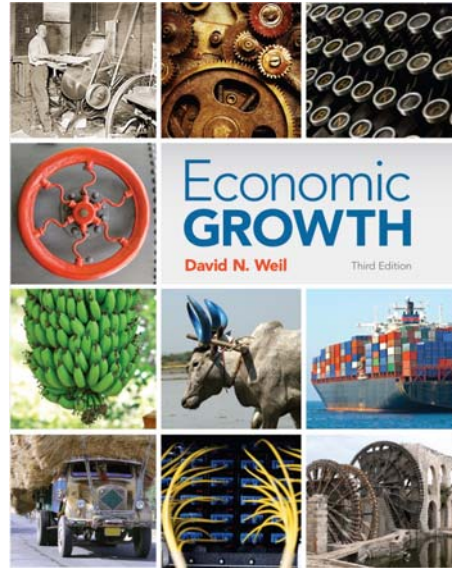


Chapter 1

THE FACTS TO BE EXPLAINED



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Incipit

“The consequences for human welfare involved in the questions about the income gap among countries are simply staggering; once one starts to think about them, it is hard to think about anything else”

Robert Lucas, Nobel prize

Two main Schools of thoughts:

- *Neo classical view*
- *Heterodox perspective*

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World at night



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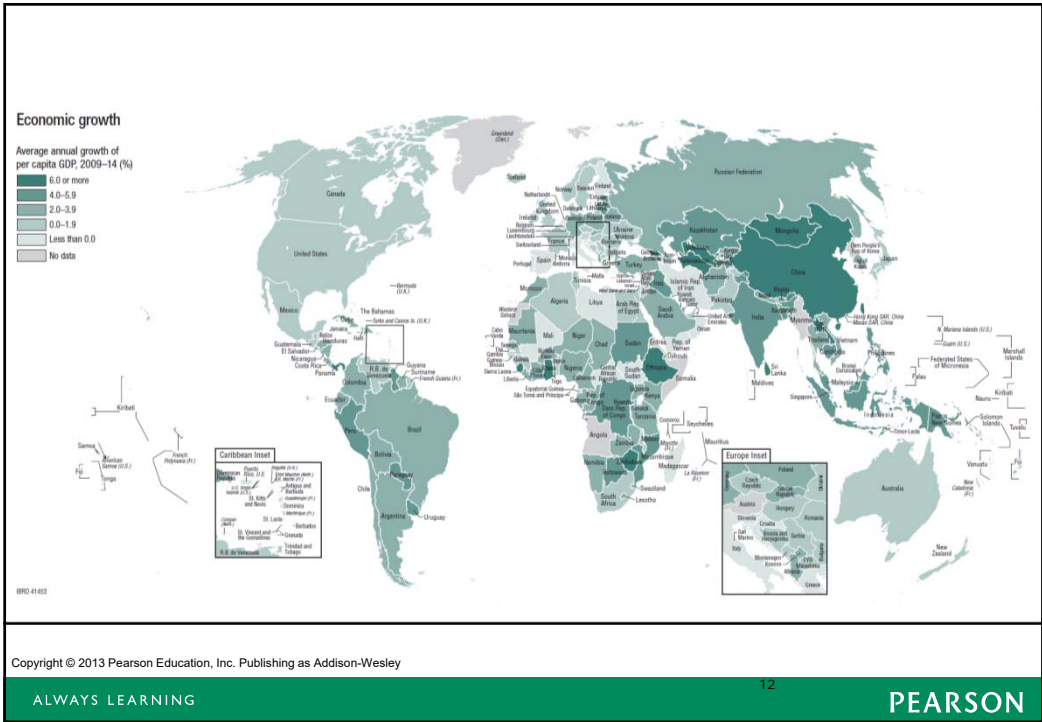
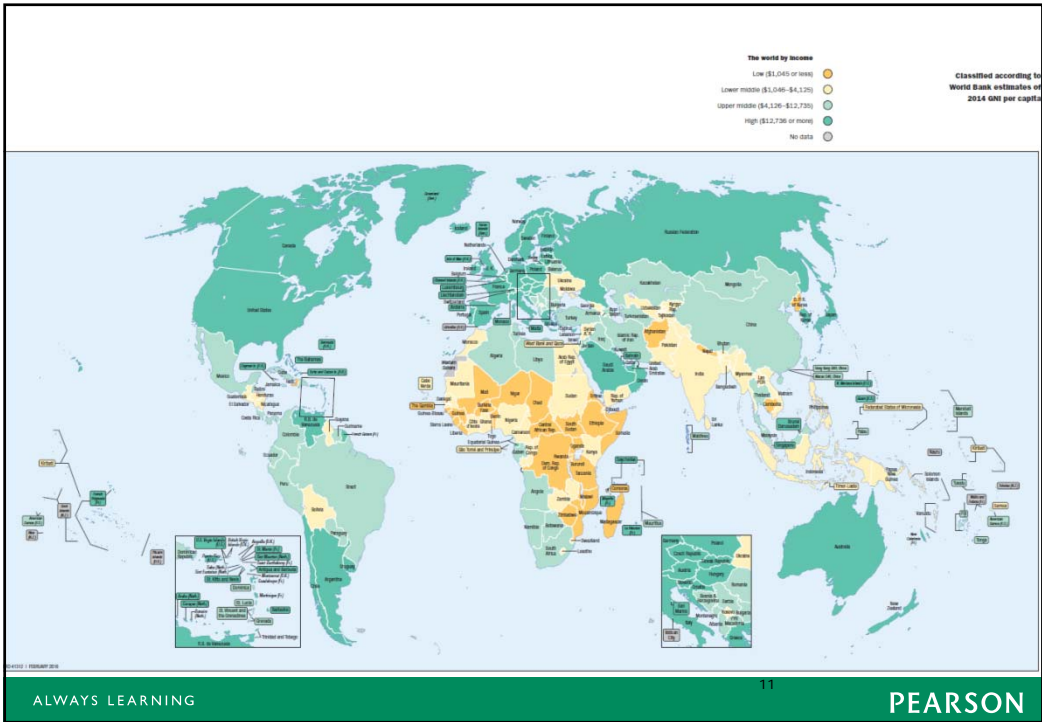






	Population millions 2013	Surface area thousand sq. km 2013	Population density people per sq. km 2013	Urban population % of total population 2013	Gross national income				Gross domestic product	
					Atlas method		Purchasing power parity		% growth 2012-13	Per capita % growth 2012-13
					\$ billions 2013	Per capita \$ 2013	\$ billions 2013	Per capita \$ 2013		
World	7,125.1 s	134,324.7 s	55 w	53 w	76,119.3 t	10,683 w	102,197.6 t	14,343 w	2.3 w	1.1 w
low income	848.7	15,359.5	57	30	617.7	728	1,662.6	1,959	5.6	3.3
Middle income	4,970.0	65,026.4	78	50	23,628.9	4,754	47,504.2	9,558	4.9	3.8
Lower middle income	2,561.1	21,590.5	123	39	5,312.2	2,074	15,280.5	5,966	5.8	4.3
Upper middle income	2,408.9	43,436.0	56	62	18,316.9	7,604	32,292.8	13,405	4.7	3.9
low & middle income	5,818.7	80,385.9	74	47	24,252.8	4,168	49,134.9	8,444	5.0	3.6
East Asia & Pacific	2,005.8	16,270.8	126	51	11,104.7	5,536	21,519.5	10,729	7.1	6.4
Europe & Central Asia	272.4	6,478.6	43	60	1,937.5	7,114	3,711.8	13,628	3.7	3.0
Latin America & Carib.	588.0	19,461.7	31	79	5,610.9	9,542	8,340.8	14,185	2.5	1.3
Middle East & N. Africa	345.4	8,775.4	40	60	-0.5	-2.2
South Asia	1,670.8	5,136.2	350	32	2,477.5	1,483	8,405.8	5,031	6.6	5.2
Sub-Saharan Africa	936.3	24,263.1	40	37	1,578.8	1,686	3,103.1	3,314	4.1	1.4
High income	1,306.4	53,938.8	25	80	52,009.9	39,812	53,285.4	40,788	1.4	0.9
Euro area	337.3	2,758.5	126	75	13,272.8	39,350	12,801.4	37,953	-0.5	-0.8

Latest table



Millennium Summit

In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the [United Nations Millennium Declaration](#), committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals.

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WE CAN END POVERTY
MILLENNIUM DEVELOPMENT GOALS AND BEYOND 2015

	Africa		Asia			
	Northern	Sub-Saharan	Eastern	South-Eastern	Southern	
1  ERADICATE EXTREME POVERTY AND HUNGER	GOAL 1 Eradicate extreme poverty and hunger					
2  ACHIEVE UNIVERSAL PRIMARY EDUCATION	Reduce extreme poverty by half	low poverty	very high poverty	moderate poverty*	moderate poverty	very high poverty
3  PROMOTE GENDER EQUALITY AND EMPOWER WOMEN	Productive and decent employment	large deficit in decent work	very large deficit in decent work	large deficit in decent work	large deficit in decent work	very large deficit in decent work
4  REDUCE CHILD MORTALITY	Reduce hunger by half	low hunger	very high hunger	moderate hunger	moderate hunger	high hunger
5  IMPROVE MATERNAL HEALTH	GOAL 2 Achieve universal primary education					
6  COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES	Universal primary schooling	high enrolment	moderate enrolment	high enrolment	high enrolment	high enrolment
7  ENSURE ENVIRONMENTAL SUSTAINABILITY						
8  GLOBAL PARTNERSHIP FOR DEVELOPMENT						

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The Millennium Development Goals Report
2015



www.un.org/millenniumgoals/

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The agenda for 2030

The Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world.

The SDGs replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty. The MDGs established measurable, universally-agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities.

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SDGs

The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.

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SDGs

- The SDGs work in the spirit of partnership and pragmatism to make the right choices now to improve life, in a sustainable way, for future generations.
- They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges of the world at large.
- The SDGs are an inclusive agenda. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet.
- The SDGs provide us with a common plan and agenda to tackle some of the pressing challenges facing our world such as poverty, climate change and conflict.

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The Sustainable Development Goals Report
2017



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<https://annualreport.undp.org/>

UNDP

DOWNLOAD REPORT

Annual Report

2018 -

HOME WHEN WHY WHO WHAT HOW

EU2020 agenda

Europe 2020 is the EU's growth strategy for the coming decade. In a changing world, we want the EU to become a smart, sustainable and inclusive economy. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion.

Concretely, the Union has set five ambitious objectives - on employment, innovation, education, social inclusion and climate/energy - to be reached by 2020. Each Member State has adopted its own national targets in each of these areas. Concrete actions at EU and national levels underpin the strategy.

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EU2020 targets

The 5 targets for the EU in 2020

1. Employment

75% of the 20-64 year-olds to be employed

2. R&D

3% of the EU's GDP to be invested in R&D

3. Climate change and energy sustainability

greenhouse gas emissions 20% (or even **30%**, if the conditions are right) **lower than 1990**

20% of energy from renewables

20% increase in energy efficiency

4. Education

Reducing the rates of early school leaving below 10%

at least 40% of 30-34-year-olds completing third level education

5. Fighting poverty and social exclusion

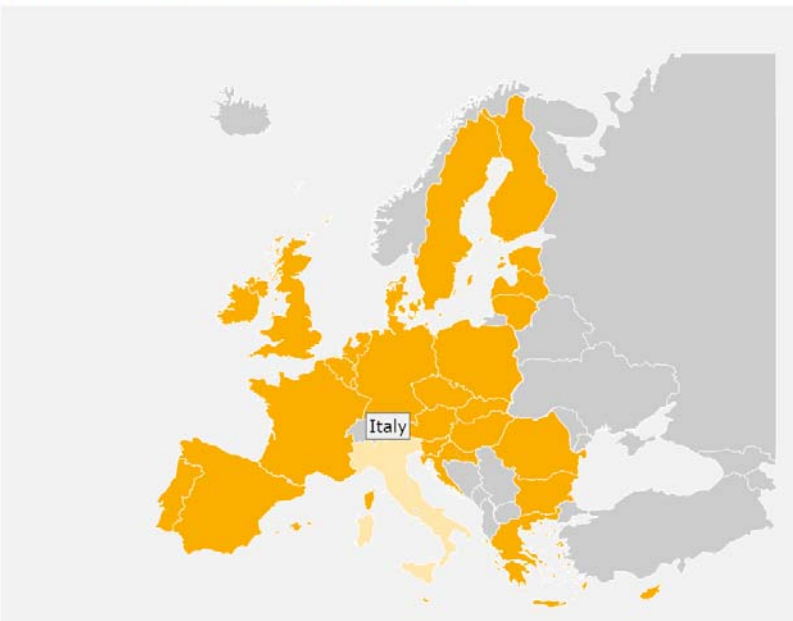
at least 20 million fewer people in or at risk of poverty and social exclusion

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Europe 2020 in your country



- [Austria](#)
- [Belgium](#)
- [Bulgaria](#)
- [Croatia](#)
- [Cyprus](#)
- [Czech Republic](#)
- [Denmark](#)
- [Estonia](#)
- [Finland](#)
- [France](#)
- [Germany](#)
- [Greece](#)
- [Hungary](#)
- [Ireland](#)
- [Italy](#)

Why a cohesion policy for EU

	max	min	Ratio*
GDP per capita (% average EU-28)	Luxembourg 266%	Bulgaria 47%	5,7*
Employment rate (%, age 20-64)	Sweden 79,8%	Greece 53,2%	1,5

Cohesion Policy is the EU's main investment policy. It targets all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life.

* In US ratio is 2,5 and in Japan is 2

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Gross domestic product (GDP) at current market prices by NUTS 2 regions EU28 (with Turkey)

Fifteen richest regions	2011
UKI1 - Inner London	343
LU00 - Luxembourg	320
NO01 - Oslo og Akershus	290
BE10 - Région de Bruxelles-Capitale	247
SE11 - Stockholm	224
NO04 - Agder og Rogaland	223
NO05 - Vestlandet	217
DK01 - Hovedstaden	209
DE60 - Hamburg	209
FR10 - Île de France	204
NL11 - Groningen	201
NO06 - Trøndelag	188
FI1B - Helsinki-Uusimaa	184
AT13 - Wien	182

Fifteen poorest regions	2011
TRA1 - Erzurum, Erzincan, Bayburt	19
TRB1 - Malatya, Elazig, Bingöl, Tunceli	19
BG33 - Severoiztochen	17
BG34 - Yugoiztochen	17
TRC1 - Gaziantep, Adiyaman, Kilis	16
RO21 - Nord-Est	15
TRC3 - Mardin, Batman, Sirnak, Siirt	15
BG32 - Severen tsentralen	14
BG42 - Yuzhen tsentralen	14
MK00 - Poranesna jugoslovenska Republika Makedonija	14
TRC2 - Sanliurfa, Diyarbakir	14
BG31 - Severozapaden	13
TRA2 - Agri, Kars, Igdir, Ardahan	13
TRB2 - Van, Mus, Bitlis, Hakkari	11

Ratio
between
richest and
poorest
region: 31

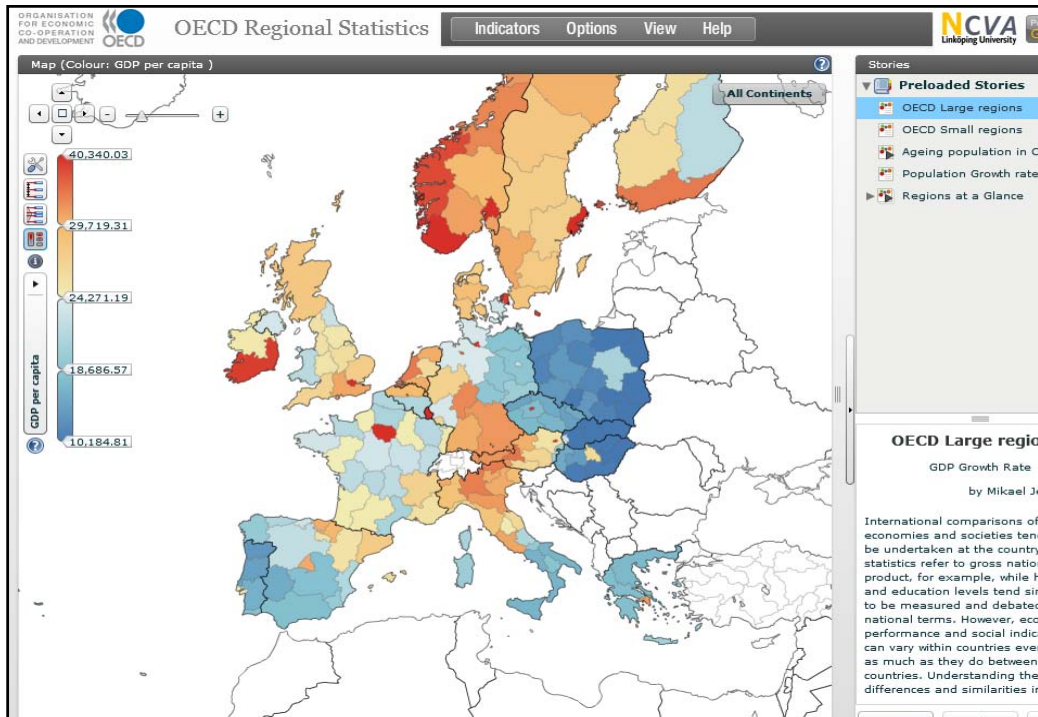
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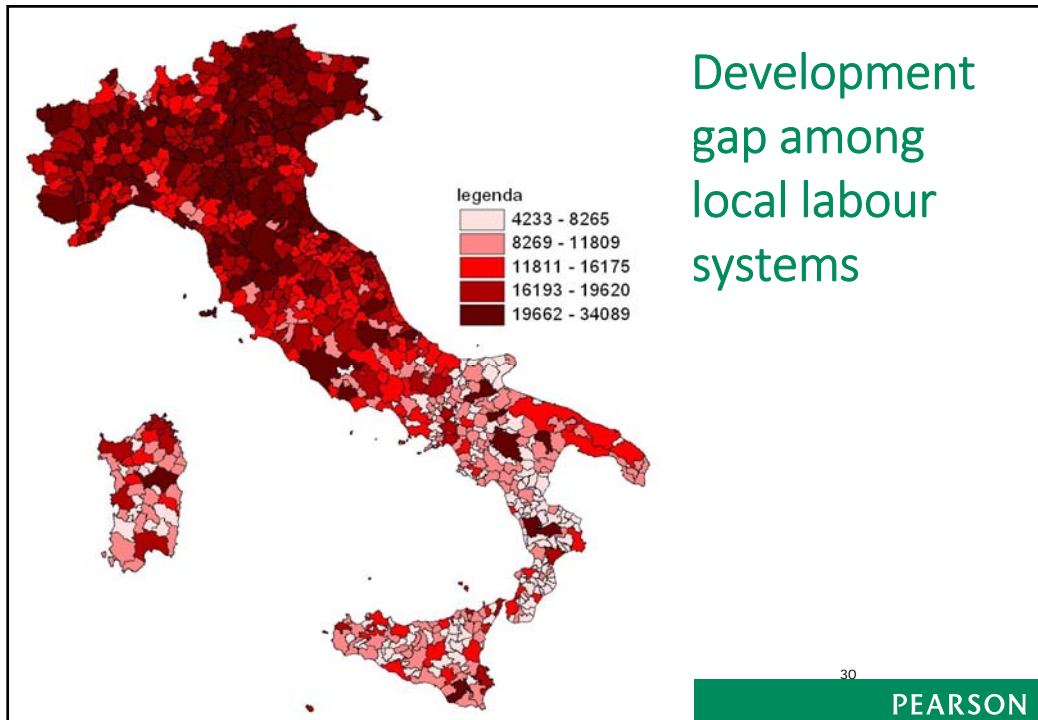
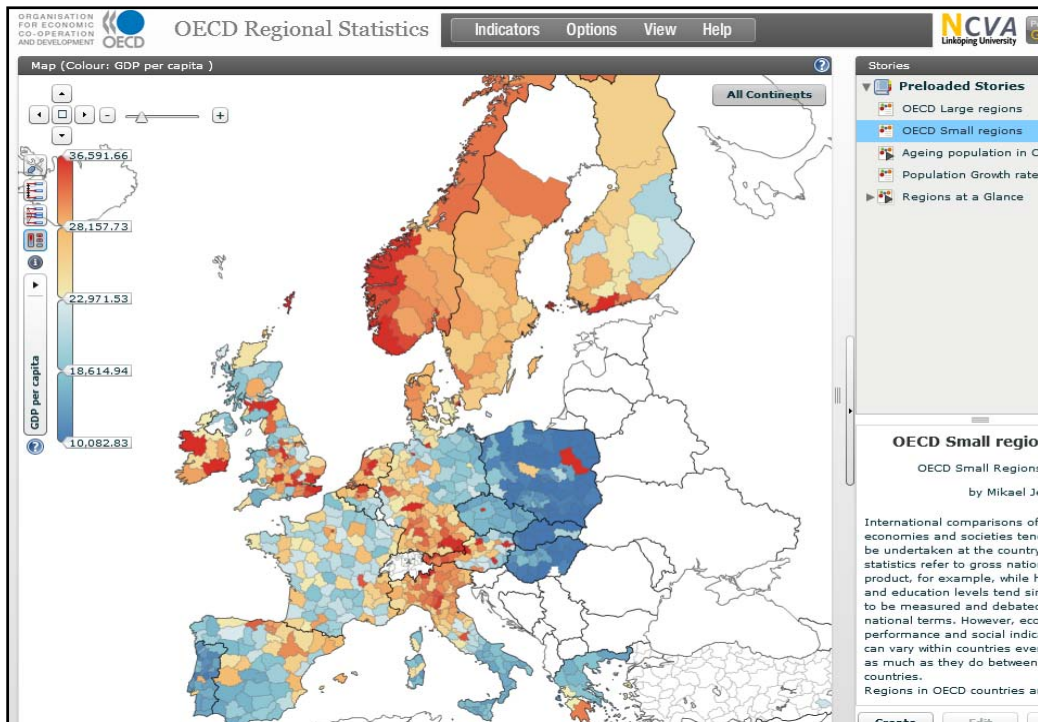
Sardinia: 79

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Top Eleven Countries in Year 2009 According to Three Different Measures

Rank	Highest GDP per Capita		Largest Economies		Most Populous Countries	
	Country	GDP per Capita (\$)	Country	Total GDP (\$ trillions)	Country	Population (millions)
1	Qatar	159,489	United States	12.62	China	1,320
2	Luxembourg	84,525	China	10.08	India	1,180
3	United Arab Emirates	52,948	Japan	3.81	United States	307
4	Bermuda	52,090	India	3.76	Indonesia	240
5	Macao	51,057	Germany	2.65	Brazil	198
6	Norway	48,945	United Kingdom	2.07	Pakistan	181
7	Singapore	47,373	Russia	2.05	Bangladesh	154
8	Kuwait	46,638	France	1.98	Nigeria	148
9	Brunei	46,229	Italy	1.68	Russia	140
10	Australia	41,304	Brazil	1.62	Japan	127
11	United States	41,098	Mexico	1.29	Mexico	111

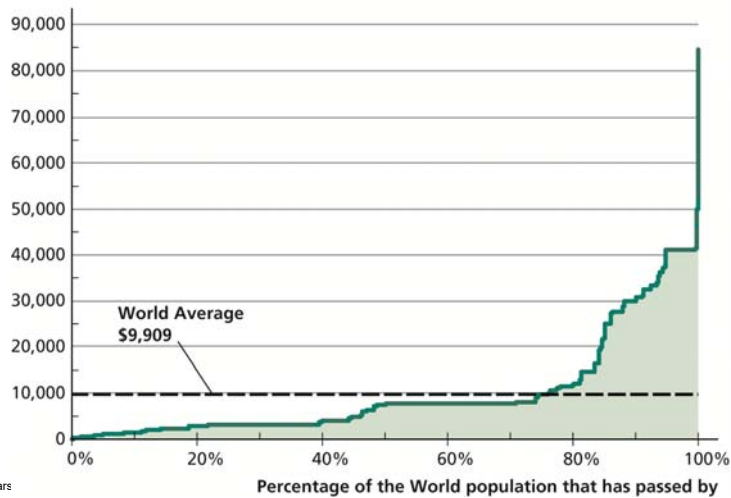
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The Parade of World Income

GDP per capita, 2009
(2005 Dollars)



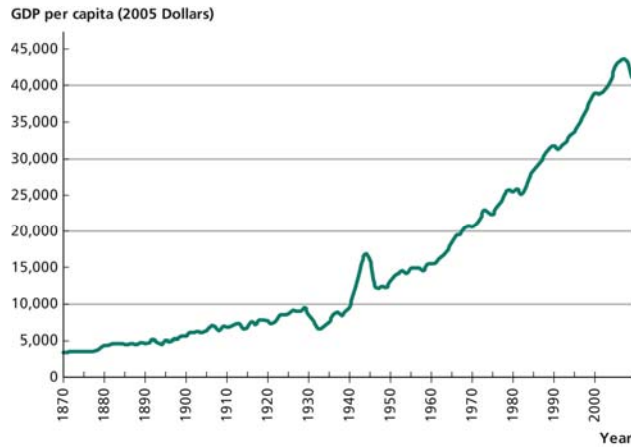
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Source: Heston, Summers, and Aten (2011).

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GDP per Capita in the United States, 1870–2009



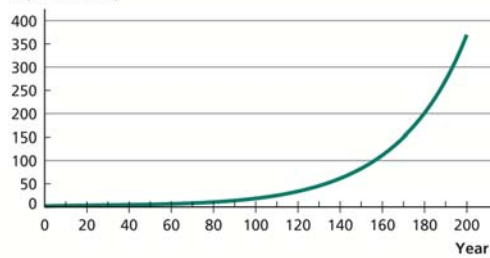
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The Effect of Using a Ratio Scale

X (Linear scale)



The formula for a trend:

$$Y_{t+1} = Y_t(1+g)$$

$$Y_{t+2} = Y_{t+1}(1+g) = Y_t(1+g)(1+g)$$

$$= Y_t(1+g)^2$$

$$Y_{t+n} = Y_t(1+g)^n$$

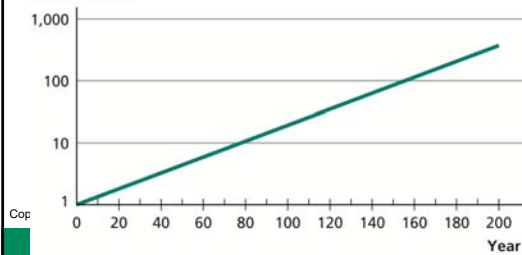
Let's extract the logarithm on both sides:

$$\text{Log}(Y_{t+n}) = \text{log}(Y_t(1+g)^n)$$

$$\text{Log}(Y_{t+n}) = \text{log}(Y_t) + n\text{log}(1+g)$$

$$\text{Log}(Y_{t+n}) = \text{log}(Y_t) + n \cdot g$$

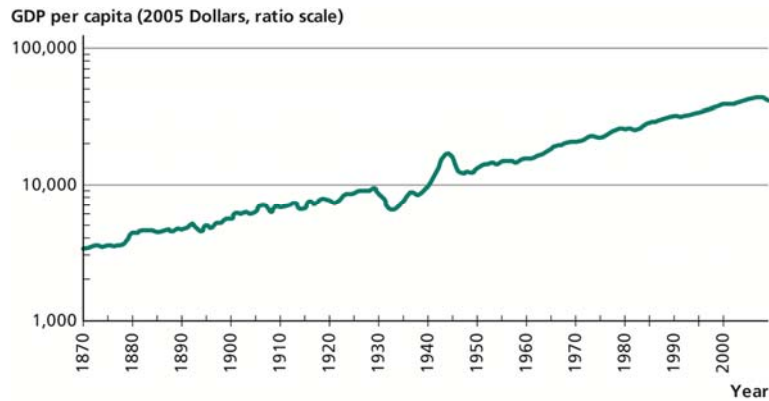
X (Ratio scale)



Cap

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GDP per Capita in the United States, 1870–2009 (Ratio Scale)



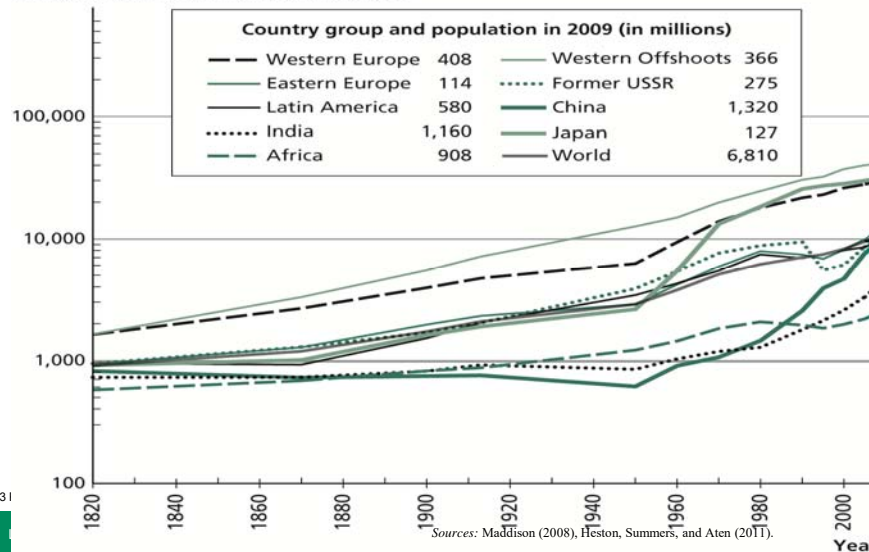
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GDP per Capita by Country Group, 1820–2008

GDP per Capita (2005 Dollars, ratio scale)



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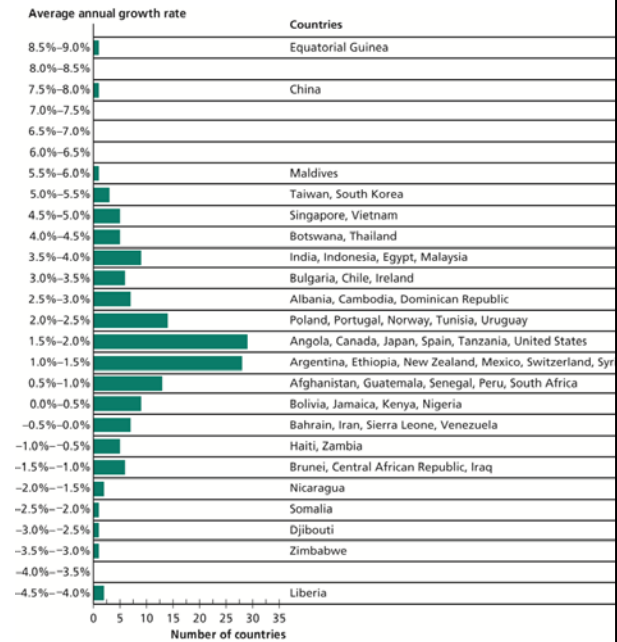
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Sources: Maddison (2008), Heston, Summers, and Aten (2011).

ON

The Distribution of Growth Rates, 1975–2009

Source: Heston, Summers, and Aten (2011).

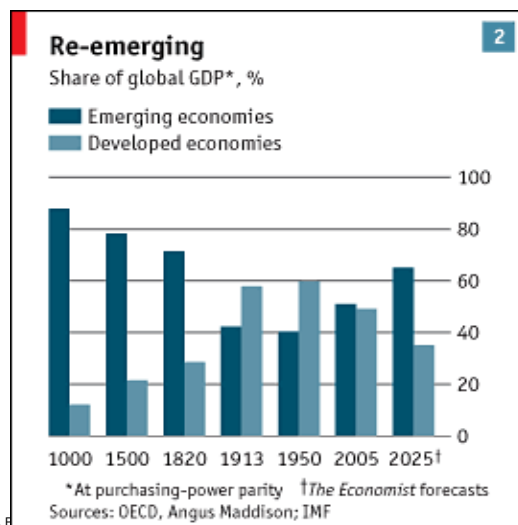


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Re-emerging economies

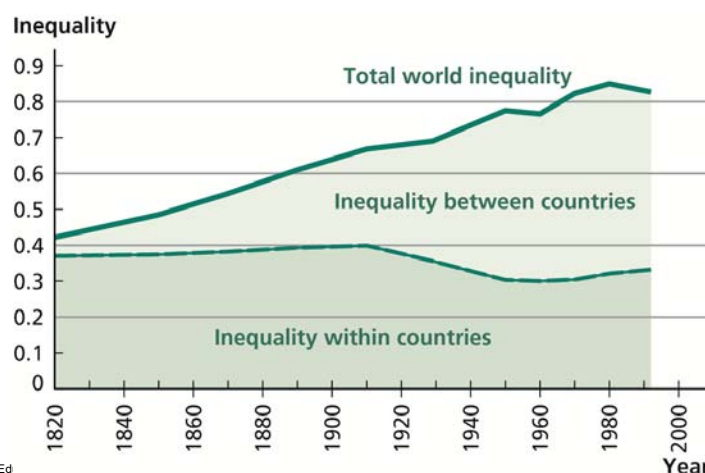


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World Inequality and Its Components, 1820–1992



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Source: Bourguignon and Morrison (2002).

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Human development index

- The Human Development Index (HDI) was created to emphasize that expanding human choices should be the ultimate criteria for assessing development results.
- Economic growth is a means to that process but is not an end in itself.
- The HDI can also be used to question national policy choices, asking how two countries with the same level of Gross National Income (GNI) per capita can end up with different human development outcomes.
- The HDI is designed to reflect average achievements in three basic aspects of human development – leading a long and healthy life, being knowledgeable and enjoying a decent standard of living. Instead of bringing additional dimensions and indicators into the HDI, other composite indices were introduced – Inequality-adjusted HDI, Gender inequality index, and gender development index.

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GDP per capita vs Human development index

The two school of thoughts....

The importance of human development and inequality...

See [table](#)

See [gapminder](#)

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Main sources of data at national and international level

Istat

<http://noi-italia.istat.it/>
<http://dati.istat.it/Index.aspx>

Eurostat:

<http://ec.europa.eu/eurostat/statistical-atlas/gis/viewer/?year=2014>
<http://ec.europa.eu/eurostat/data/database>
http://ec.europa.eu/europe2020/europe-2020-in-your-country/index_en.htm

Oecd

<http://stats.oecd.org/Index.aspx>

Worldbank

<https://data.worldbank.org/>

UNCTAD

<http://unctadstat.unctad.org/EN/>

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Learning assessment procedures

- The evaluation will take place through a written exam and two assessments during the course (33.3% each). Students will have to prepare a written report and to present a specific case-study to the class. Students that will write the report and present a study to the class can choose to answer just one out of three questions at the final exam. [30 minutes per question].
- The written exam consists of three open questions (closed books) on the topics taught in the course. Students that will not present the report and study to the class will be required to write the entire exam (3 questions instead of 1).

Learning assessment procedures

- The written exam includes open question on a general topic analysed during the course, such as: human capital, technological change, geography...
- The report refers to a short document about of a country/region for a potential customer/employer, be it a public institutions or a private company
- Presentations with slides of about 15 minutes for each student on an issue chosen by students (and approved by the Professor) on European issues/policies

Syllabus for written exam

Economic Growth, D. Weil

PART I: OVERVIEW

Chapter 1: The Facts to be Explained

Chapter 2: A Framework for Analysis

PART II: FACTOR

ACCUMULATION

Chapter 3: Physical Capital

Chapter 4: Population and Economic Growth

Chapter 6: Human Capital

PART III: PRODUCTIVITY

- Chapter 7: Measuring Productivity
- Chapter 8: The Role of Technology in Growth

PART IV: FUNDAMENTALS

- Chapter 12: Government
- Chapter 14: Culture
- Chapter 15: Geography, Climate, and Natural Resources

PART V: CONCLUSION

- Chapter 17: What We Have Learned and Where We are Headed

In italics only reading. No appendices

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Country report

3/5 pages, cover included, if any

One page devoted to a statistical overview of the socio-economic background

Eligible countries

- EU28
- Enlargement candidates
 - » [Albania](#), [Bosnia and Herzegovina](#), [the former Yugoslav Republic of Macedonia](#), [Iceland](#), [Kosovo*](#), [Montenegro](#), [Serbia](#), [Turkey](#)
- European Neighbouring countries
 - » [Algeria](#), [Armenia](#), [Azerbaijan](#), [Belarus](#), [Egypt](#), [Georgia](#), [Israel](#), [Jordan](#), [Lebanon](#), [Libya](#), [Moldova](#), [Morocco](#), [Palestine](#), [Syria](#), [Tunisia](#), [Ukraine](#)

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EUROPEAN NEIGHBOURHOOD POLICY

EU cooperation with its neighbours



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Cases

- Report on a EU country for an extra EU multinationals
- Report on a candidate country for a government body of a EU country
- Report on a EN country for an ONG based in EU
- Report on either a candidate or a EN country for EU institutions (a DG for example)
- Others?

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Report delivery

- Report: pdf file via mail to stefanousai@unica.it
- File name: surname_name.pdf
- Mail subject: country report
- Mail text: specification of the case (see above)
- deadline: end of January?

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Report: examples

- [Example 1](#)
- [Example 2](#)
- [Example 3](#)
- [Example 4](#)

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Presentations

- Groups, 3/4 people
- Mixed group
 - 5 groups of 4 students + 1 group of 5 students
- Theme: European issue/policy (your/our choice)
- 45/60 minutes
- Group and Individual assessment
- December/January?

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The European Semester

The European Semester provides a framework for the coordination of economic policies across the European Union. It allows EU countries to discuss their economic and budget plans and monitor progress at specific times throughout the year.

The framework

The European Semester: why and how
Macroeconomic imbalance procedure
Stability and Growth Pact
The EU's economic governance explained

European Semester timeline

Setting the priorities
The analysis phase
National Reform Programmes and
Stability/Convergence Programmes
EU country-specific recommendations
Putting recommendations into practice
Timeline: visual presentation
The autumn package explained

Thematic factsheets

Business environment
Financial stability
Green economy
Public administration
Labour markets and skills
Social protection and cohesion
Fiscal stability

Presentations: standard outline

- Introduction: motivations, aims and summary
- Main analytical background and framework
- Main empirical scenario
- Focus
- Conclusions

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Presentations: examples

- [Example 1](#)
- [Example 2](#)

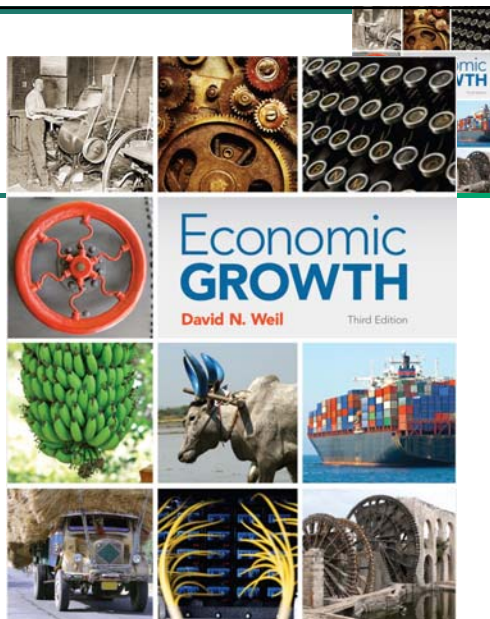
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Chapter 2

A FRAMEWORK FOR ANALYSIS



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1-56

The Economics of Sylvania and Freedonia: A parable



- Why is Sylvania so much poorer than its neighbour, Freedonia?
- You are hired as a consultant by the king of Sylvania: you start by computing GDP
- Same population...one eighth of the GDP
 - Capital
 - investment...saving...(32 times higher in Freedonia than in Sylvania): investment rate 4 times higher... but this would produce a difference in GDP per capita of a multiple of only 2

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1-57

Other potential factors



- Productivity
 - Technology: the available knowledge on how to combine inputs to produce output
 - Sylvania is 35 years behind: this explains another part of the gap but not all...
- Efficiency
 - How the available technology and inputs are actually used...
- Fundamentals
 - Government and Institutions
 - Income inequality
 - Culture
 - Geography and natural resources

This may be the crucial factor to explain the differences in GDP per capita between Sylvania and Freedonia

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1-58

From Parable to practice



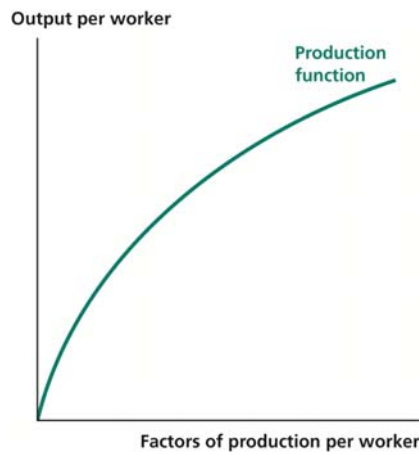
- Two main causes for growth
 - The accumulation of inputs
 - Productivity
 - Differences in technology
 - Differences in efficiency

It is important to distinguish between proximate causes (production factors, technology and efficiency) and ultimate causes (fundamentals)

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1-59

The Production Function

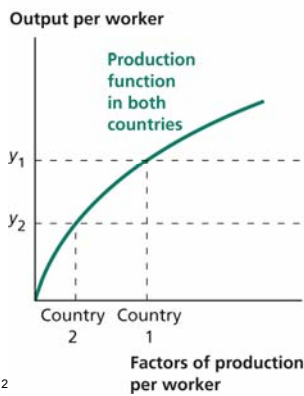


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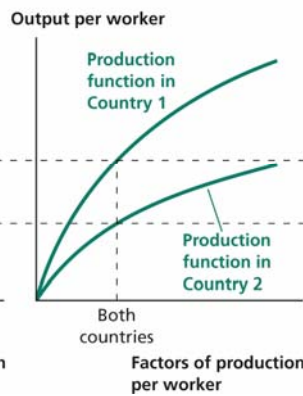
Possible Sources of Differences in Output per Worker



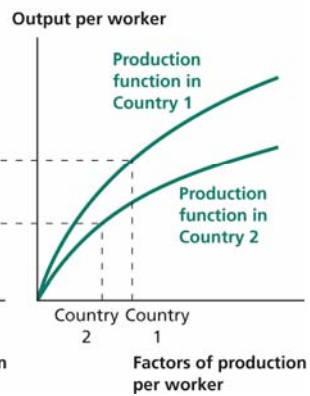
(a) Differences due to factor accumulation



(b) Differences due to productivity

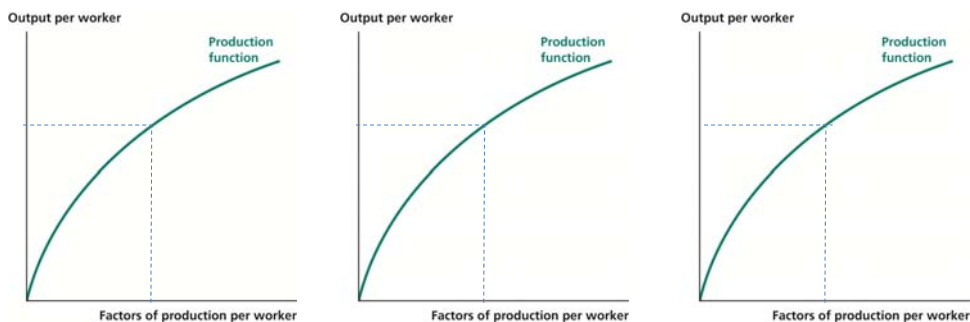


(c) Differences due both to productivity and factor accumulation



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From income levels to growth rates

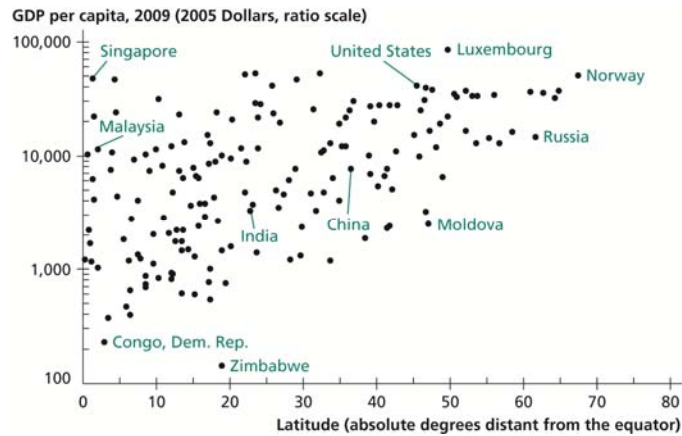


- What happens to Sylvania if the king is deposed and democracy replaces monarchy such as the two countries have the same fundamentals?
- Does this imply that the two countries have immediately the same GDP pc?

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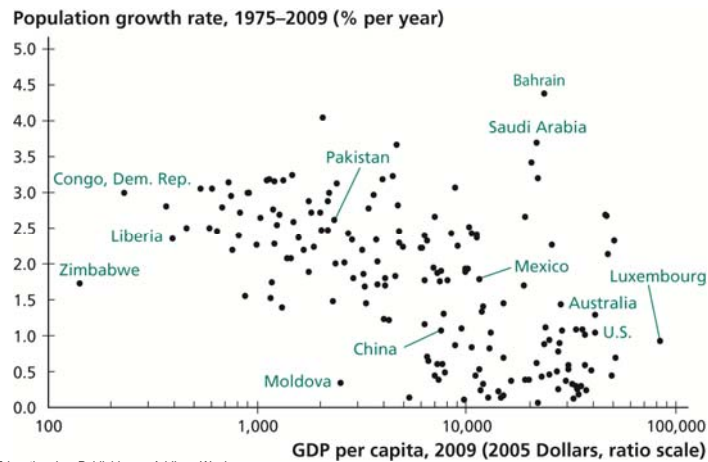
What can we learn from data: Relationship between Latitude and Income per Capita



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What can we learn from data: Relationship between Income per Capita and Population Growth



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