumption is that the :
- **Decision to commit crime is a function of the costs and benefits of crime.**
- From this assumption, he concluded that the **way to reduce crime is to raise the probability of punishment or to make the punishment more severe – Importance of Incentives**
- His insights into crime, helped spawn a new branch of economics – Law and Economics

Thinking like an Economist : Incentives matter

Do Safety regulations increase unsafe behavior? – Peltzman

Mandatory safety devices such as seat **belts reduced the probability of harm to the driver**, if the car crashed

That in turn, encouraged people to drive more recklessly, hence leading to more accidents and danger to pedestrians.

He found that the regulation of making seat belts mandatory did indeed

- **cause more accidents,**
- **though the number of fatalities remained largely unchanged.**

Thinking like an Economist : Unintended consequences

- Does unintended breaking of a window help the economy by creating jobs for glass-repairers?
- "What is Seen and What is Not Seen", Frédéric Bastiat
- Have you ever been witness to the fury of that solid citizen, James Goodfellow, when his incorrigible son has happened to break a pane of glass?
- What would become of the glaziers if no one ever broke a window?..."

Thinking like an Economist

:At the Margin, please

- Think about your next step forward.
- “Marginal” = “Additional”
- The first glass of lemonade on a hot day quenches your thirst, but the next glass, maybe not so much.
- If you think at the margin, you are thinking about what the next or additional action means for you.
- Or "marginal" means the derivative or slope of a curve.

- Why are diamonds more expensive than water?
- Paradox of unessential vs. essential good
- People are choosing between one additional diamond versus one additional unit of water
 - **Marginal utility**

Thinking like an Economist

- Scientific method of inquiry
- Work with models
 - Assumptions
 - Test theory with data for evidence
- Policy evaluations : Cost –Benefit analysis

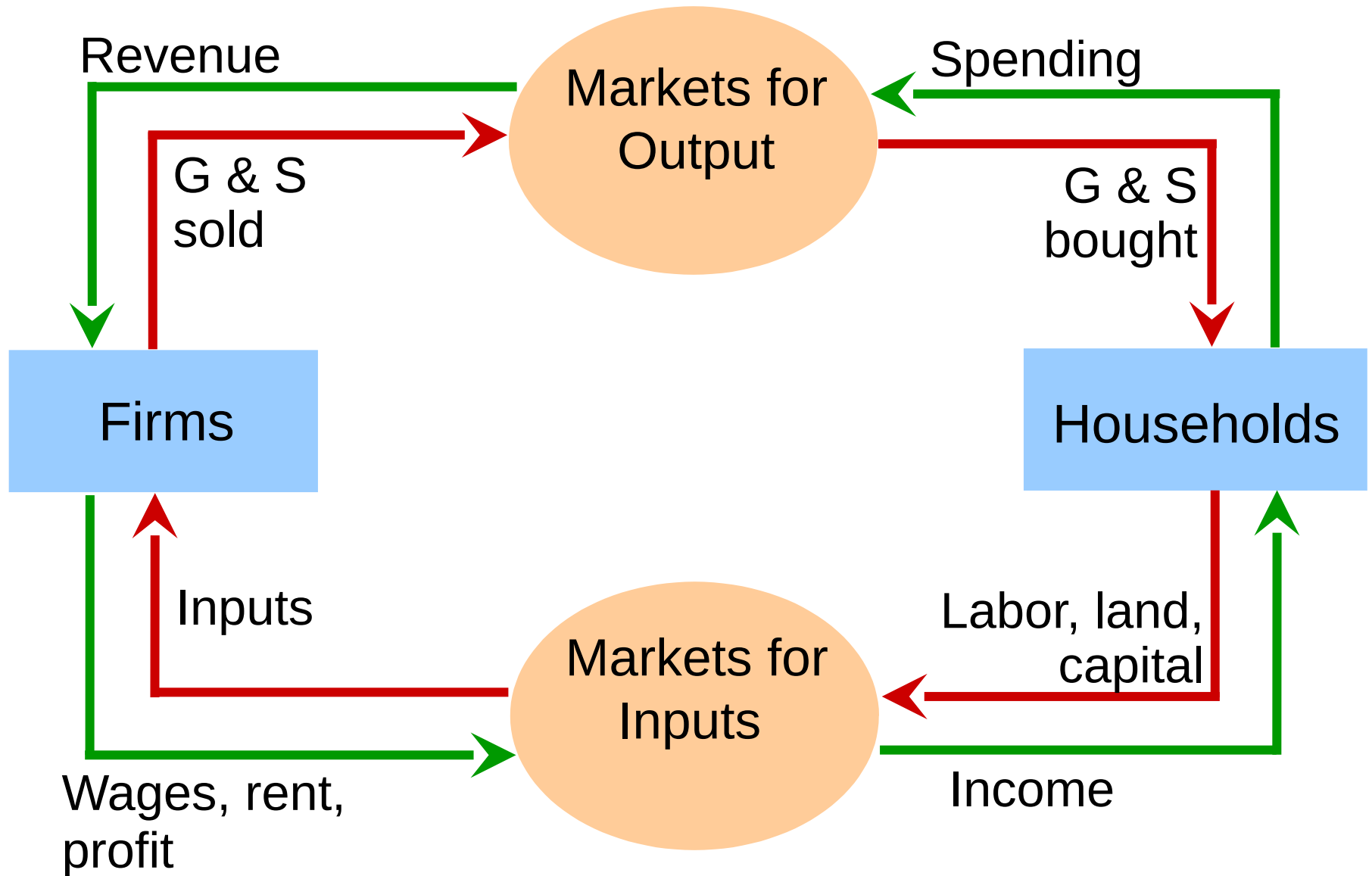
The Origins of Macroeconomics

- Macroeconomics examines the **aggregate behavior** of the economy.
- Macroeconomics came into its own as a branch of economics during the Great Depression.
- In an effort to understand economic slumps and find ways to prevent them.

Example of model for Macroeconomy

- **Macroeconomy: Study of the economy as a whole.**
- An example of model for macroeconomy
- **Circular flow diagram**
 - a simple depiction of the macroeconomy
 - illustrates spending, revenue, and income flowing within an economy

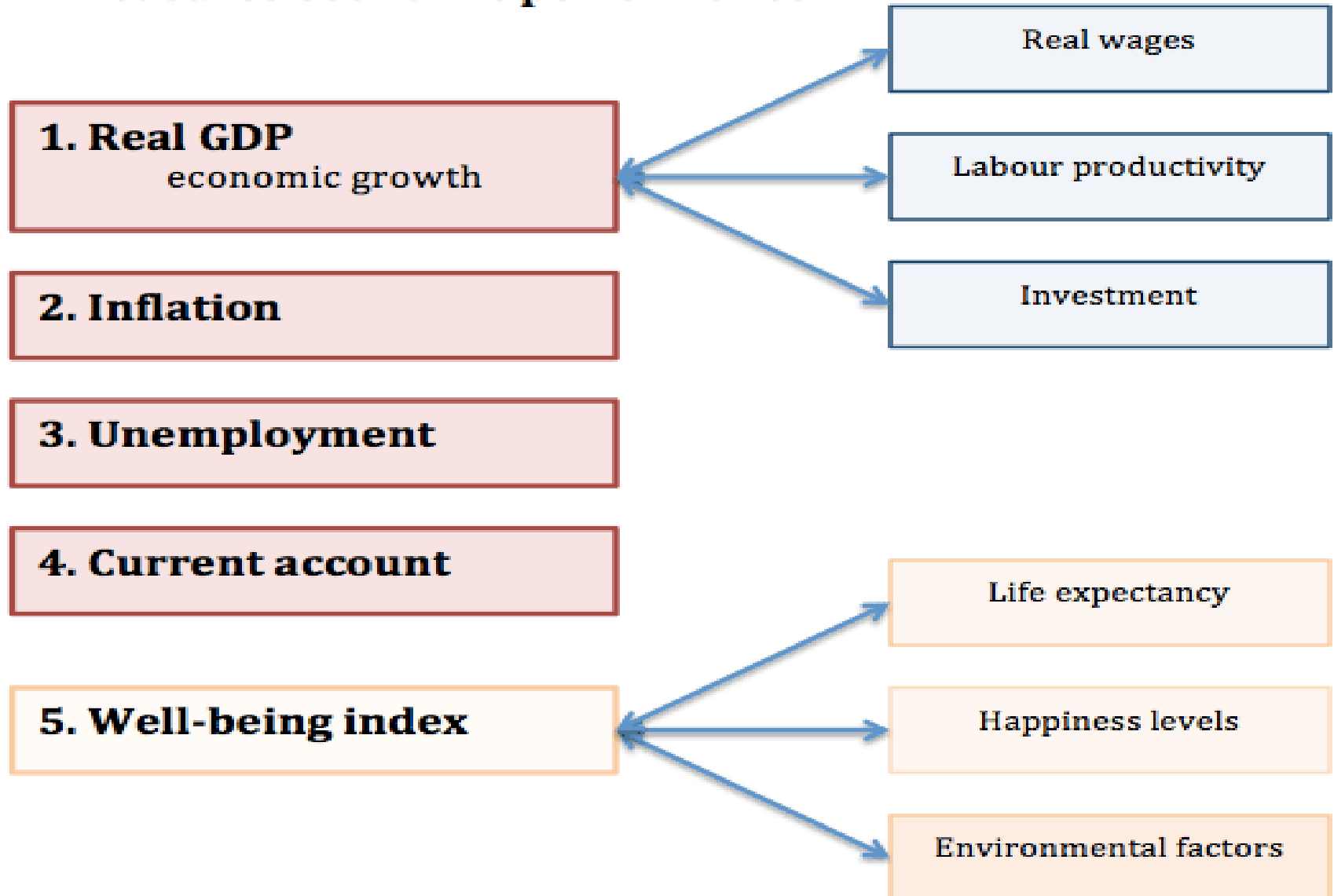
The Circular-Flow Diagram



Measuring the Macroeconomy

- Almost all countries calculate the **National Income and Product accounts**.
- The national accounts keep track of the flows of money between different parts of the economy.
- Flows such as spending of consumers, business investment spending, government purchases.
- In India, these numbers are calculated by the Central Statistical Organization (CSO).

Measures economic performance



GDP: Speedometer of the economy

- **GDP: Gross Domestic Product**
- GDP is like a speedometer: it tells you whether your economy is going faster or slower.
- As in cars, a speedometer is useful but doesn't tell you everything you want to know.
- For example, it won't tell you whether you are overheating, or about to run out of fuel.
- Above all, the speedometer doesn't tell you whether or not you're going in the right direction.

GDP is....

...the market value of all final goods & services produced within a country in a given period of time.

- Measures **size of the economy**
- Useful for
 - comparing the economies of other countries
 - how an economy changes over time.

Measurement of GDP

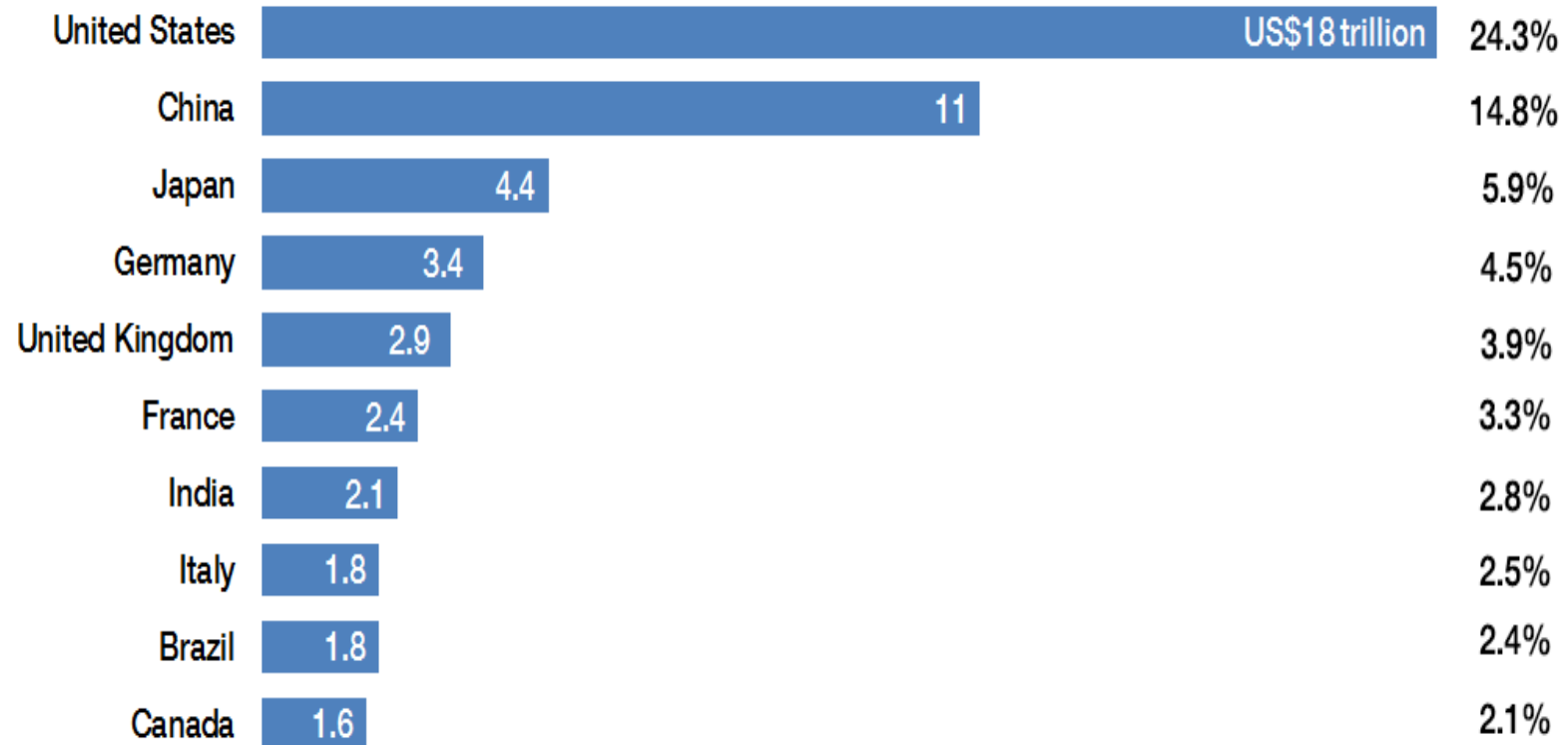
- **GDP = Total Income = Total Expenditure of an economy**
- Four components of expenditure:
 - Consumption
 - Investment
 - Government Purchases
 - Net Exports

U.S. GDP and Its Components

	<i>billions</i>	<i>% of GDP</i>
GDP	\$13,841	100.0
Consumption	9,734	70.3
Investment	2,125	15.4
Govt. spending	2,690	19.4
Net Exports	-708	-5.1

The world's biggest economies

GDP in current USD and share of global total, latest World Bank data, 2015



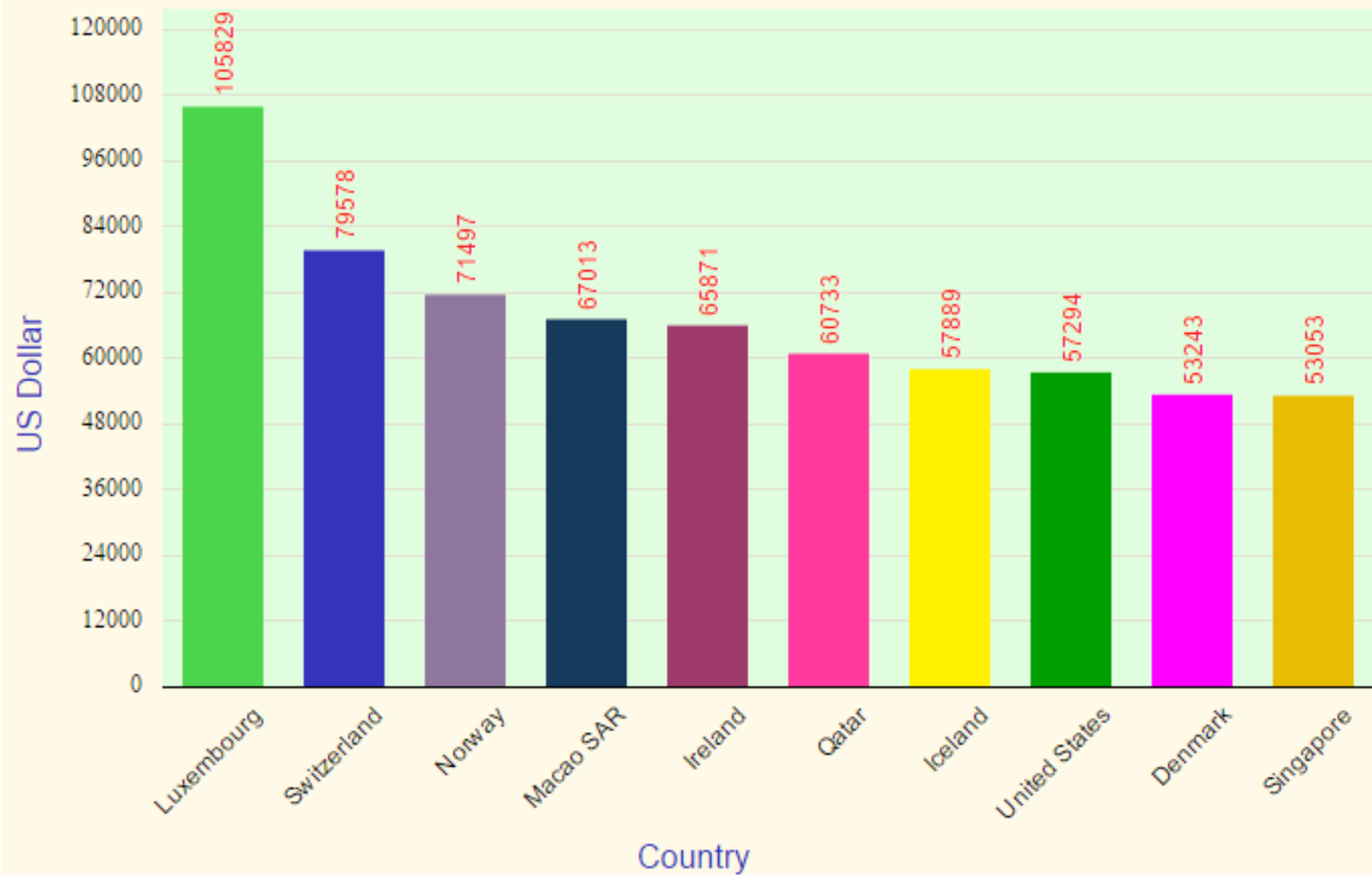
Source: World Bank and Visual Capitalist

GDP per capita

- GDP is a measure of a country's Total output.
- **A country with larger population = Larger GDP**
- So, how do we compare GDP across countries by eliminating the population size difference?
- **GDP per capita = GDP / Total Population**
- Indicator of standard of living
- Indicator for relative performance of the countries

Top 10 countries by GDP (Nominal) per capita 2016

Source : IMF (Outlook October 2016)



A typical family with all their possessions in the U.K., an advanced economy



GDP per capita: \$35,580

Life expectancy: 79 years

Adult literacy: 99%

A typical family with all their possessions in Mexico, a middle income country



GDP per capita: \$11,410

Life expectancy: 76 years

Adult literacy: 92%

*A typical family with all their possessions in Mali,
a poor country*



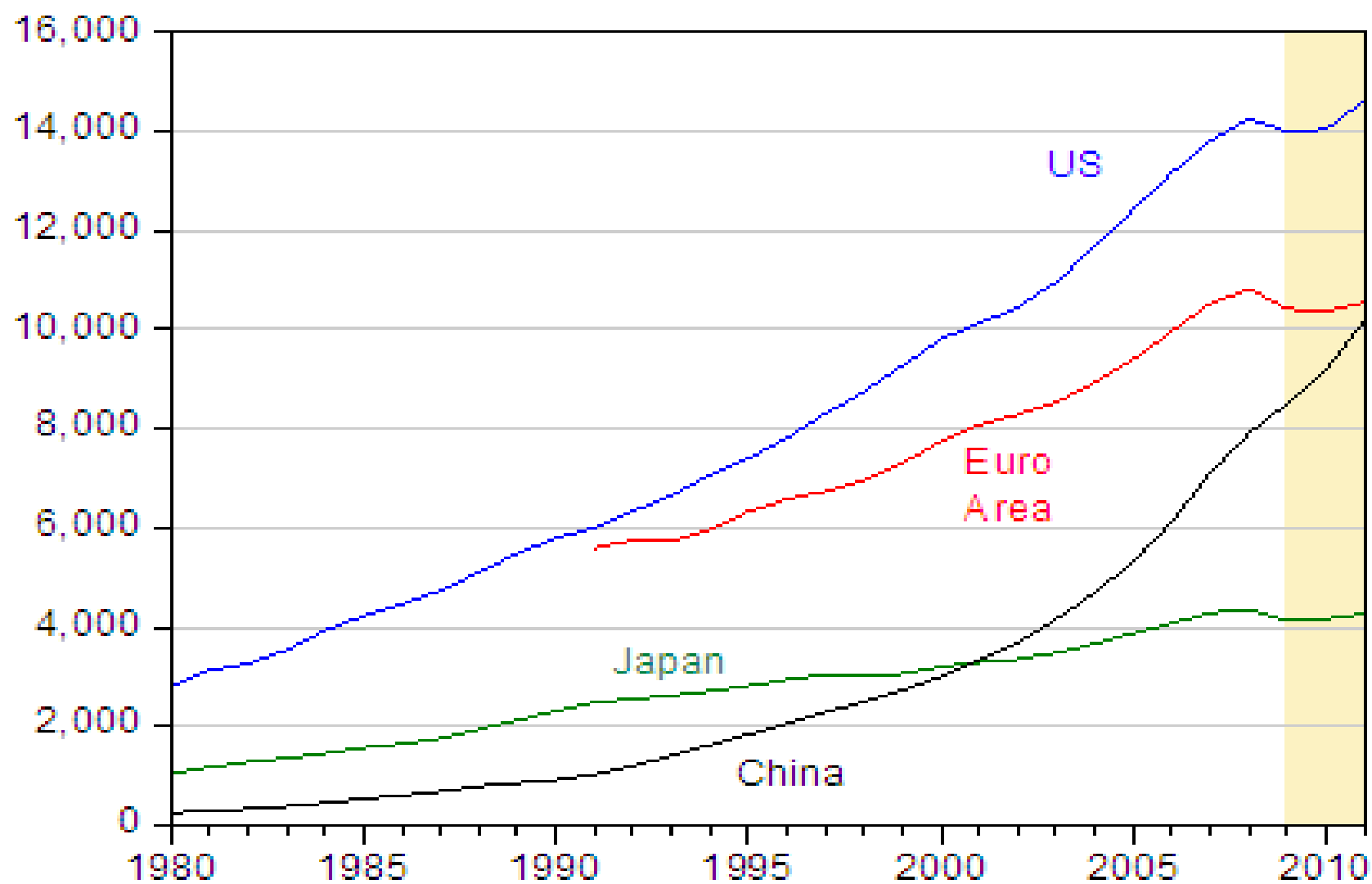
GDP per capita: \$742.70

Life expectancy: 50 years

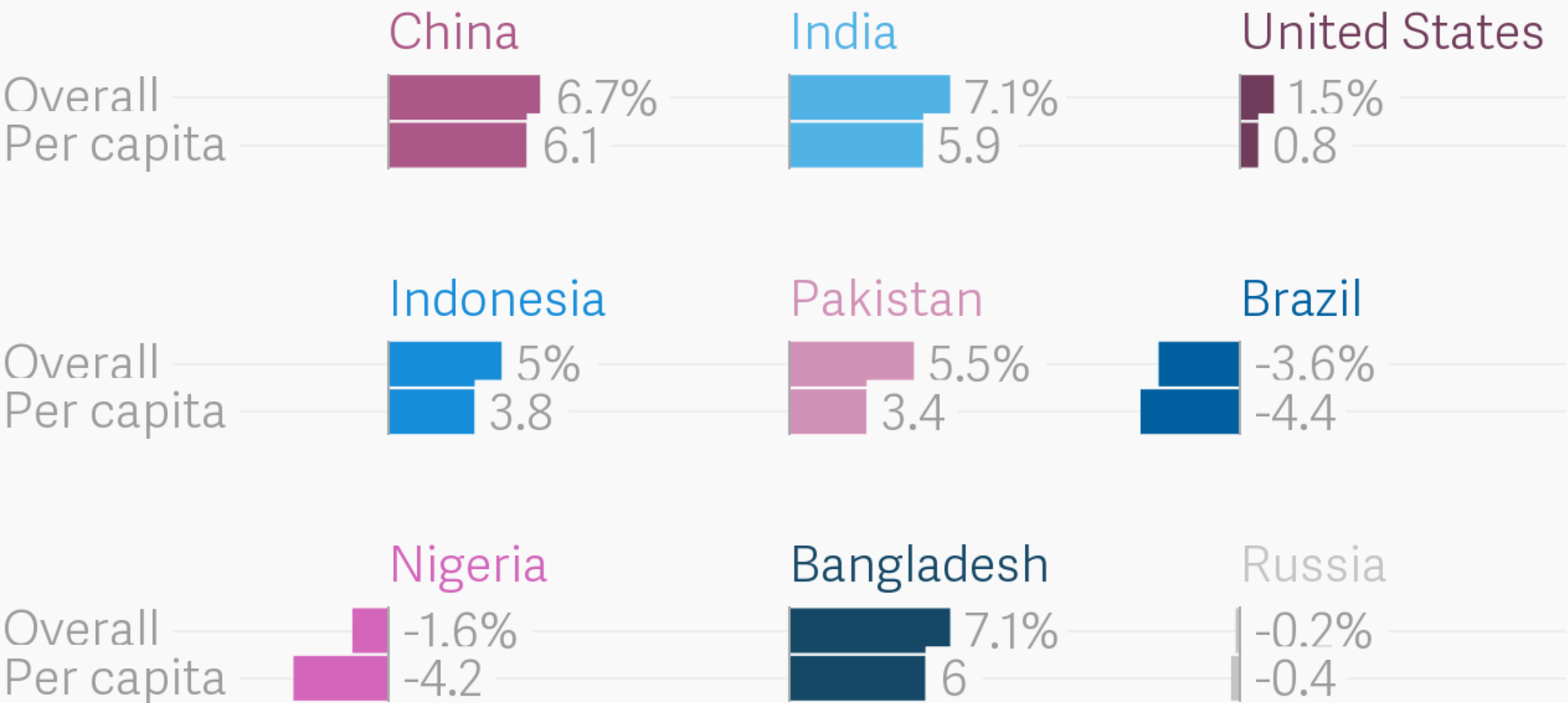
Adult literacy: 46%

Growth patterns

- **Argentina : Growth Disaster**
- **Japan, South Korea : Growth Success**
- **Great Britain, France: Steady Growth**
- So, will the richer continue to grow richer and poor poorer?



GDP growth in 2016



Bad, But Getting Better



GDP GROWTH AT 4-YEAR LOW

% ANNUAL RATE

FY13 **5.5**

FY14 **6.4**

FY15 **7.5**

FY16 **8**

FY17 **7.1**

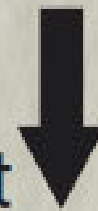
FY18* **6.5 (Forecast)**

THE BAD NEWS

Manufacturing and consumption yet to recover



Slower farm sector growth amidst agrarian discontent



THE GOOD NEWS

GST and DeMo effect fading out; second half growth back at **7%**

Investments showing some spark, up **4.5%**

Services, jobs-intensive construction have shown higher growth this Year

GDP and well-being

But GDP is not a perfect measure of well-being.

Example

- the quality of the environment
- leisure time
- non-market activity, such as the child care a parent provides his or her child at home
- an equitable distribution of income

Alternatives for Measuring Economic Progress

- Let's look at some alternatives, then...
- **Human Development Index**
- HDI measures a nation's achievement in three dimensions of human development:
 - long and healthy life (indicated by **life expectancy** at birth),
 - knowledge (indicated by **literacy and school enrollment rates**), and
 - decent standard of living (indicated by **GDP per capita**).

Alternatives for Measuring Economic Progress

- **Gross National Happiness**
- The GNH Index is used to measure the happiness and well-being of Bhutan's population
- India ranked at 122 ■■ out of 155 countries in the World Happiness report, 2017

The

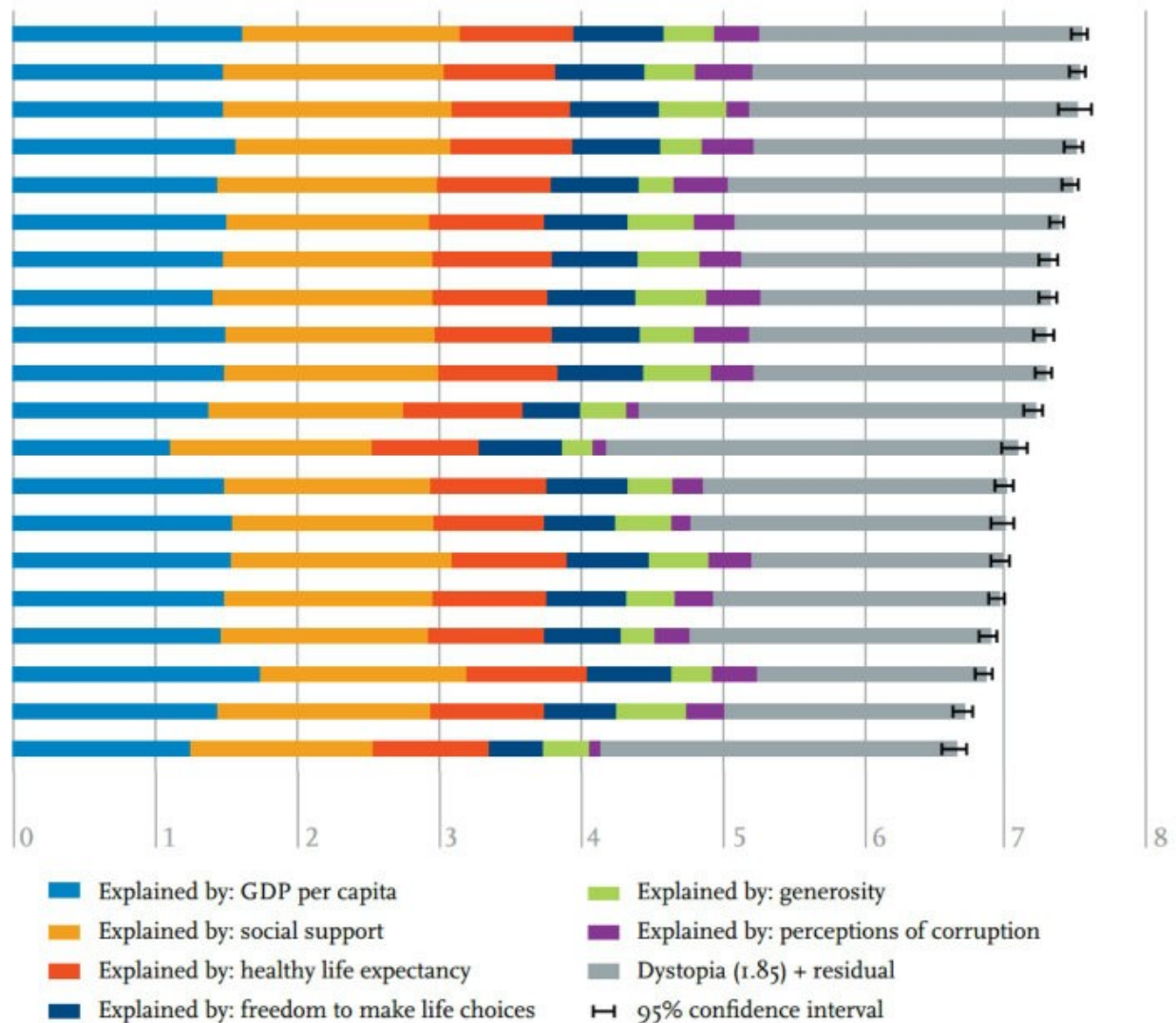


Happiest Countries in the World



The 20 Happiest Countries in the World (2014-2016)

1. Norway (7.537)
2. Denmark (7.522)
3. Iceland (7.504)
4. Switzerland (7.494)
5. Finland (7.469)
6. Netherlands (7.377)
7. Canada (7.316)
8. New Zealand (7.314)
9. Australia (7.284)
10. Sweden (7.284)
11. Israel (7.213)
12. Costa Rica (7.079)
13. Austria (7.006)
14. United States (6.993)
15. Ireland (6.977)
16. Germany (6.951)
17. Belgium (6.891)
18. Luxembourg (6.863)
19. United Kingdom (6.714)
20. Chile (6.652)



WORLD
HAPPINESS
REPORT
2017

Published by the Gallup Organization