

MACRO RISK, ADVANCED COUNTRY CHALLENGES AND THE SHIFTING STRUCTURE OF THE GLOBAL ECONOMY

Michael Spence

Boroli Lecture

Bocconi

May 2012

The Growth Report
Strategies for Sustained Growth
and Inclusive Development

MICHAEL SPENCE

Le colossali asimmetrie fra paesi avanzati e paesi in via di sviluppo si stanno riducendo. Due mondi distinti convergono. Il futuro della crescita è legato alla capacità delle prossime generazioni di comprendere il modo in cui evolverà la nostra reciproca dipendenza e di trovare modi creativi per gestirla e governarla.

La convergenza inevitabile

UNA VIA GLOBALE PER USCIRE DALLA CRISI

28 ANTICORPI **GLF** LATERZA



Council on Foreign
Relations

FOREIGN AFFAIRS

How America Can Compete

Globalization and Unemployment
Michael Spence

The Risks and Rewards of
Health-Care Reform
Peter Orszag

Learning From the Germans
Steven Rattner

Does Obama Have
a Grand Strategy?
Daniel Drezner

WORKING PAPER

The Evolving Structure of the American Economy and the Employment Challenge

Michael Spence and Sandile Hlatshwayo
March 2011

Periodic Systemic Risk, Multiple Equilibria and Bi-Modal Distributions

Viewpoint

March 2012

Mohamed A. El-Erian, A. Michael Spence

A. Michael Spence

Market Signalling

Informational Transfer in Hiring
and Related Screening Processes

Systemic Risk, Multiple Equilibria
and Market Dynamics – What You
Need to Know and Why

Topics

- Prospects and macro risk in Europe
- Structural challenges in the advanced countries
- Emerging market growth and partial decoupling
- The middle income transition in China
- Disruptive technologies

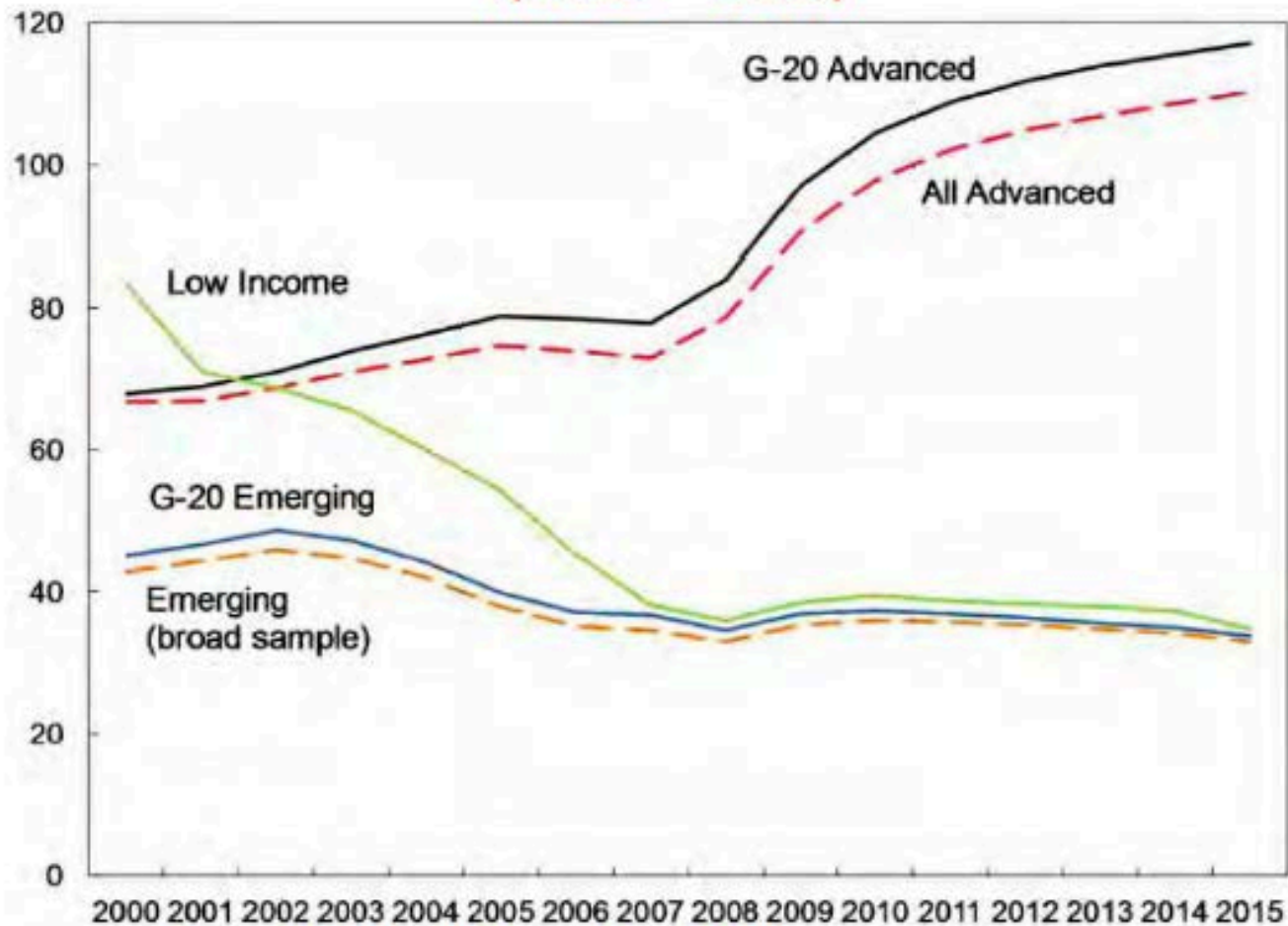
Defective or Unsustainable Growth Models with Built In Decelerators

- Import substitution
- Excess economic diversification
- Natural resource curse
- Excess consumption (private or gov't or both)
 - Deficient investment
 - Usually excess debt
 - Excess reliance on domestic demand for growth and employment
 - USA, UK, Ireland, Italy, Spain, Greece, Portugal
- Excess investment
 - Low return trap
 - China
- Resource and environmental constraints on the size of the global economy
 - Global and longer term

A Perfect Storm: Advance Country Distress

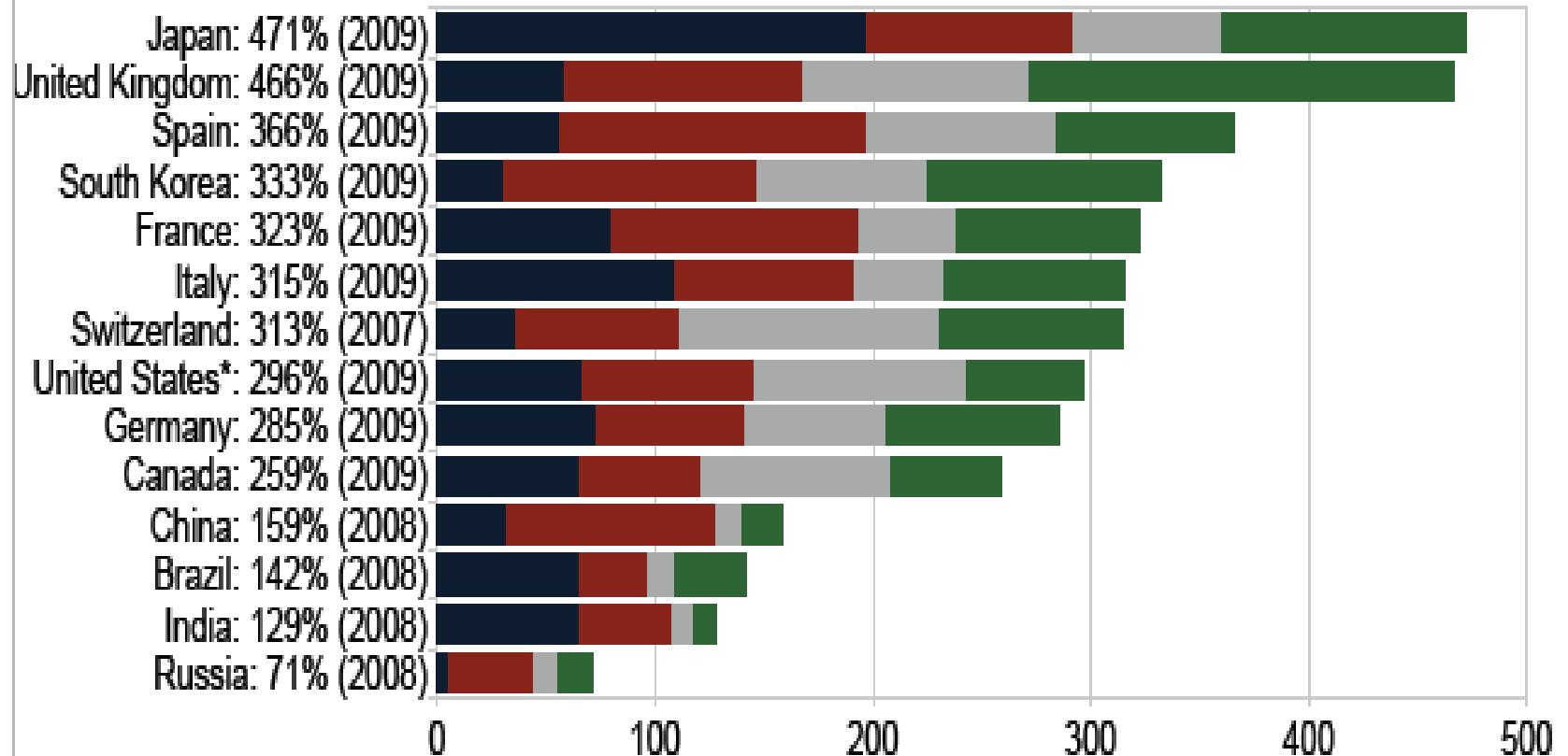
- Massive failure of counter-cyclicality in private and public sectors
- Involuntary build-up of liabilities
 - On autopilot
 - With build up of imbalances and violent reversal in balance sheet crisis and downturn
 - IMF – 80% of deficit increases due to automatic stabilizers
- Growth Models with built-in decelerators
- Demographic headwinds for fiscal rebalancing and growth

G20 Countries: General Government Debt to GDP Ratios (2000 – 2015)



Source: IMF, *Fiscal Monitor*, May 2010

Total Debt in Selected Countries around the World, latest data available, as percent of GDP, by sector



Black – government

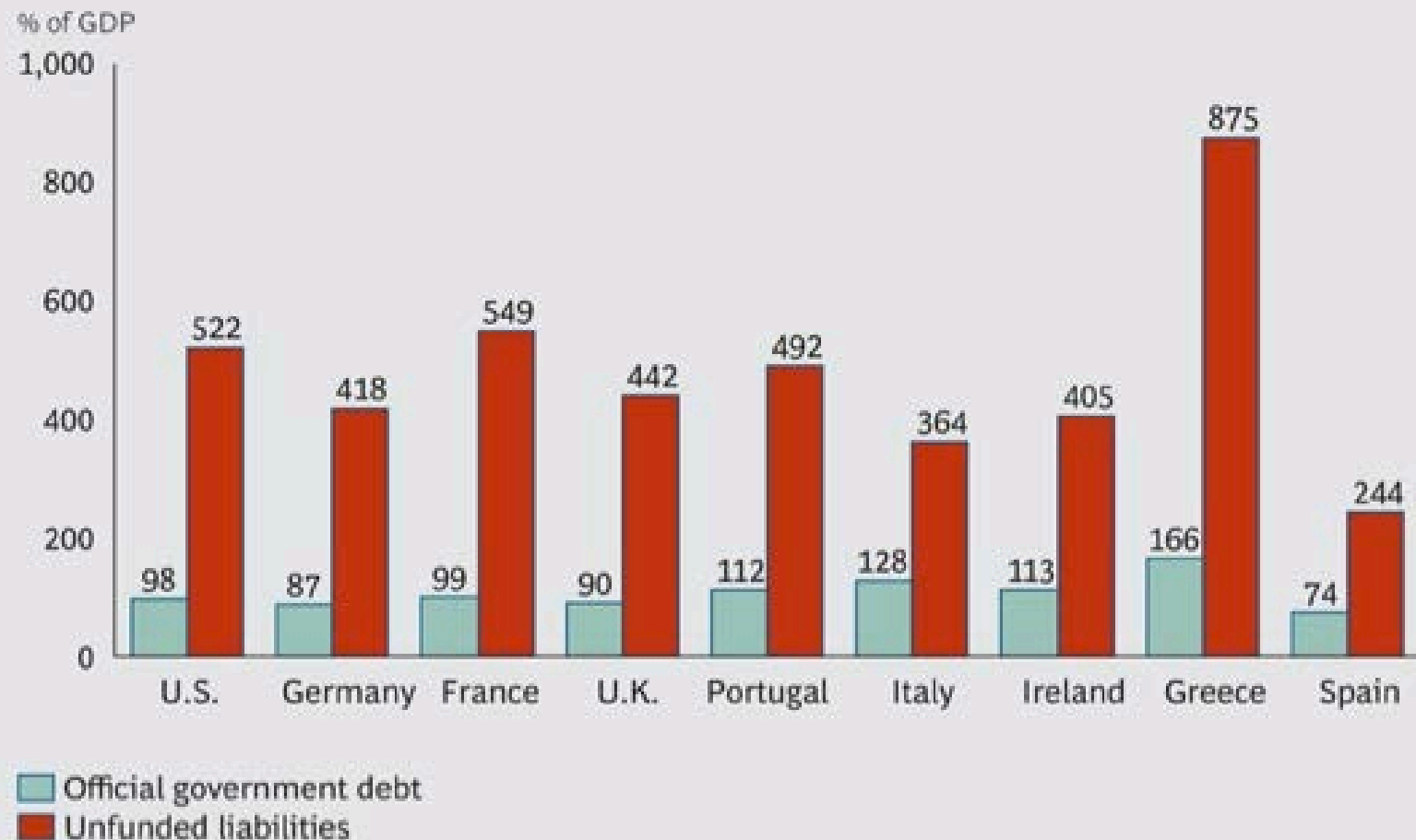
Red – non-financial corporate

Grey – household

Green – financial institutions

EXHIBIT 1 | Net Expected Tax Revenues Are Not Adequate to Continue Funding Current Social Policies

Unfunded liabilities and official government debt



Sources: Jagadeesh Gokhal, "Measuring the Unfunded Obligations of European Countries," 2009; OECD.

Note: Unfunded liabilities are the difference between the projected cost of continuing current government programs and net expected tax revenues. Government debt based on 2011 forecasts from the OECD.

Extreme Macro Risk and Uncertainty

- Interests are aligned globally
- Multiple players
- Resources, competence and will framework
- Known “unknowns”
 - Contagion for example
 - Clear differences (between Italy and Spain versus Greece and Portugal)
 - But we have the examples from 97-98 “Asian” currency crisis
 - Lender of last resort circuit breaker (ECB and IMF)

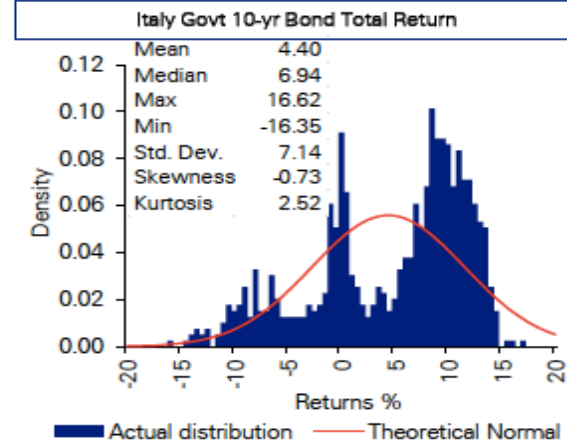
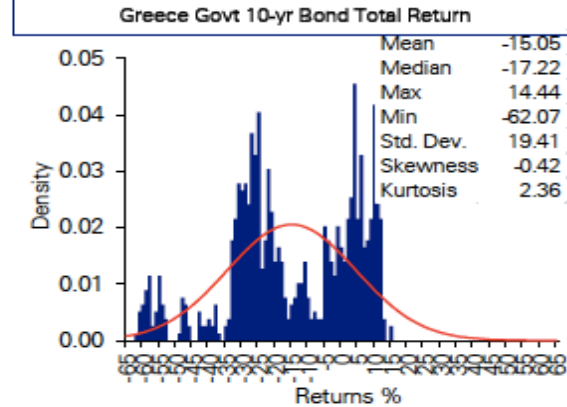
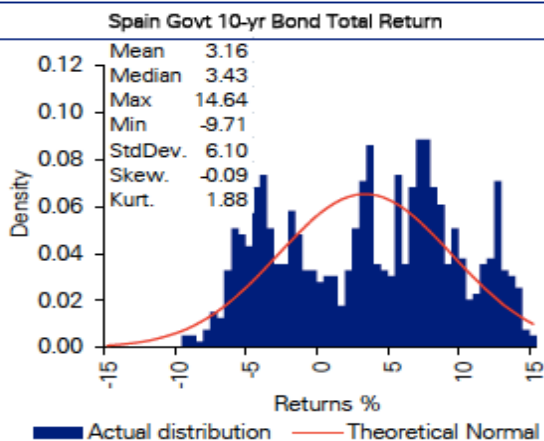
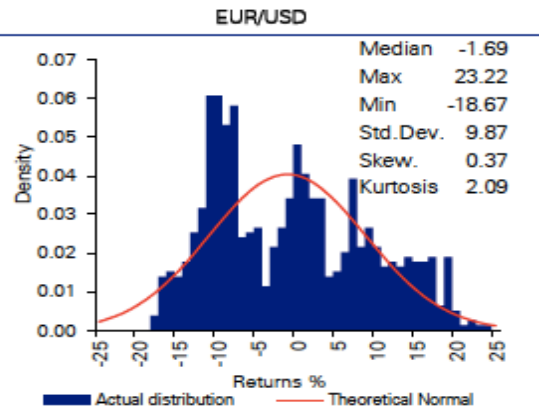
Multiple Equilibria and Bi-Modal Distributions

- Expectations or beliefs are explicitly part of the model – endogenous
- Changes in expectations produce large changes in incentives, behavior and market outcomes
- Accurate versus self-confirmed in the context of that market structure
- Produces multiple equilibria
- Anchors and policy circuit breakers sometimes eliminate “bad” equilibria
 - Bank runs
- Eurozone
 - What are the circuit breakers?
 - Successful reform in Italy and Spain
 - Contagion control from Greek Exit
 - ECB intervention to control yields while reforms take effect

Bi-Modal Distributions

Euro and Euro Area government bond markets

Rolling 1-yr returns from Jan '08 to Jan '12



Source: Bloomberg Finance LP, Standard & Poor's, DBIQ, Deutsche Bank GMR

Macro Risk Across the Atlantic

Euro-dollar Exchange Rate Volatility



Robert Mundell

The international monetary system has become a major impediment to stability, investment and globalization

Eurozone is Current Center of Global Macro Risk

- Mostly likely scenario
 - Eurozone core holds together
 - Periphery (Greece and Portugal) exits
 - No growth model without a reset of the terms of trade
- Downside Scenario (The other “equilibrium”)
 - The eurozone core comes apart – with a reform failure or a lack of support from the center
 - Keys are Italy and Spain with support from the ECB and IMF
- Reasons
 - The eurozone core and the key countries have the resources and the competence
 - The big question mark is the political will – at both national and EU levels
 - Resetting these economies for fiscal stability, growth and employment momentum is painful and costly
 - The issue of political will is really a question of how to fairly distribute these costs

Italy and Eurozone Stability

- Third largest sovereign debt market in the world
- Debt to GDP 120% (second to Japan)
- Highly vulnerable to escalating yields
- But (see graph) overall debt OK
- Household debt low
- Household net worth very high
- Dynamic northern economy
- New government is highly competent
- The issues are political will and support from the ECB as implement reforms
 - Market sentiment and the equilibrium shifted dramatically in the summer of 2011
 - Even if reforms are likely to succeed, the rising yields could kill the benefits, and defeat the effort
 - Tension between political moral hazard and avoiding a very bad equilibrium outcome
- This is a classic multiple equilibrium structure

What to Watch

- The status quo is an unstable non-equilibrium
- It will break one way or the other in the next year
- Greece default and exit
- ECB/EU/IMF responses to capital flight and contagion effects
- Then
- Reform momentum in Italy and Spain
- ECB again on controlling yields
- The return of external private capital flows to sovereign debt markets

Eurozone Longer Term

- Monetary union is unstable with
 - Uncertain fiscal discipline
 - Limited and reluctant fiscal transfers
 - Increasing but still limited mobility of people
 - This was known at the start
 - Monetary union was a step in a process
 - The issue is whether the process will move forward or be unwound and move back
- Stabilize first and reform the system later?
- Or do it all at the same time?
- Austerity versus growth

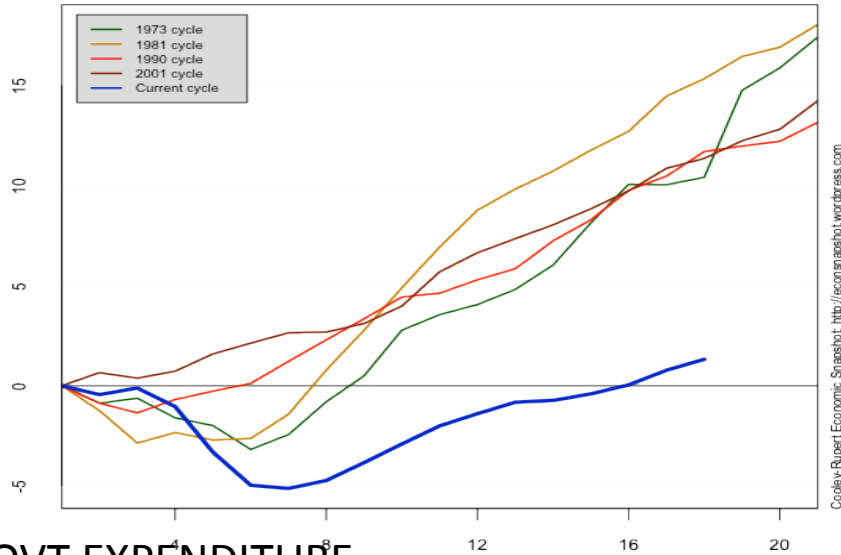
A Brewing Storm in the USA

- After the presidential election
 - The debt ceiling will be hit again
 - The Bush tax cuts expire
 - The payroll tax holiday expires
 - And we don't know if the new president and Congress will be able to do anything
- An investment world without a risk free asset
- Potential instability in in sovereign debt market

GDP

Real Gross Domestic Product

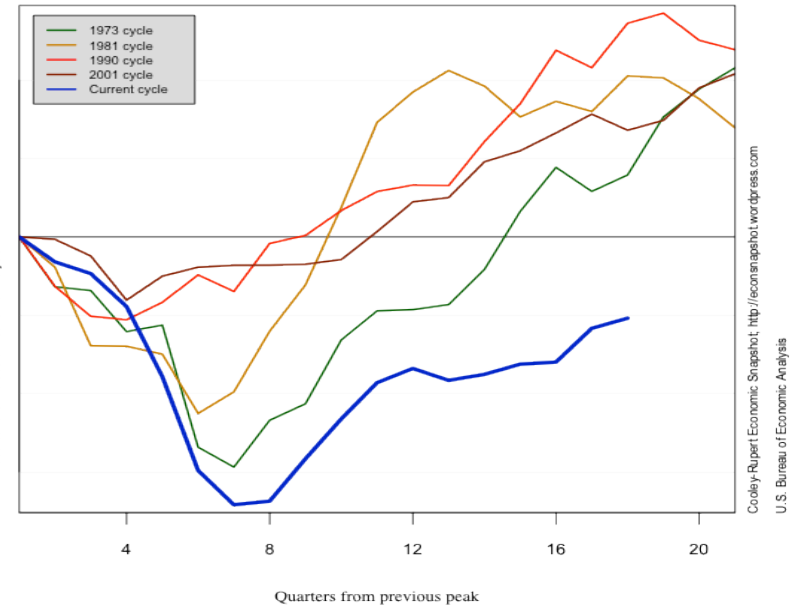
Percentage change from previous peak, Seasonally Adjusted



INVESTMENT

Real Gross Private Domestic Investment

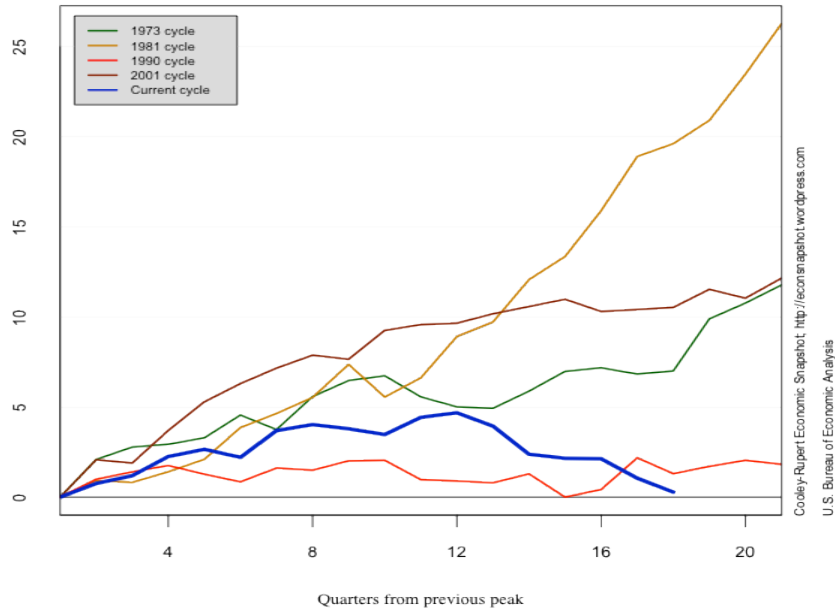
Percentage change from previous peak, Seasonally Adjusted



GOVT EXPENDITURE

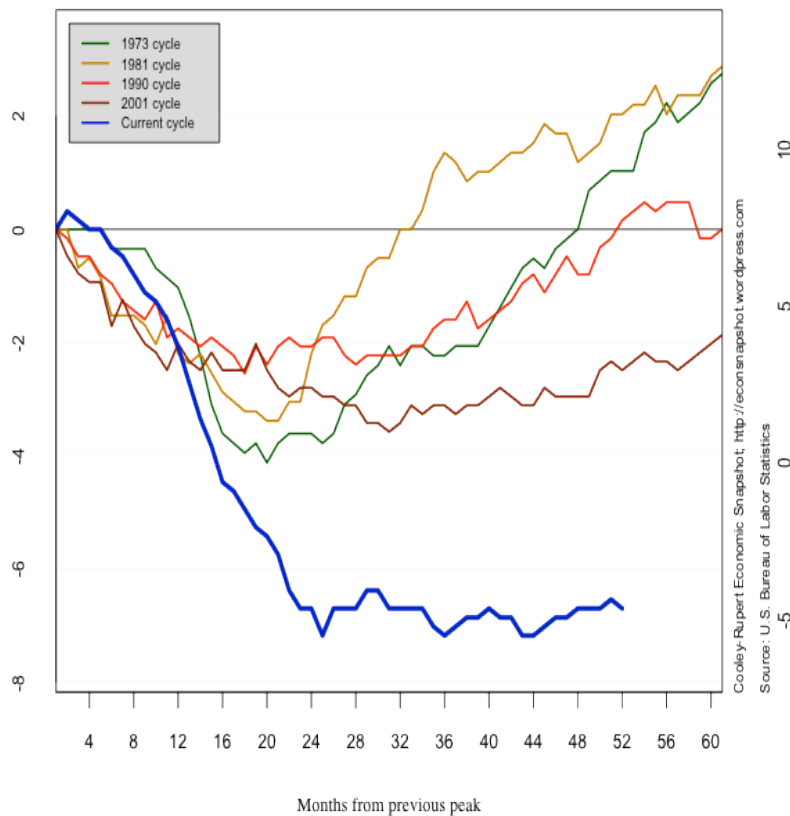
Real Government Consumption Expenditures & Gross Investment

Percentage change from previous peak, Seasonally Adjusted



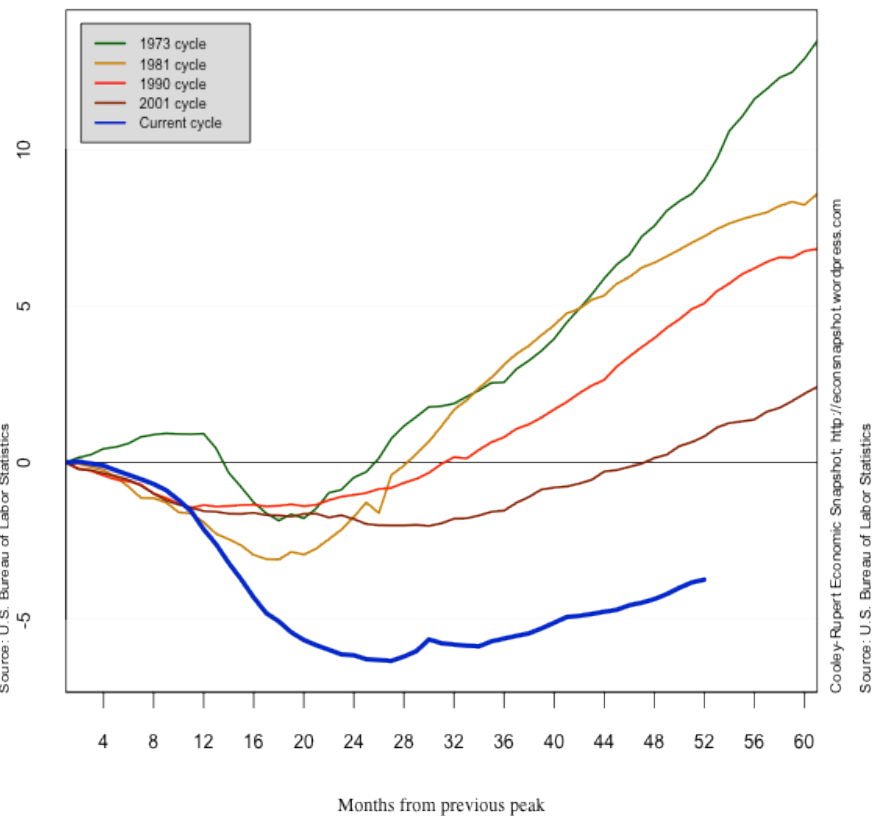
Civilian Employment Population Ratio

Percentage change from previous peak, Seasonally Adjusted



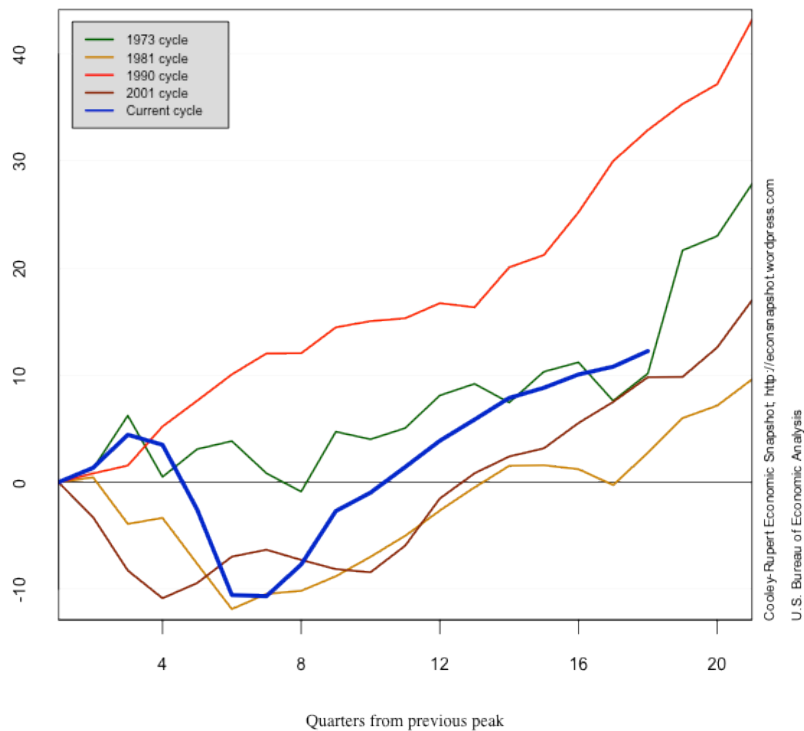
Total Employment - Establishment Survey

Percentage change from previous peak, Seasonally Adjusted, Nonfarm Business



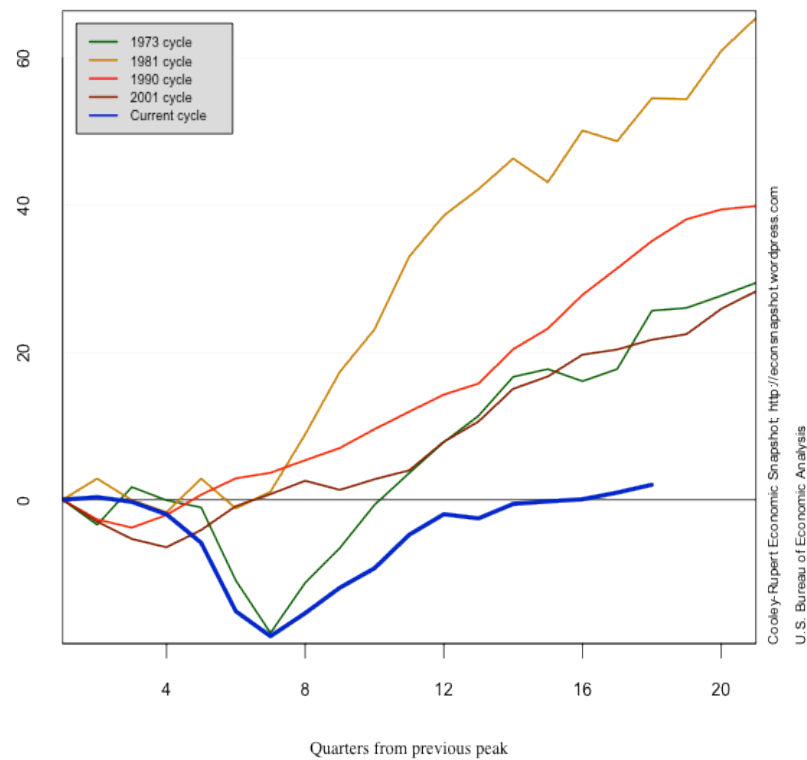
Real Exports of Goods & Services

Percentage change from previous peak, Seasonally Adjusted

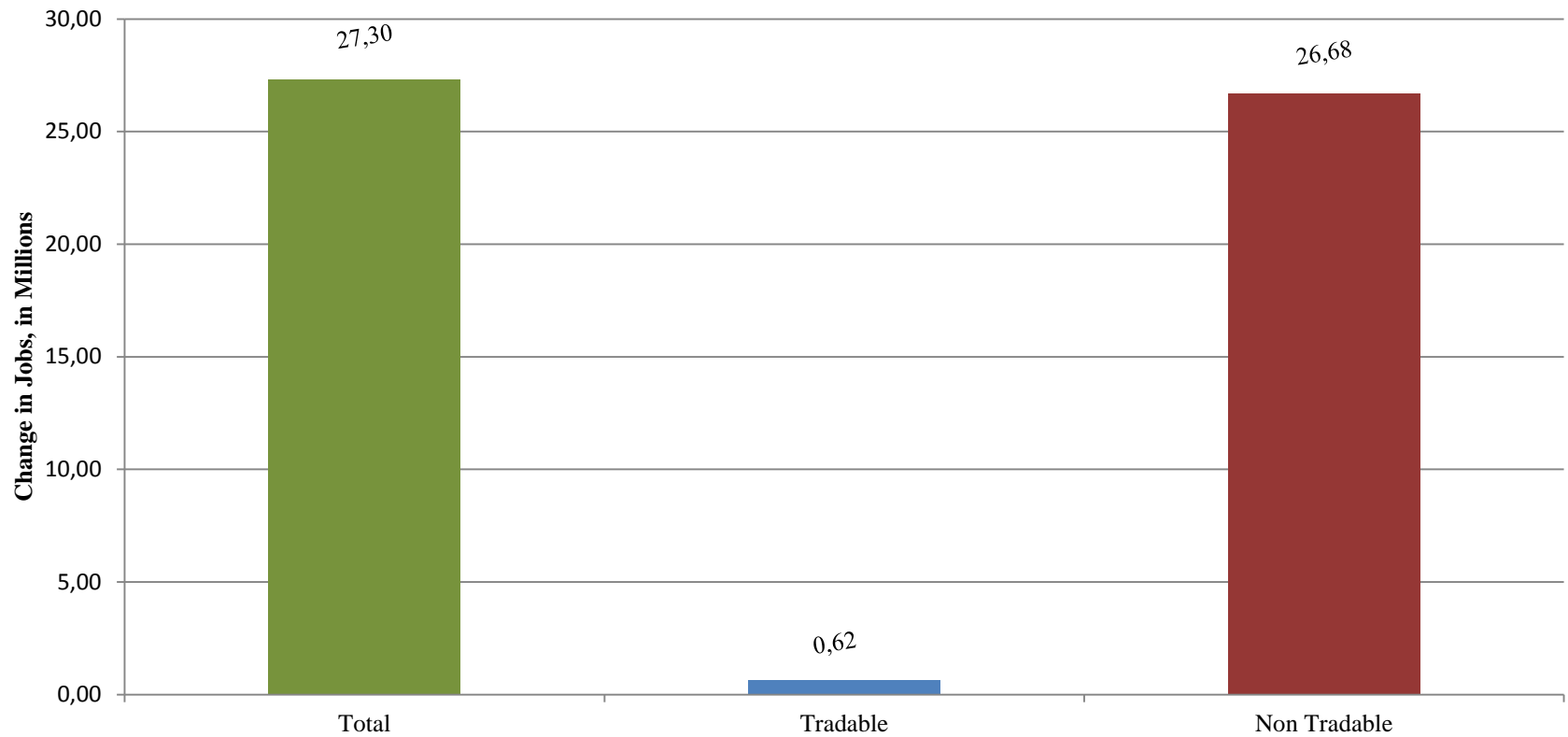


Real Imports of Goods & Services

Percentage change from previous peak, Seasonally Adjusted



Employment in the US 1990-2008



Value Added Does not Show the Same Pattern

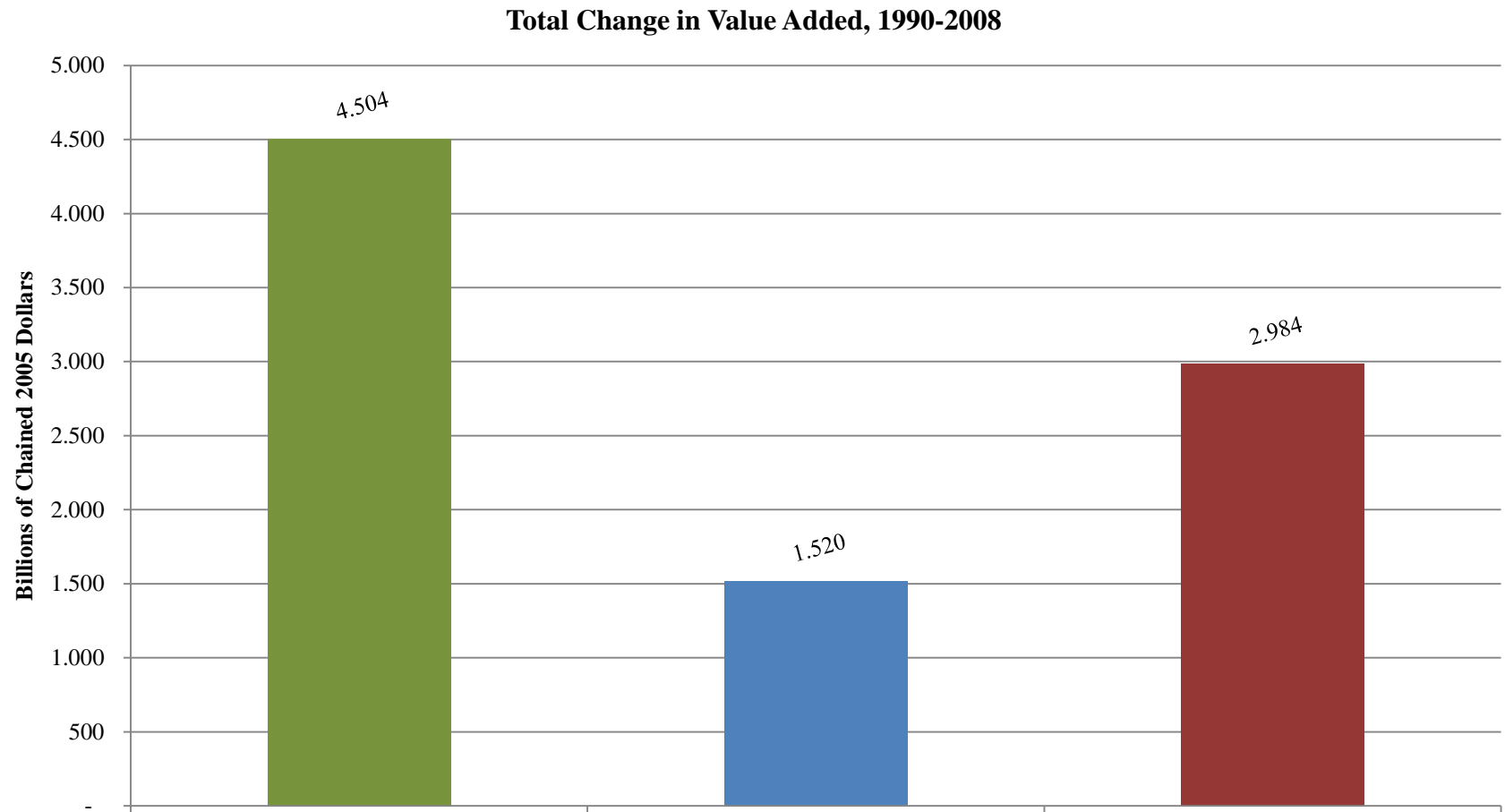
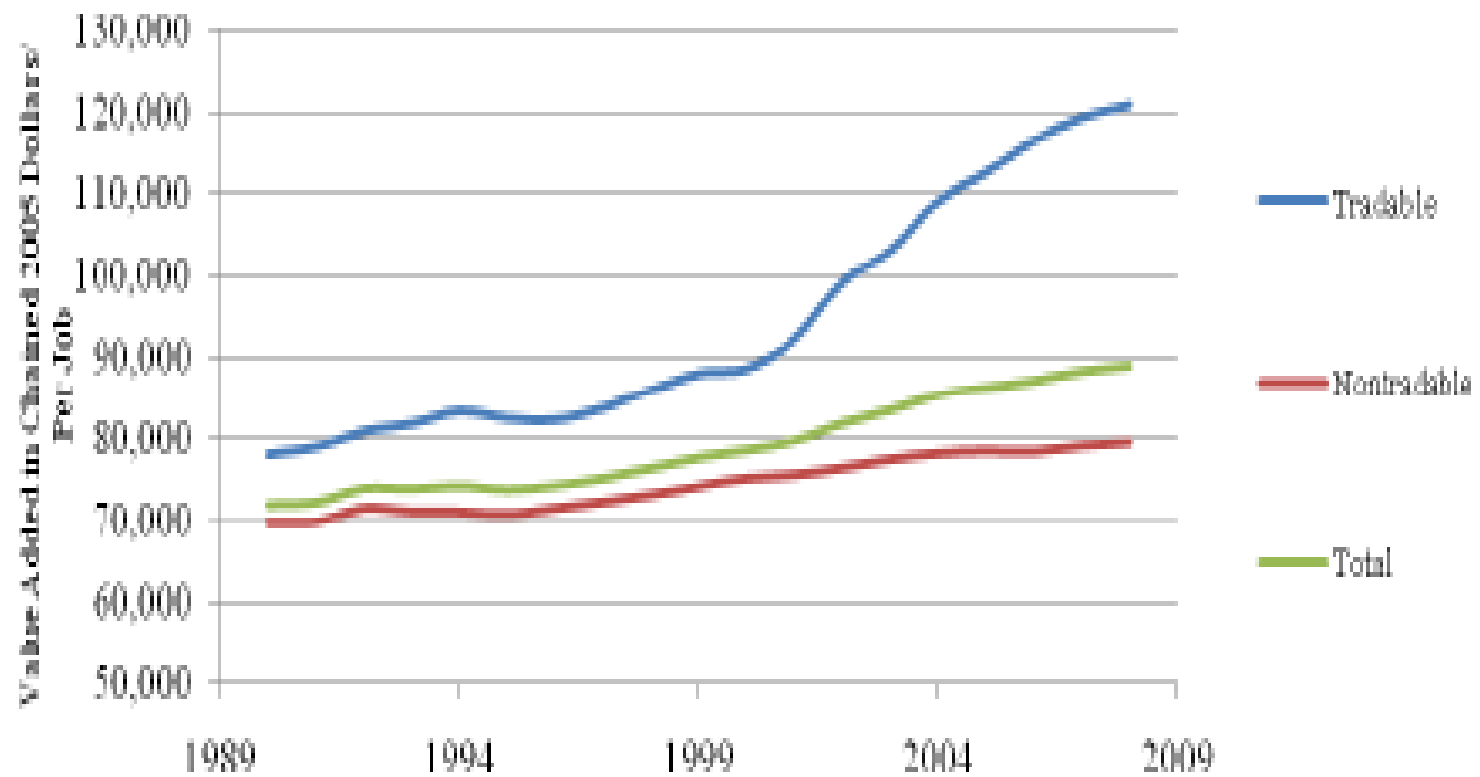
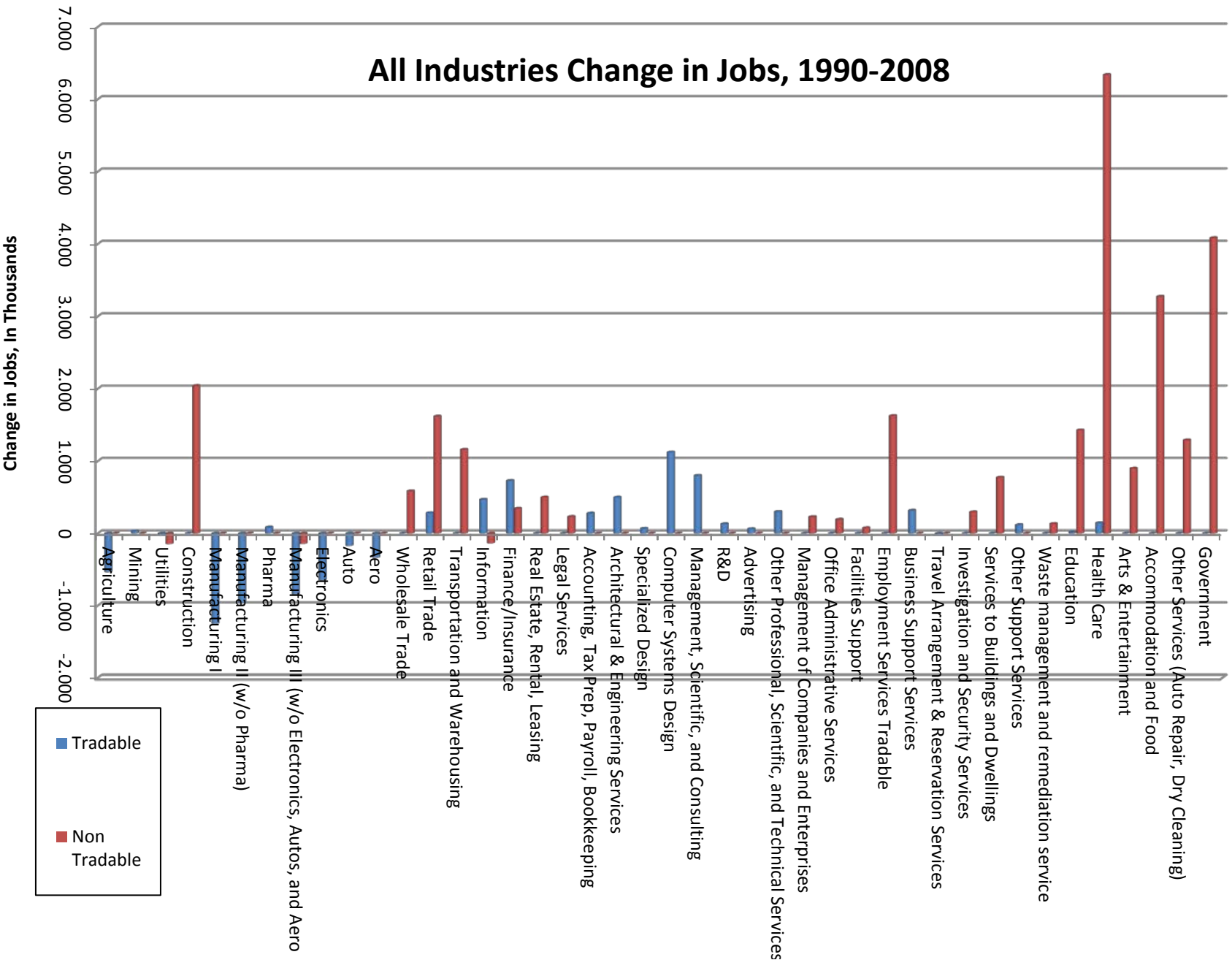


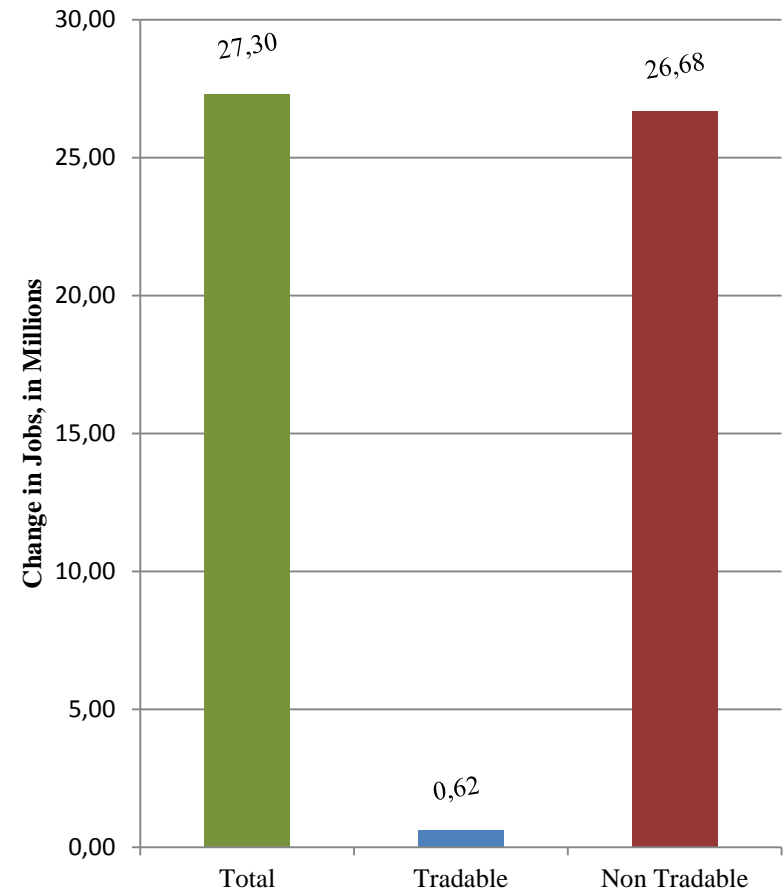
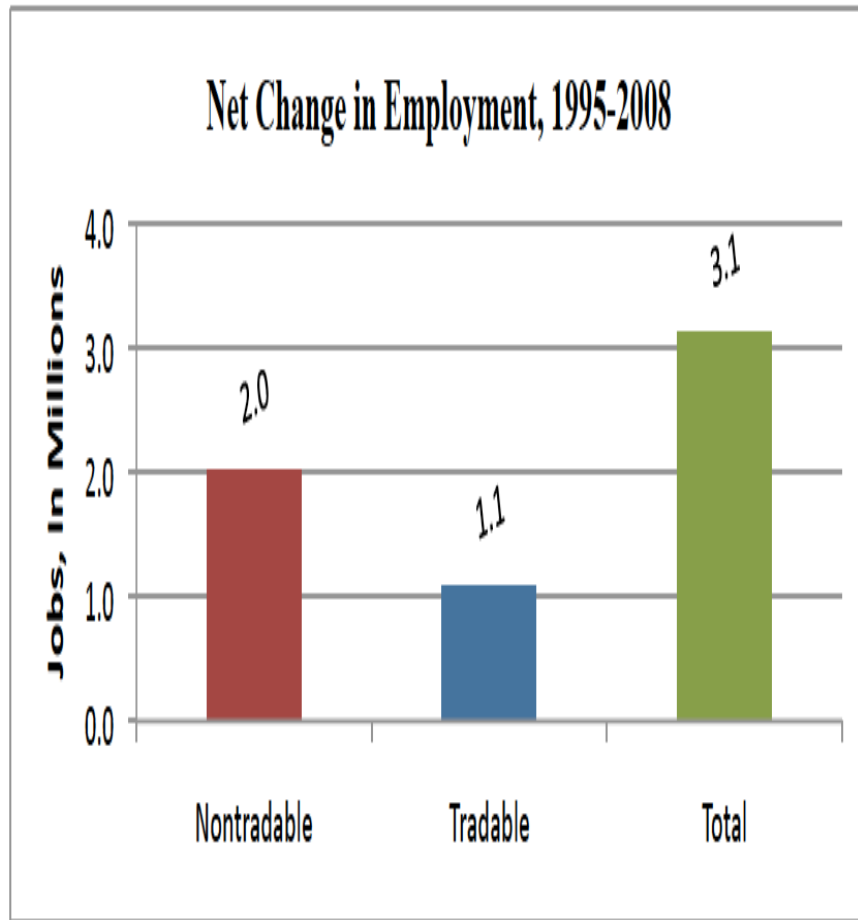
Figure 15. Value Added per Job, 1990–2008



Source: Authors' calculations using Bureau of Economic Analysis and Bureau of Labor Statistics historical data series

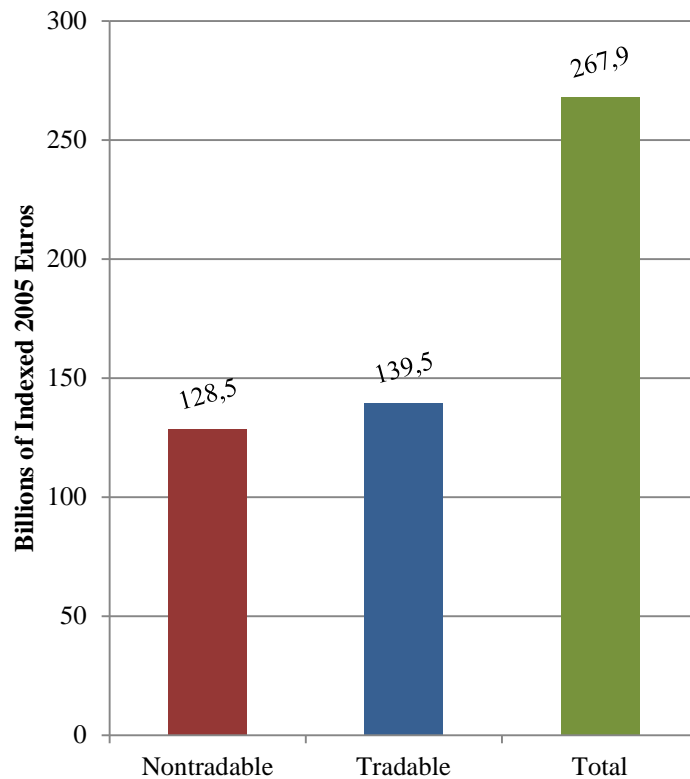


Structural Reform in Germany: Employment Germany (left) and US for Comparison (right)

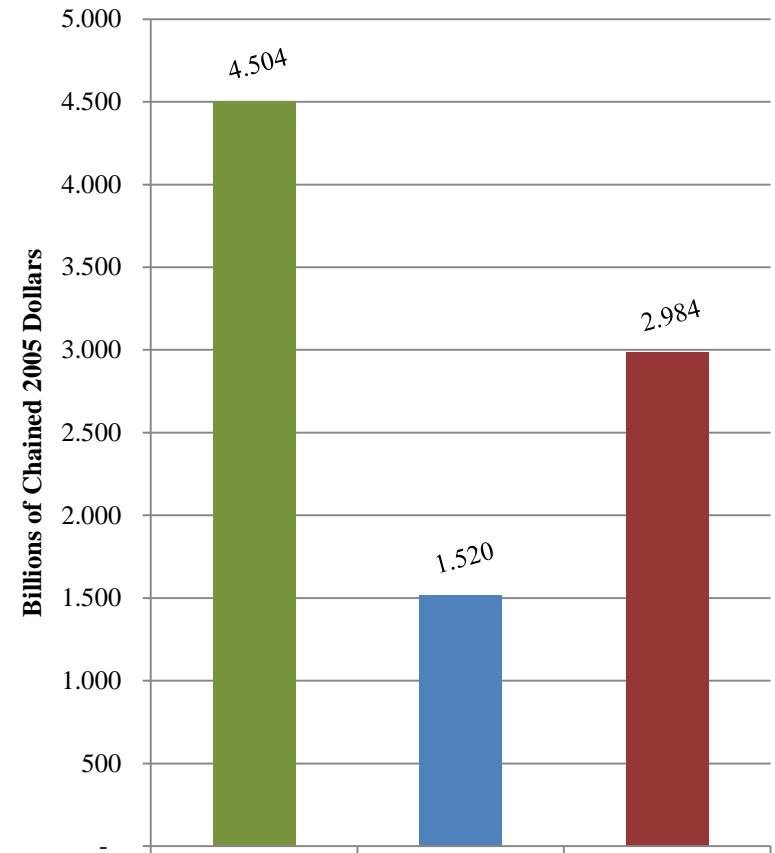


Germany vs US: Value Added

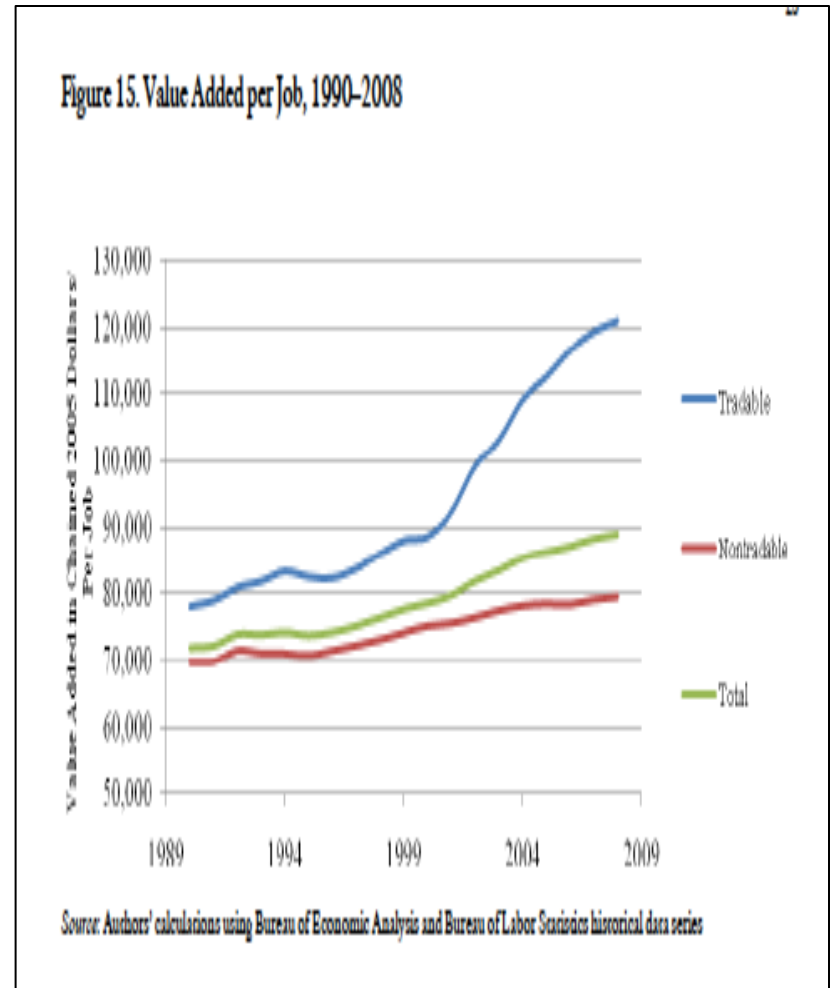
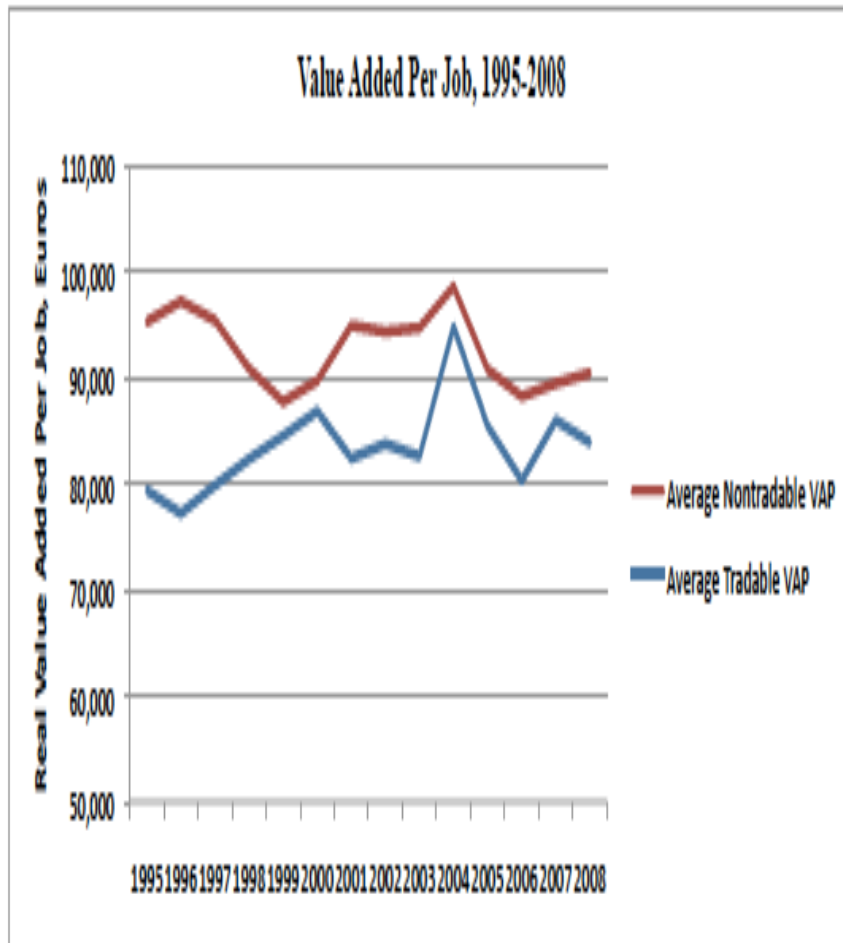
Net Change in Real Value Added (1995-2008)

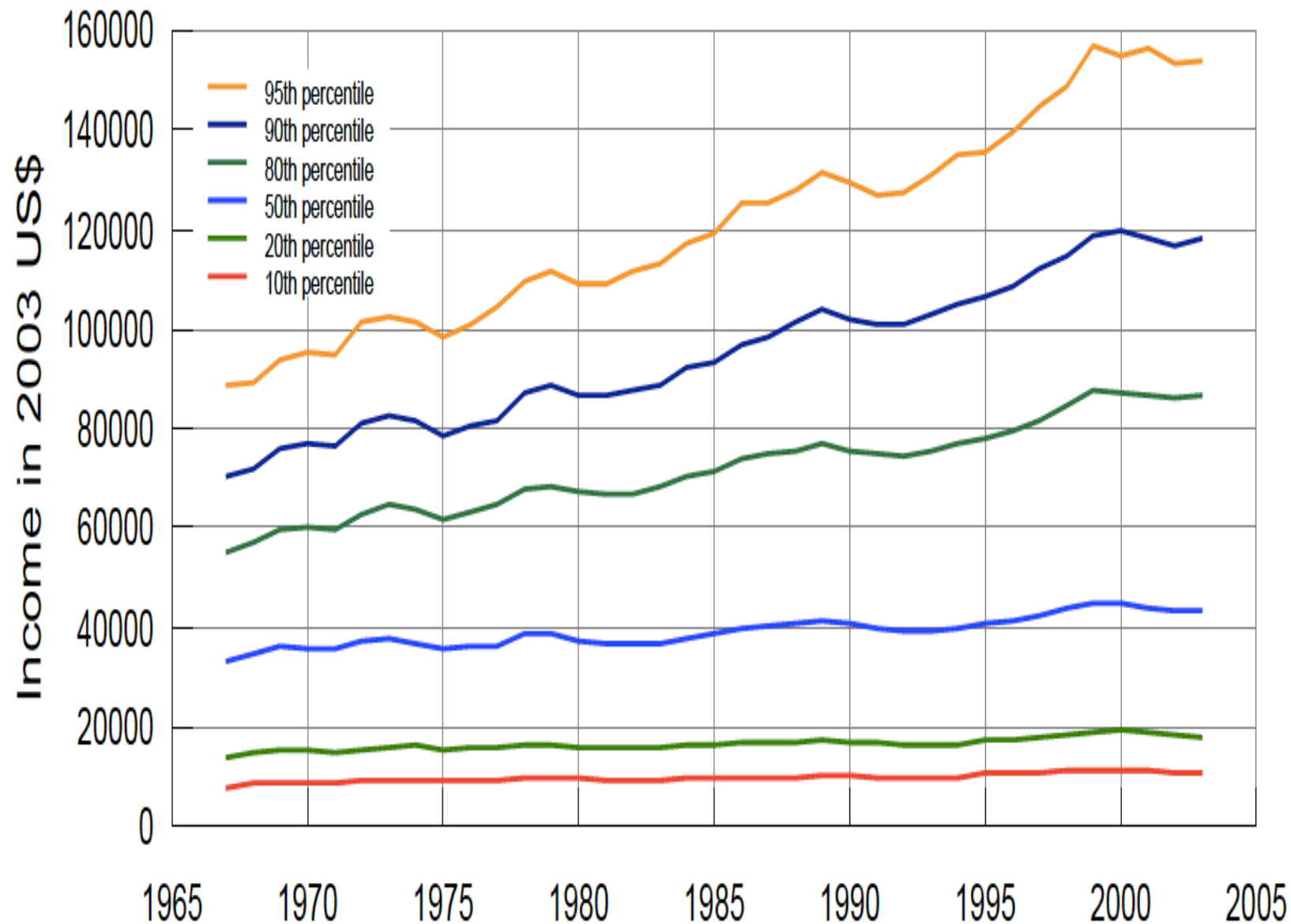


Total Change in Value Added, 1990-2008



Germany and US: Value Added per Person





	COUNTRY	INCOME OF THE RICHEST 10% OVER THE POOREST 10%	INCOME OF THE RICHEST 20% OVER THE POOREST 20%	GINI COEFFICIENT
	Australia	12.5	7	35.2
	Austria	6.9	4.4	29.1
	Belgium	8.2	4.9	33
	Brazil	51.3	21.8	57
	Canada	9.4	5.5	32.6
	China (PRC)	21.6	12.2	46.9
	Denmark	8.1	4.3	24.7
	Finland	5.6	3.8	26.9
	France	9.1	5.6	32.7
	Germany	6.9	4.3	28.3
	Greece	10.2	6.2	34.3
	India	8.6	5.6	36.8
	Israel	13.4	7.9	39.2
	Italy	11.6	6.5	36
	Japan	4.5	3.4	24.9
	South Korea	7.8	4.7	31.6
	Mexico	24.6	12.8	46.1
	Netherlands	9.2	5.1	30.9
	New Zealand	12.5	6.8	36.2
	Norway	6.1	3.9	25.8
	Russia	12.7	7.6	39.9
	South Africa	33.1	17.9	57.8
	Spain	10.3	6	34.7
	Sweden	6.2	4	25
	Switzerland	9	5.5	33.7
	Turkey	16.8	9.3	43.6
	United Kingdom	13.8	7.2	36
	United States	15.9	8.4	40.8

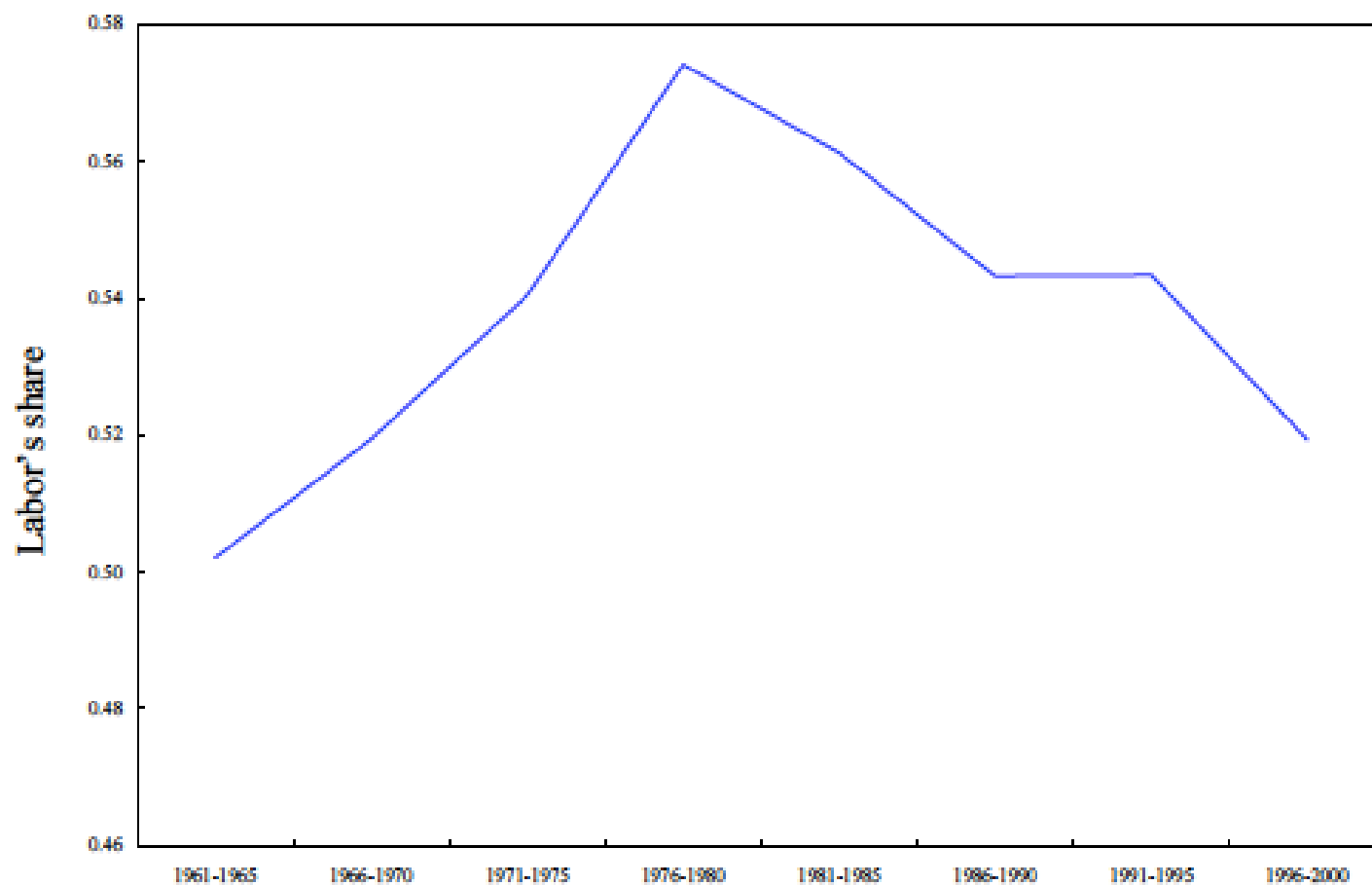
■ Figure I. ■

COMPARING COUNTRIES' AND ECONOMIES' PERFORMANCE

	Statistically significantly above the OECD average
	Not statistically significantly different from the OECD average
	Statistically significantly below the OECD average

	On the overall reading scale	On the reading subscales					On the mathematics scale	On the science scale
		Access and retrieve	Integrate and interpret	Reflect and evaluate	Continuous texts	Non-continuous texts		
OECD average	493	495	493	494	494	493	496	501
Shanghai-China	556	549	558	557	564	539	600	575
Korea	539	542	541	542	538	542	546	538
Finland	536	532	538	536	535	535	541	554
Hong Kong-China	533	530	530	540	538	522	555	549
Singapore	526	526	525	529	522	539	562	542
Canada	524	517	522	535	524	527	527	529
New Zealand	521	521	517	531	518	532	519	532
Japan	520	530	520	521	520	518	529	539
Australia	515	513	513	523	513	524	514	527
Netherlands	508	519	504	510	506	514	526	522
Belgium	506	513	504	505	504	511	515	507
Norway	503	512	502	505	505	498	498	500
Estonia	501	503	500	503	497	512	512	528
Switzerland	501	505	502	497	498	505	534	517
Poland	500	500	503	498	502	496	495	508
Iceland	500	507	503	496	501	499	507	496
United States	500	492	495	512	500	503	487	502
Liechtenstein	499	508	498	498	495	506	536	520
Sweden	497	505	494	502	499	498	494	495
Germany	497	501	501	491	496	497	513	520
Ireland	496	498	494	502	497	496	487	508
France	496	492	497	495	492	498	497	498
Chinese Taipei	495	496	499	493	496	500	543	520
Denmark	495	502	492	493	496	493	503	499
United Kingdom	494	491	491	503	492	506	492	514
Hungary	494	501	496	489	497	487	490	503
Portugal	489	488	487	496	492	488	487	493
Macao-China	487	493	488	481	488	481	525	511
Italy	486	482	490	482	489	476	483	489
Latvia	484	476	484	492	484	487	482	494

Figure 1. Cross-Country Average Labor's Share in National Income
(Ratio of labor income to national income)



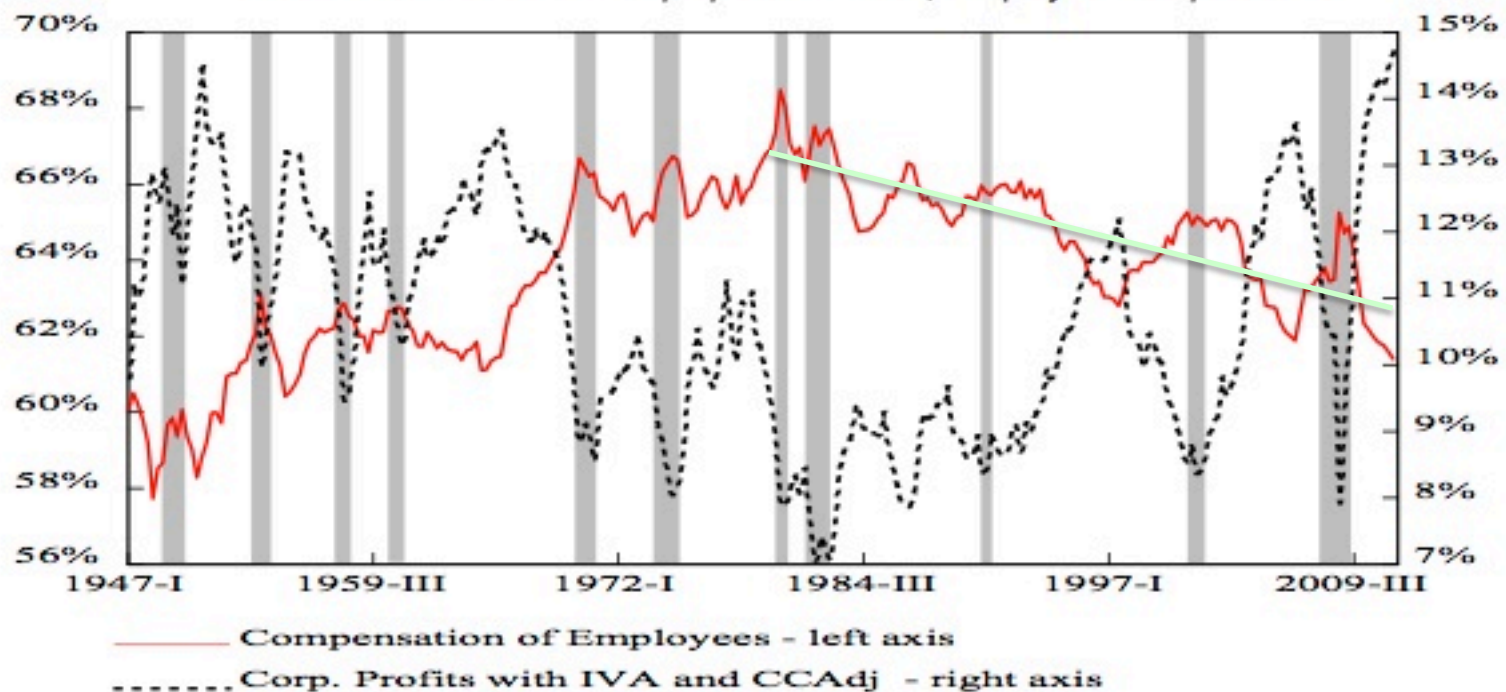
Source: OECD, Structural Analysis Database.

US INCOME SHARES

CHART 7

Corporate Profits and Employee Compensation as a % of national income

Last Points 4Q 2011: corp. profits 14.6%; employee comp. 61.8%



Source: Bureau of Economic Analysis

The Developing Countries: What is the Next Convergence?

- Before the Industrial Revolution
- 200 years of divergence
- Post World War II: Reversal of the Divergence Pattern
- Now mid way through a century of convergence of developing and advanced economies
- The convergence process is causing a massive increase in the size of the global economy
 - Likely to triple in size in the next 25 years

What is High Speed Growth

- In the 200 years of industrialization 2.0% 36 years
- Post war advanced country growth 2.5% 29 years
- High speed developing country growth 7.0 – 10% 10-7 years

Key Elements in Sustained High Growth in Developing Countries

- A functioning market system
- The global economy
 - Knowledge transfer and catch up growth
 - Market Size and specialization
- Very high rates of overall saving and investment
- An effective government that supports and complements the private sector dynamics
- Structural change and economic diversification
- Inclusiveness and a reasonable degree of equity
- Powerful employment engines in the modernizing part of the economy in both the tradable and non-tradable parts of the economy
- Leadership
- A pragmatic, persistent, experimental approach to policy
- Complexity does not cause paralysis

When Does It Fail?

- Leadership
- Failures of governance
 - But the form of governance is not highly correlated with economic performance
- Pursuit of other objectives than growth
- Natural resource distortions of political
- National identity not formed
- Low rates of public sector investment
- “Bad,” meaning misguided strategy
- Inclusiveness failure

Why Does It Matter?

- Growth engines
- Major markets
- Investment opportunities
- But also huge challenges
 - Stability
 - Equity and Distribution
 - Sustainability
 - Natural Resources
 - Unsustainable Growth Models
 - Governance without a dominant West
- This really is a completely “New Normal”

Global Energy Consumption

The Multi-dimensional Adding Up Problem

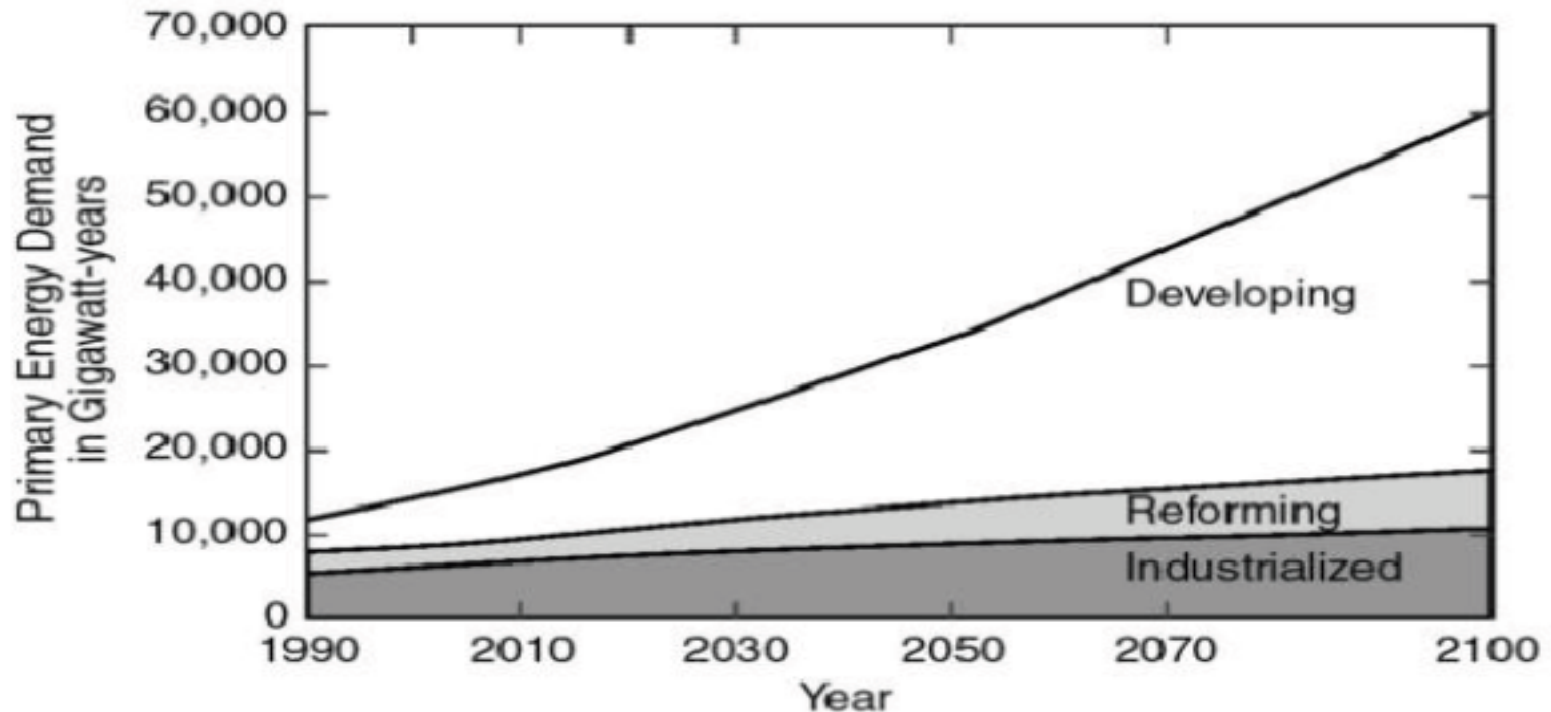


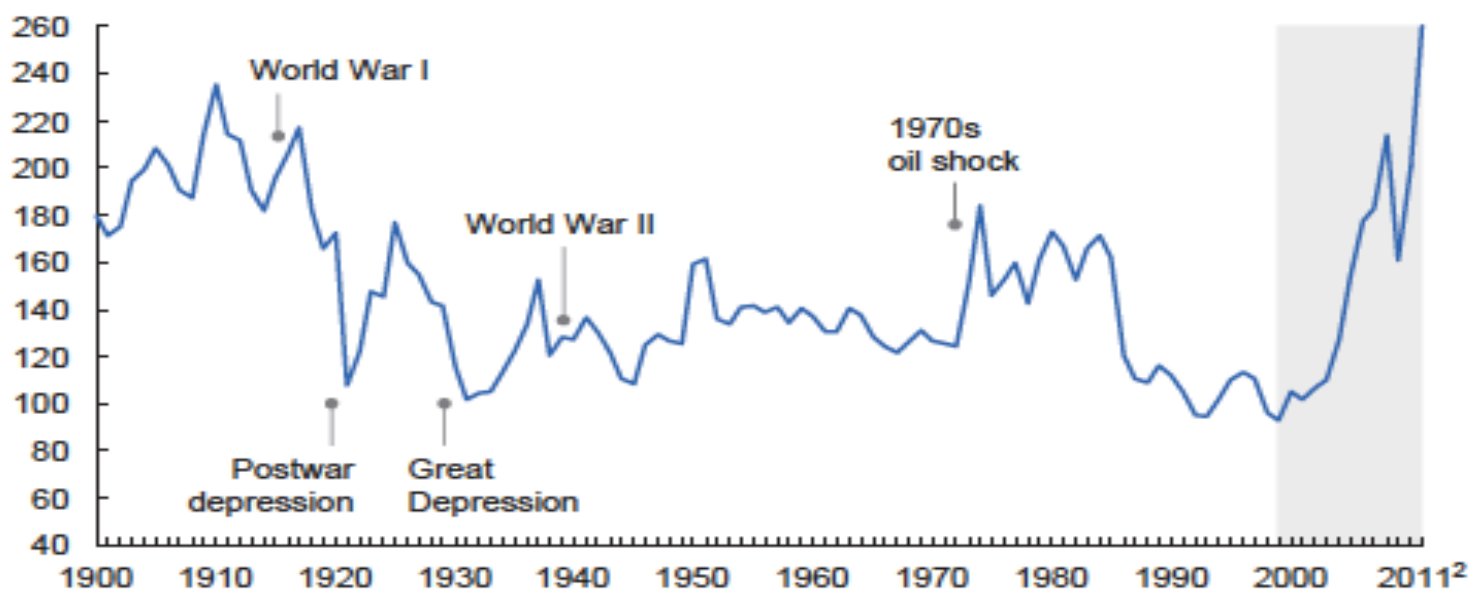
Fig. 6.2 IIASA projection of future energy-demand scenario A1 (high growth). IIASA projections show that energy demand in the twenty-first century is dominated by the growth of the developing nations.

Commodity Prices

Exhibit E1

Commodity prices have increased sharply since 2000, erasing all the declines of the 20th century

MGI Commodity Price Index (years 1999–2001 = 100)¹



¹ See the methodology appendix for details of the MGI Commodity Price Index.

² 2011 prices are based on average of the first eight months of 2011.

SOURCE: Grilli and Yang; Stephan Pfaffenweller; World Bank; International Monetary Fund (IMF); Organisation for Economic Co-operation and Development (OECD); UN Food and Agriculture Organization (FAO); UN Comtrade; McKinsey analysis

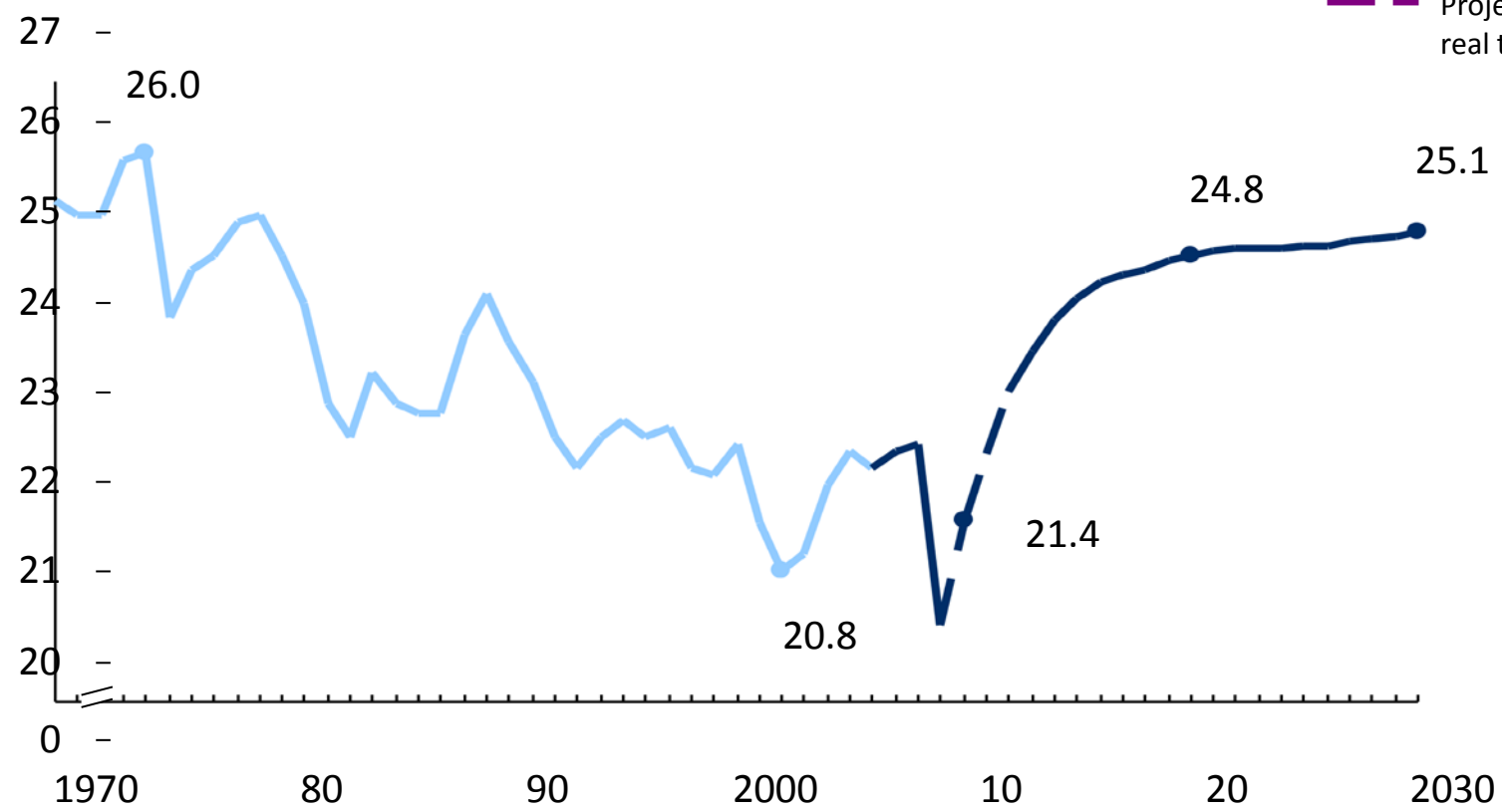


DEVELOPING COUNTRY GROWTH SET TO PRODUCE A GLOBAL
INVESTMENT BOOM
AND PROBABLY UPWARD PRESSURE ON INTEREST RATES AND THE COSTS
OF CAPITAL

CONSENSUS GLOBAL
GROWTH SCENARIO

Global investment rate, 1970–2030
% of global GDP

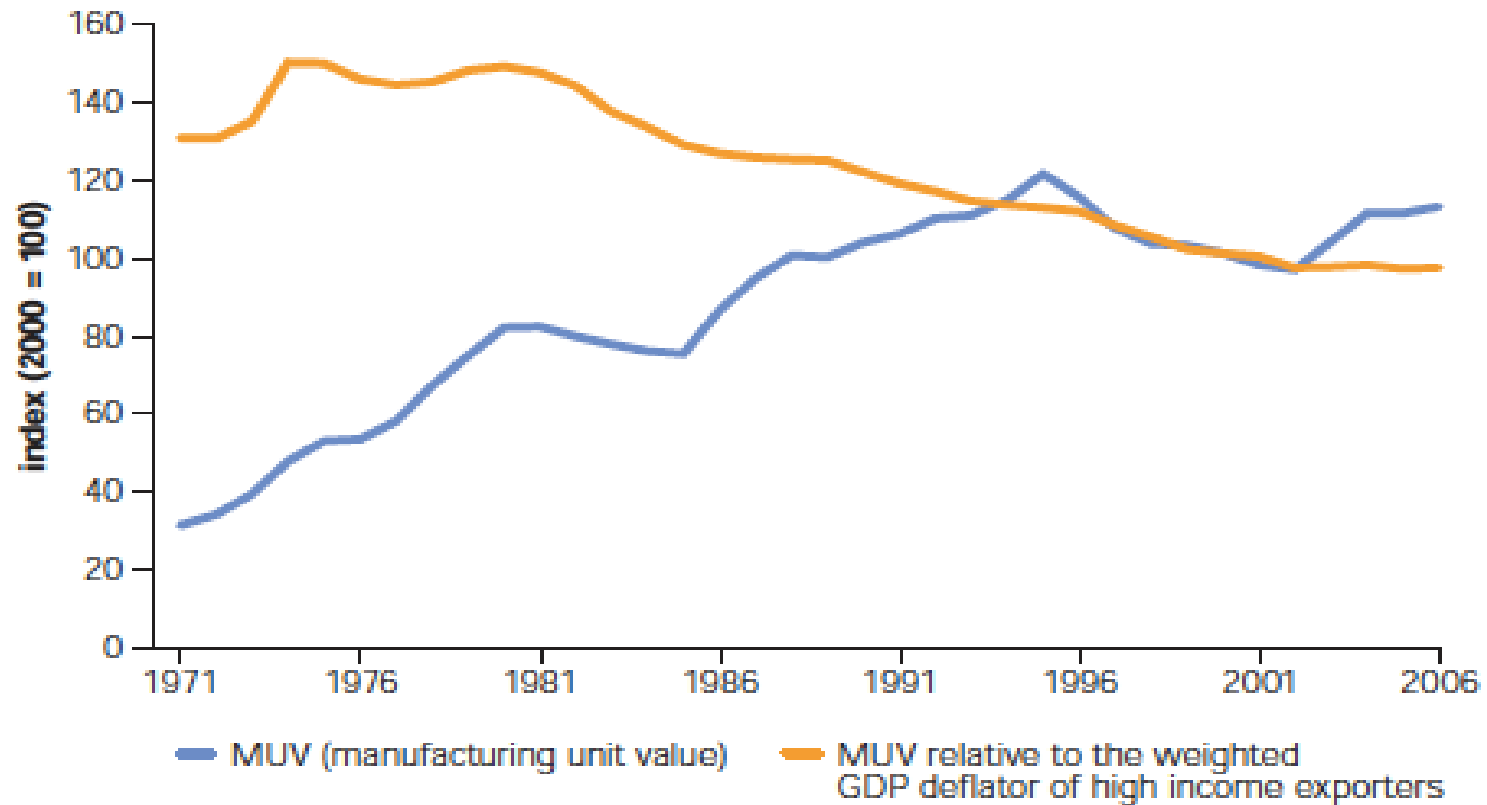
- Historical trend in nominal terms¹
- Historical trend in real terms²
- Projection in real terms^{2,3}



1 Based on actual prices and exchange rates of each year.
2 Shown in 2005 prices and exchange rates.
3 Forecast assumes price of capital goods increases at same rate as other goods and assumes no change in inventory.

Relative Price of Manufactured Goods

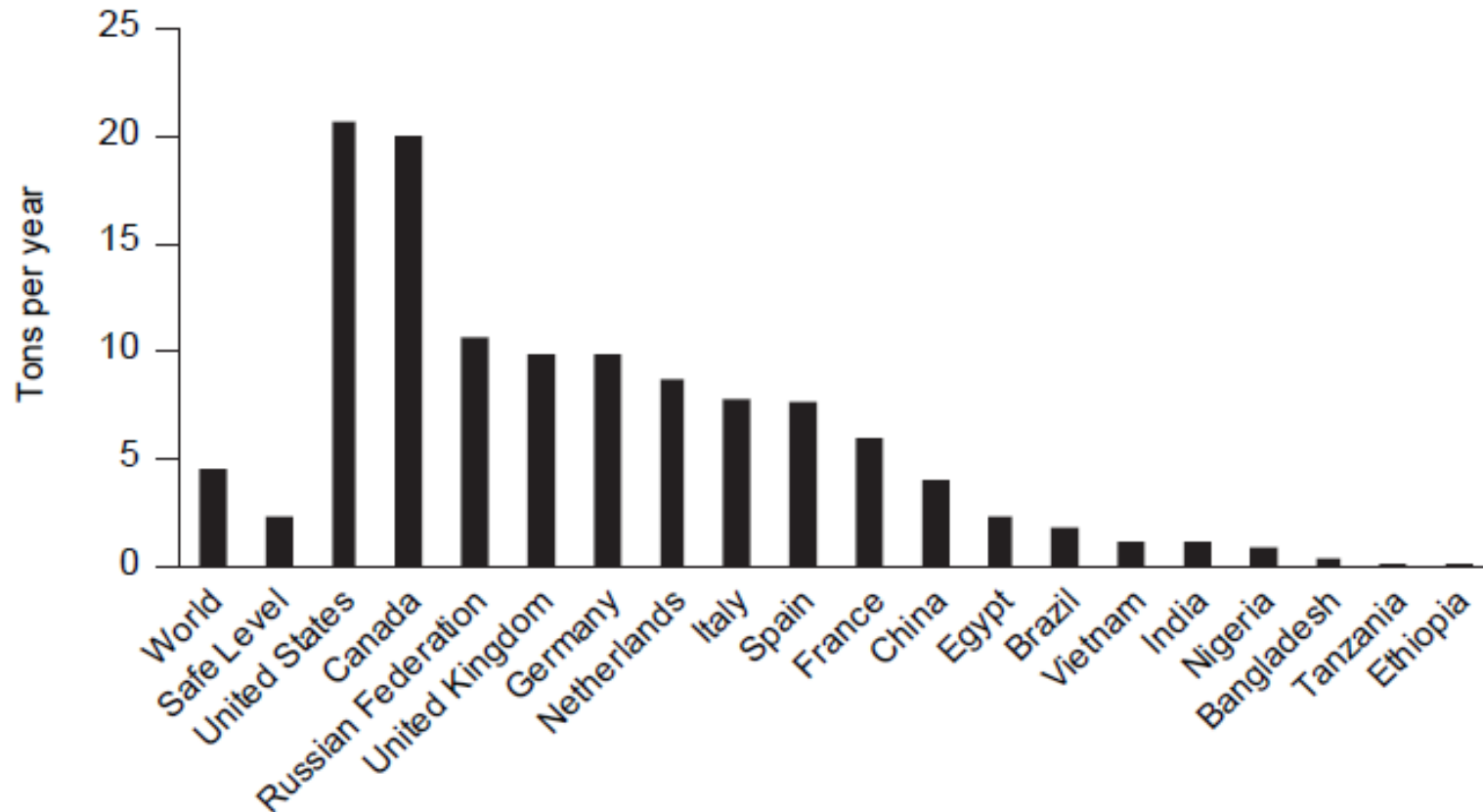
Figure 11 Chinese-Led Decline in Manufacturing Prices



Source: Development Economics Prospects Group, World Bank.

CO₂ Emissions: The Status Quo

Figure 1. CO₂ Emissions per Capita



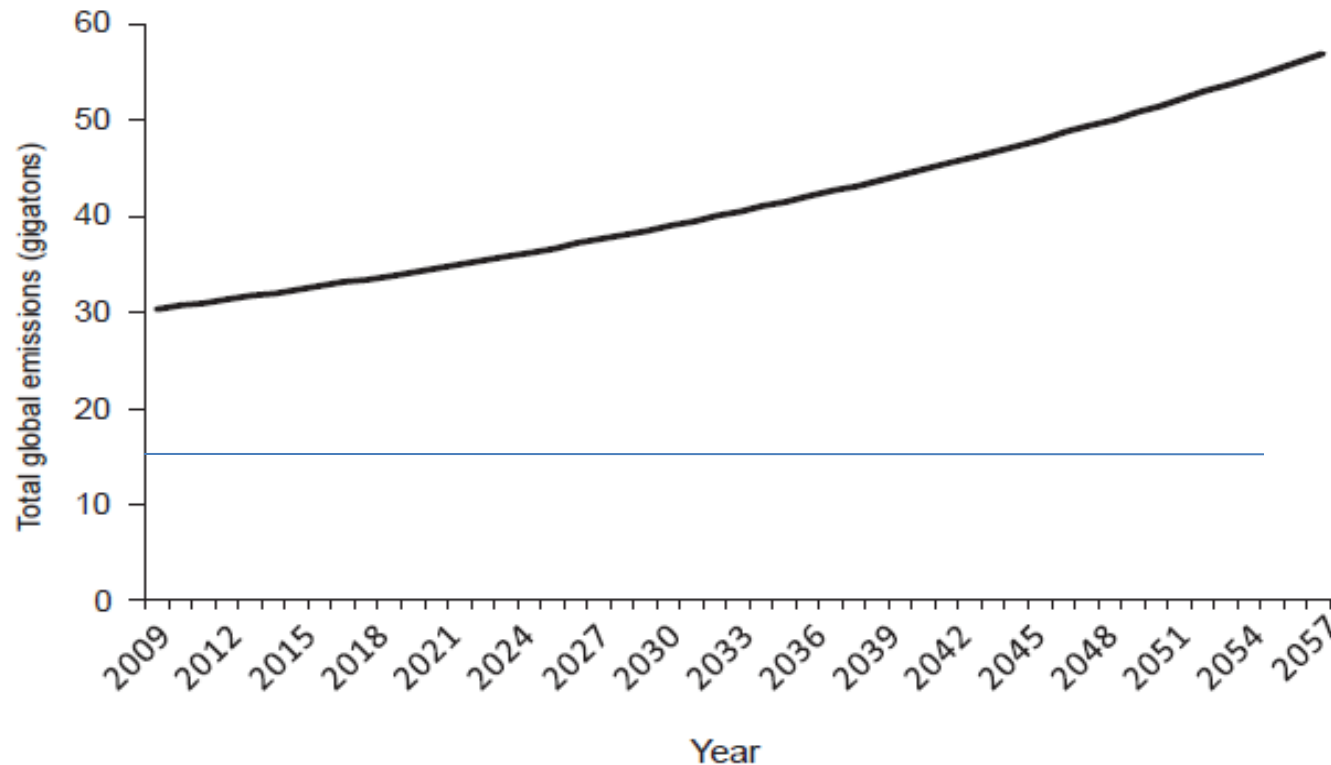
Source: IPCC and Human Development Report 2007/2008 (UNDP).

One ton of carbon equals = 3.67 tons of carbon dioxide.

A price of \$30 per ton of carbon dioxide equals a price of \$110 per ton of carbon.

Global Annual Emissions Under BAU will Double or More Going to 4 Times the “Safe” Level

Figure 4. Total Global Emissions (Gigatons)



Source: Author's calculations.

The safe level in total emissions is about 15 gigatons of CO₂

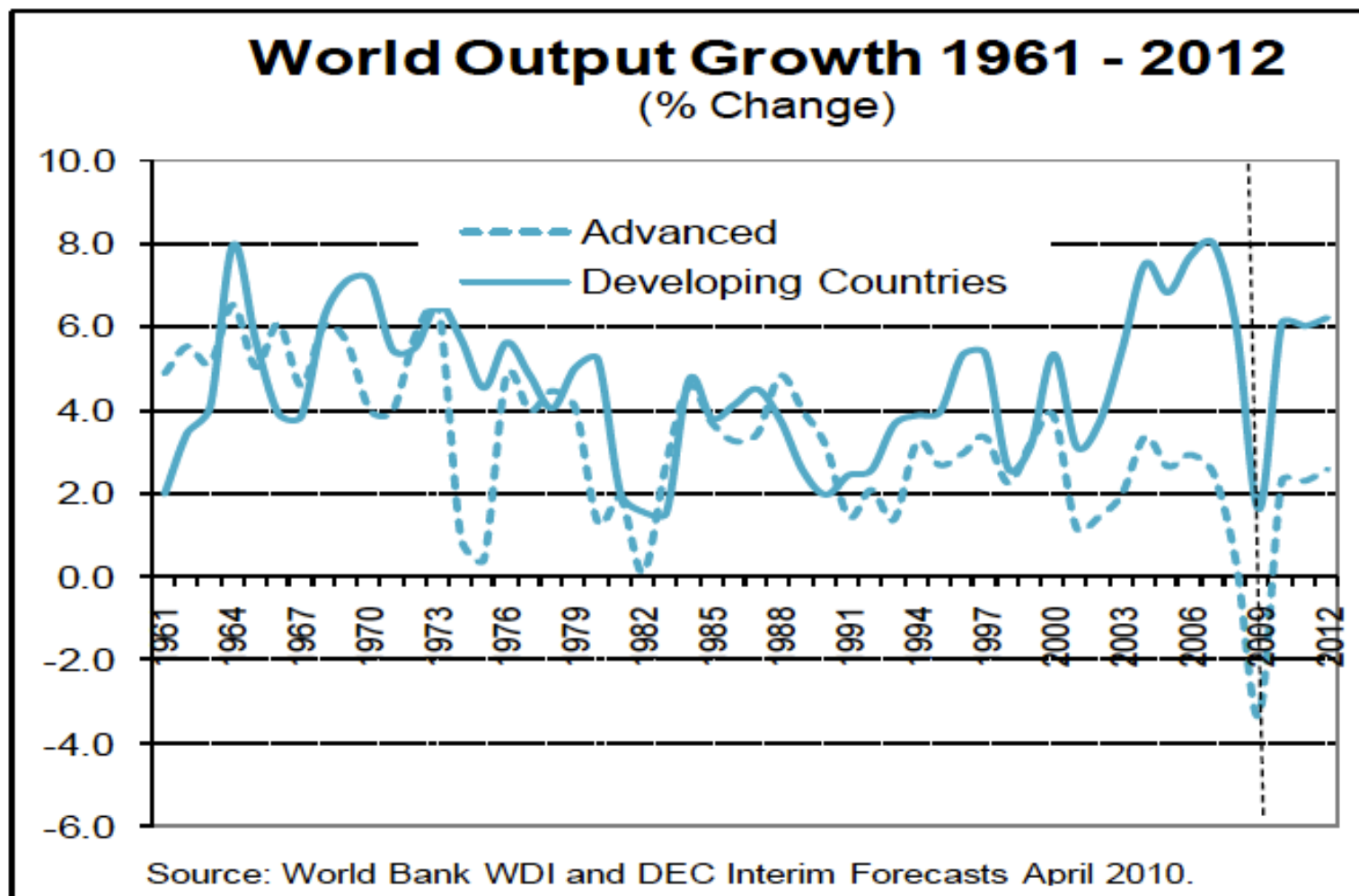
What Does It Mean?

- All countries, with Asia in the lead, will have to invent a new growth model over time
 - Some prefer the no growth path
 - The developing countries will not accept it
- Advanced countries have major structural adaptations to undertake to thrive in this new world
- Global and regional governance institutions will have to be developed or made more effective

Partial Decoupling

Less Dependence on Advanced Country Growth

Figure 1



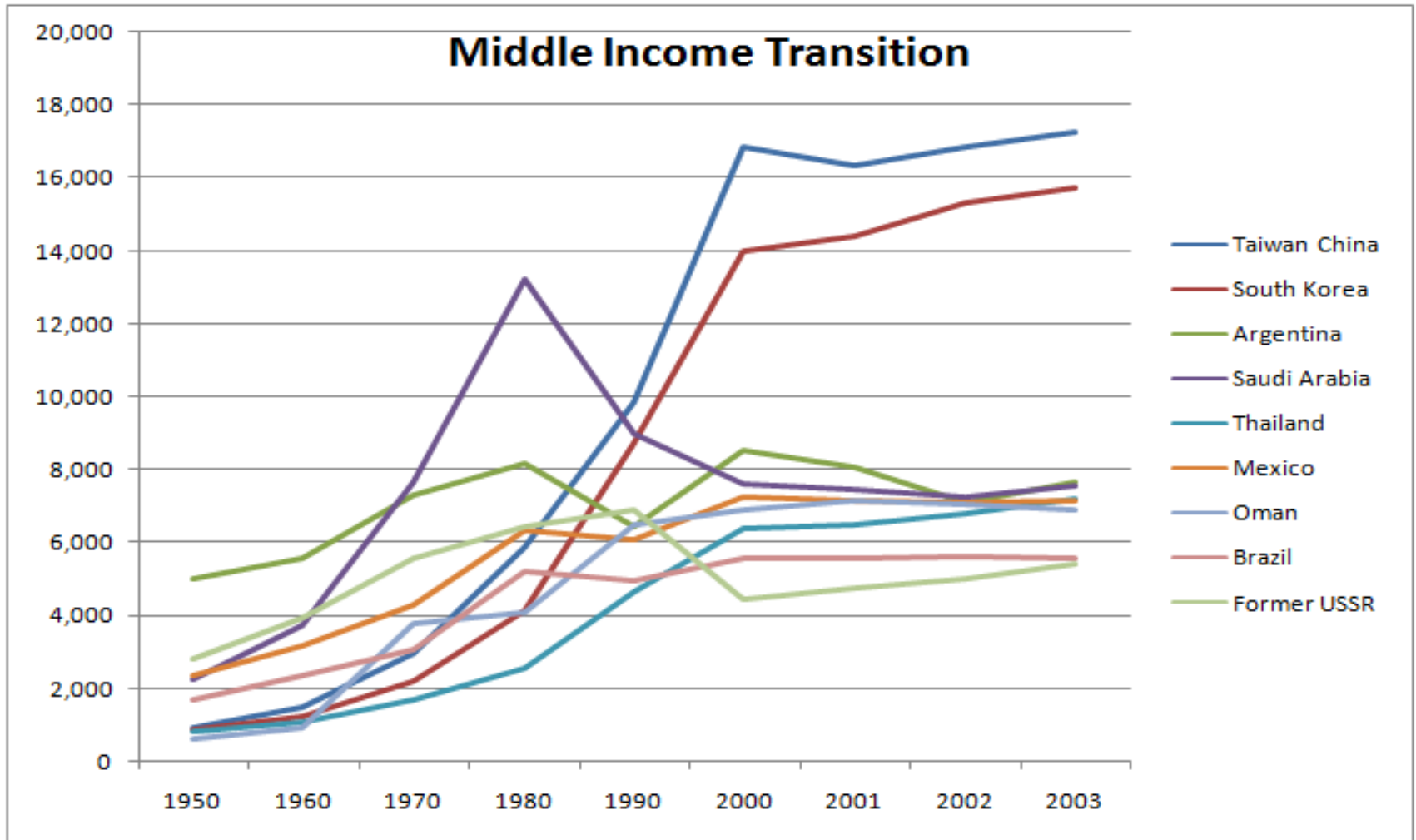
How Decoupled Are They and Why?

- They are partially decoupled
 - They can sustain pre crisis growth even if advanced countries are flat
 - But not if there is a major downturn in the advanced countries
- Why?
 - Economic size of EM group
 - Trade within EM group
 - Higher incomes and closer match between demand and supply sides of the economy
 - The network structure of global has shifted
- Downside Risks
 - Europe
 - Protectionism and
 - Slowdown in China
 - China's growth has become an important growth engine
 - Main export partner for Japan, Korea, India, Brazil, Australia,

China Entering the Middle Income Transition

- In a fragile global economy with significant downside risks
- At a scale never before seen or tried
- It is a complex set of structural changes on the demand and supply sides of the economy
- Market expands: state recedes
- Government changes its role to creating the hard and soft infrastructure that supports the market driven economic diversification and productivity growth
- It has been done before in other countries and it is not easy to sustain the growth

Middle Income Slowdowns are Common

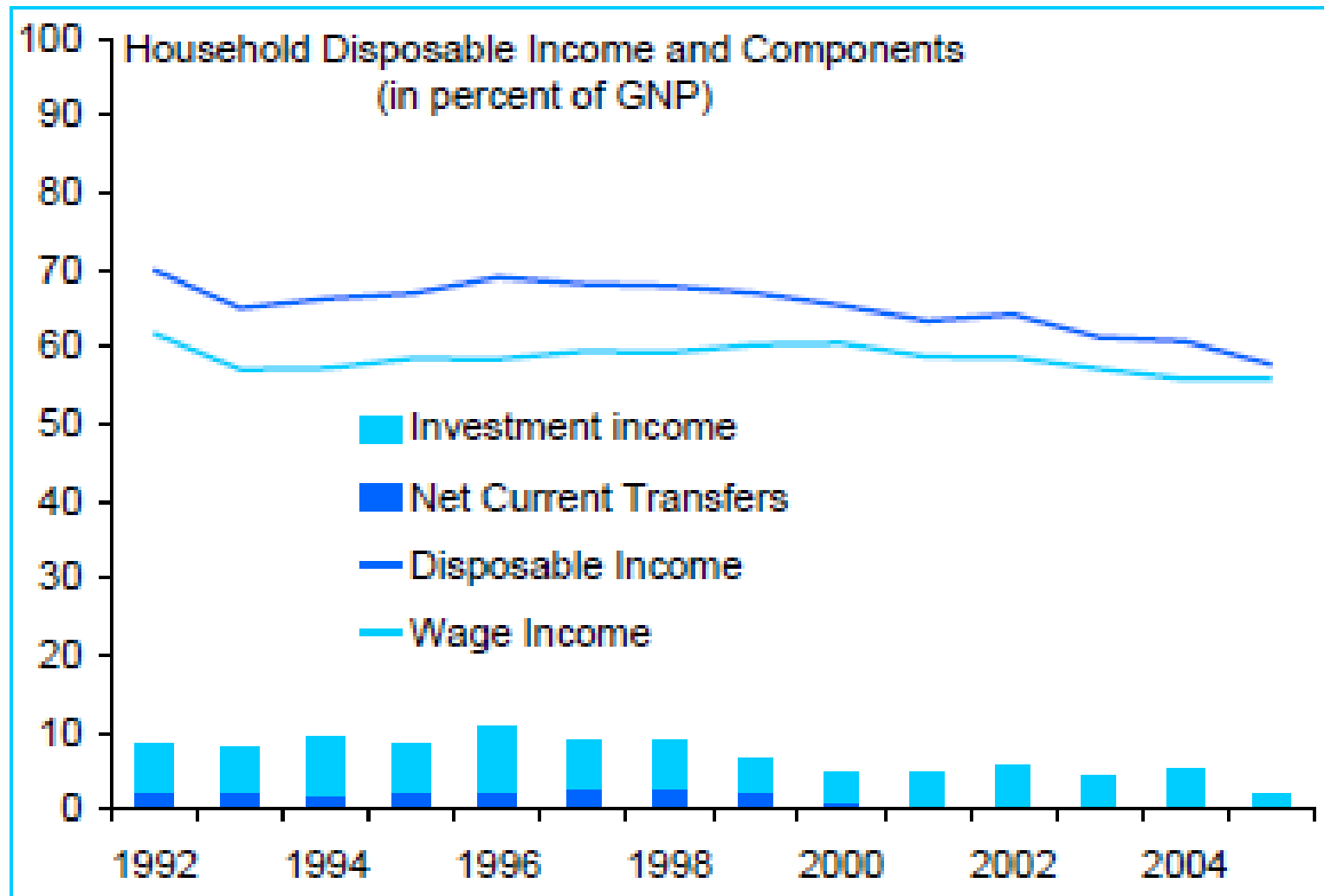


Five High Speed Transitions

- Japan
- Korea
- Taiwan/China
- Hong Kong/China
- Singapore

- None at China's scale

China: Disposable Income Declining Percentage of National Income



China Has to Climb the Valued Added Ladder to Growth

- That means structural transformation
- Keys to Implementation
 - More household income
 - Less low return investment (public and SOE)
 - More market lead diversification and innovation, less state
 - Supporting policies
 - Competition policy
 - Human capital and technology
 - Financial sector development
- Major implementation risk
 - Vested interests cloaked in ideological differences, equity issues and (deliberate misinterpretation of) failures in the west
 - SOE's and competition
 - Reform momentum and the governance structure


Requirements are Understood and Embedded in the 12th Five Year Plan

- Significant change in the investment system
 - Shift from investment led to rate of return led growth
- Shift in structure of income side of the economy – shift toward the household sector
 - The Lewis turning point
- Elimination of low return investment
- Market takes larger role in driving structural change
- Government role shifts to innovation and human capital investment and the knowledge and technological underpinnings
- Financial sector development to expand savings options and recycle savings to productive (high return) investment
- Corporate governance
- Expansion of social insurance and services – with a focus on inclusion
- Urban service sector needs to take over from labor intensive process manufacturing as main entry level employment engine

Markets and the Evolving Role of the State

- Market strengths
 - Efficiency, innovation, growth
 - With qualifications for externalities, informational asymmetries and coordination/multiple equilibrium issues
- Vulnerabilities
 - Stability, equity, sustainability and structural adaptation
 - Networks and local optimization
 - Global labor supply and rising return to capital, including human capital
- Substantial and Healthy State Balance Sheet
 - Capacity to respond to shocks
 - Recycle income when distributional trends are adverse
 - Capacity to invest in structural change
 - Capturing some of the return on public investment in knowledge and technology base of the economy

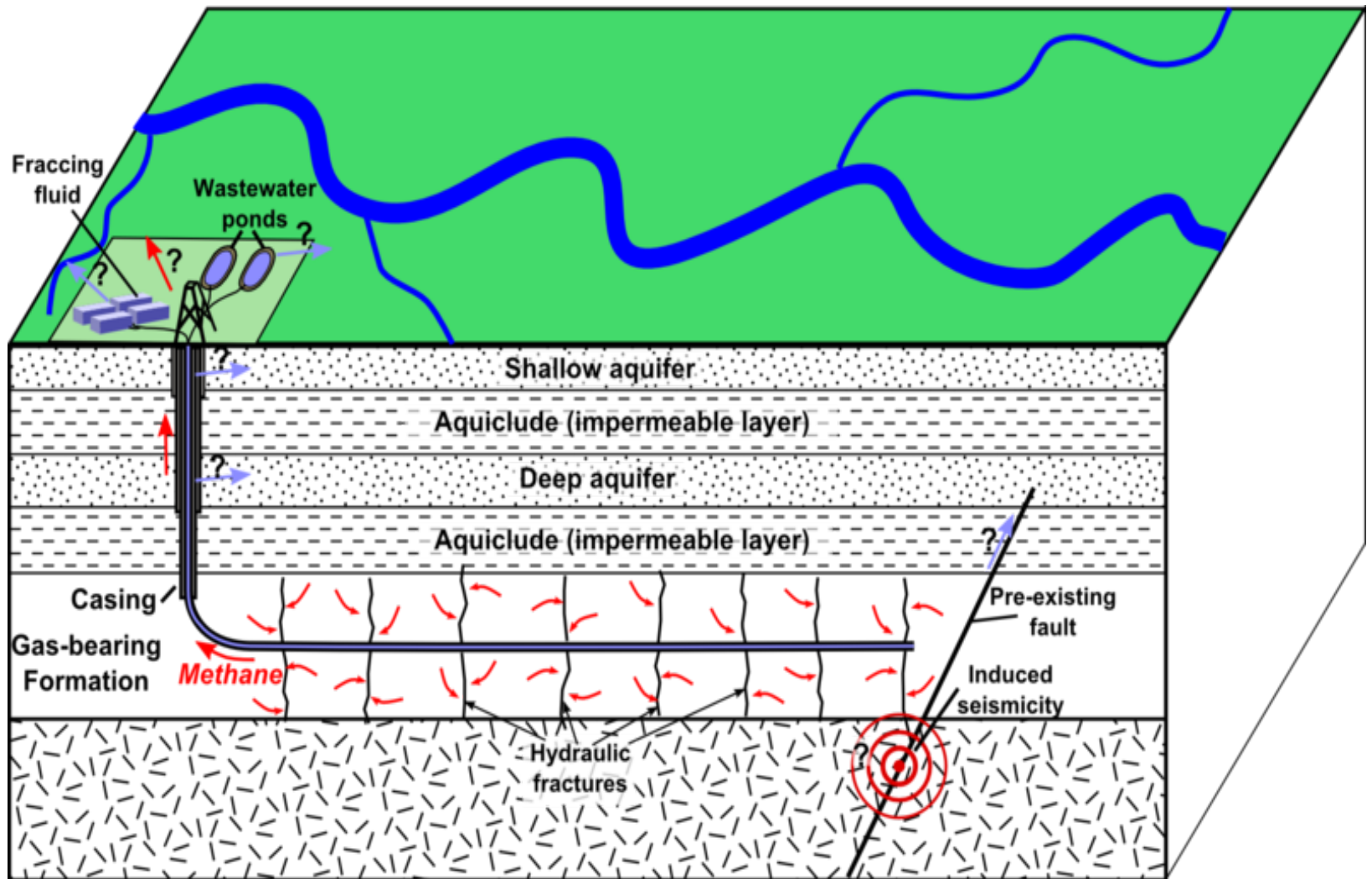
Role and Resources of the State?

- Roles
 - Shock absorber for internal and external shocks
 - Building the human capital, skills, and knowledge base of the economy
 - Dealing with distributional issues that depend on shifting technological and global market conditions
 - Regulating for stability (domestic and int'l)
 - Adapting growth patterns for economic, social, political and natural resource sustainability
- Resources
 - Policy instruments
 - Balance sheets
 - Adaptability to changing global conditions
 - Ability to act  the ability to resolve the inevitable distributional issues involved in rebalancing

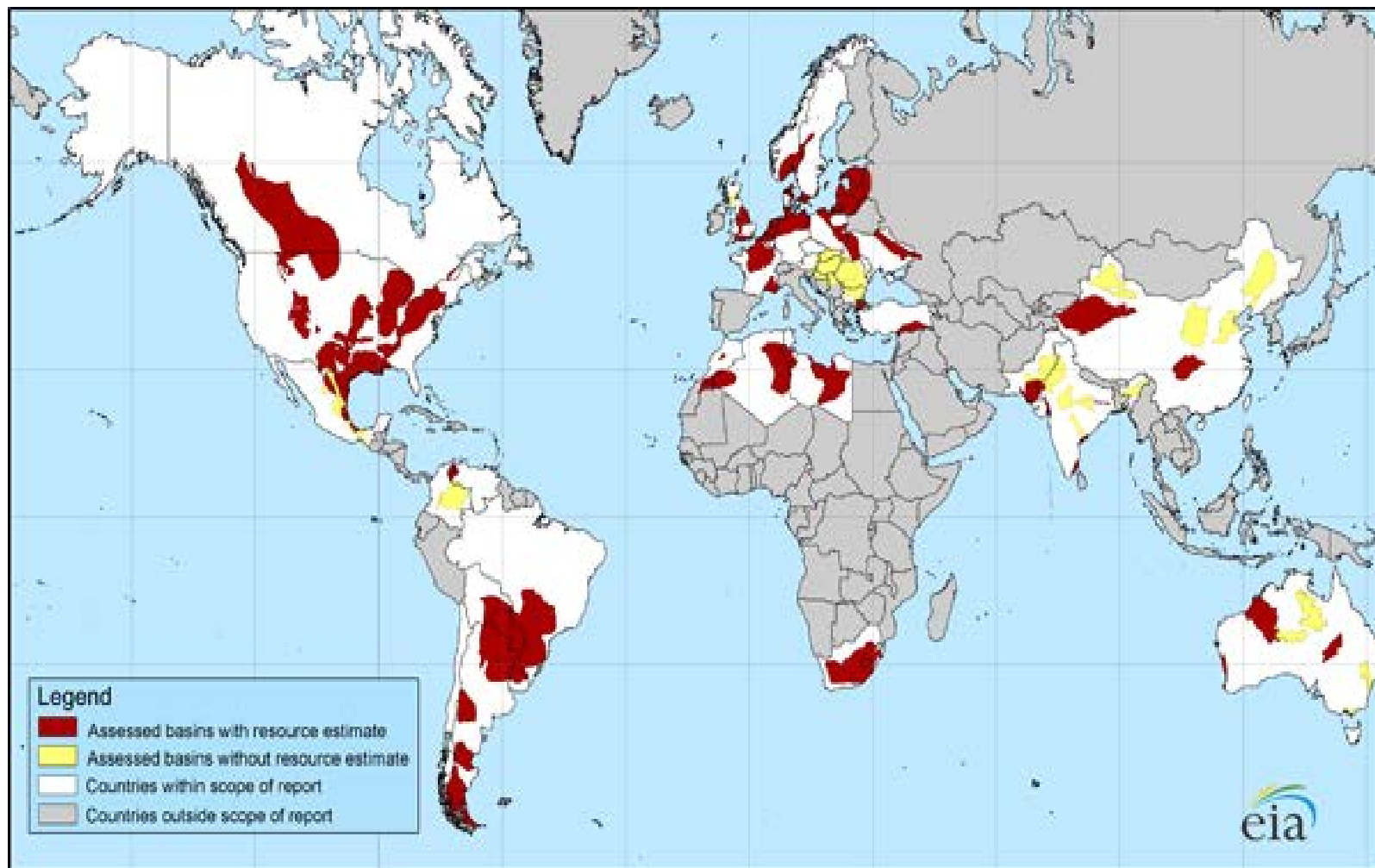
Game Changing Technologies

- Shale Gas
- Mobile phones
- 3D Printing

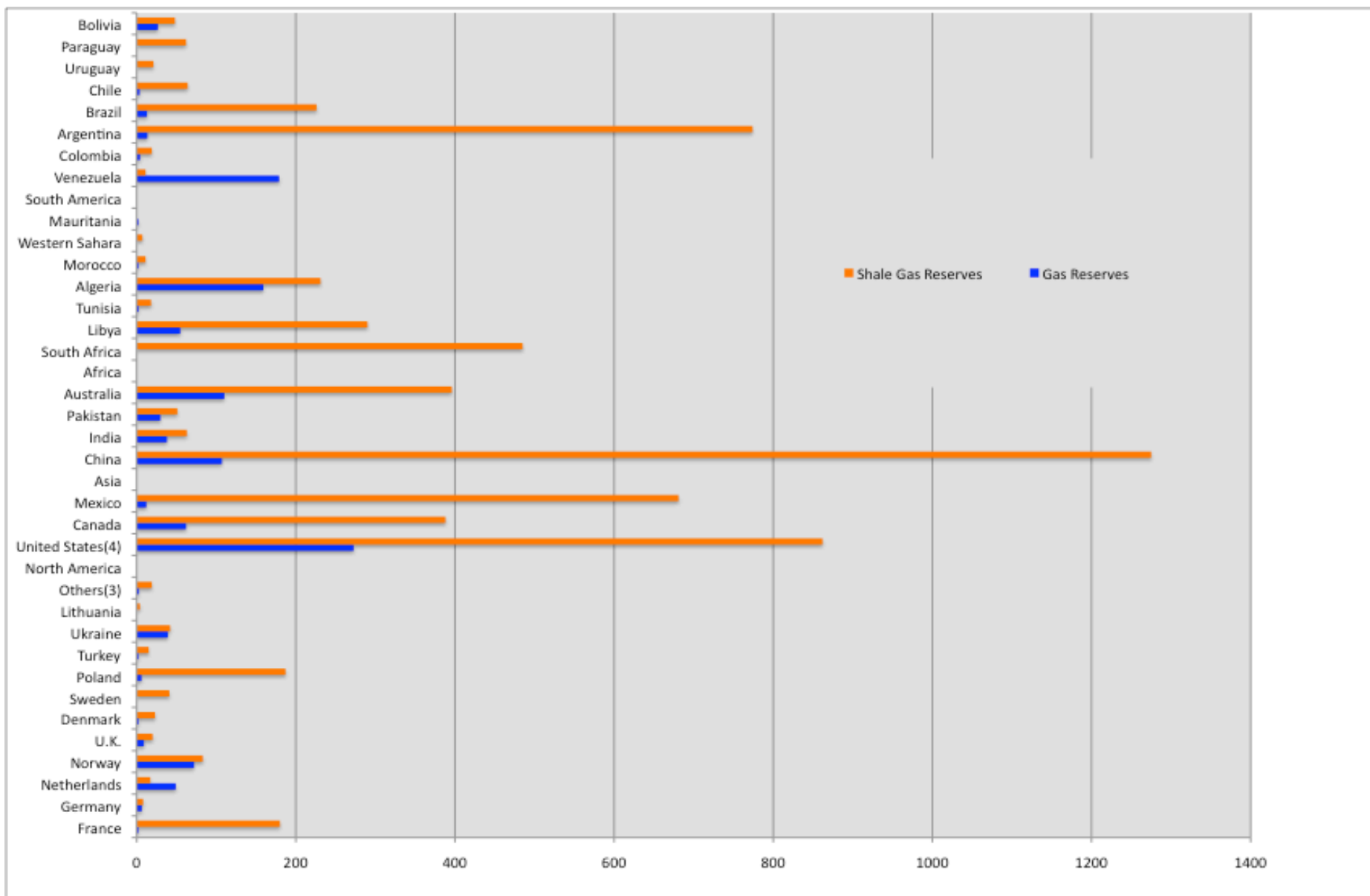
Shale Gas



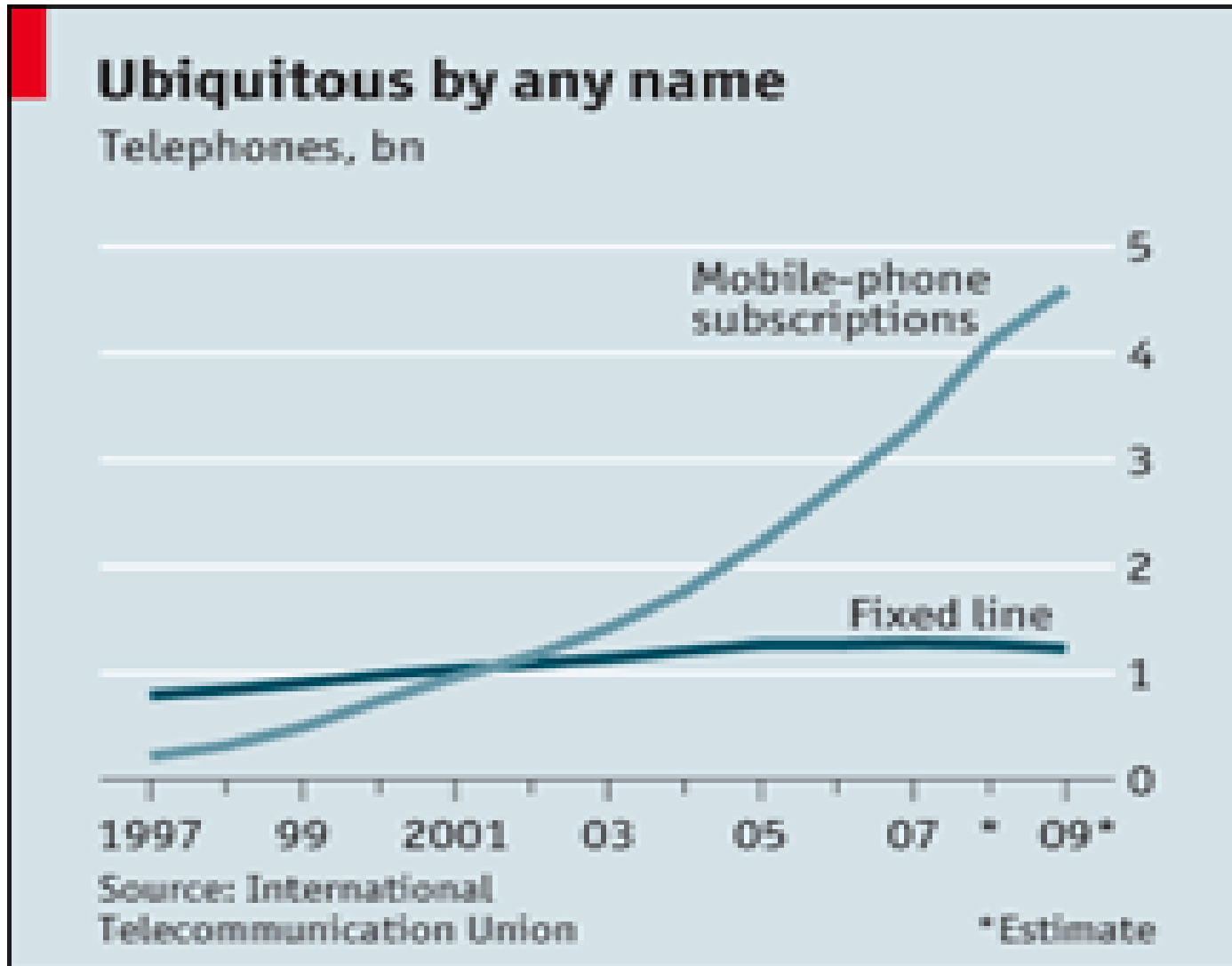
Location of Shale Gas



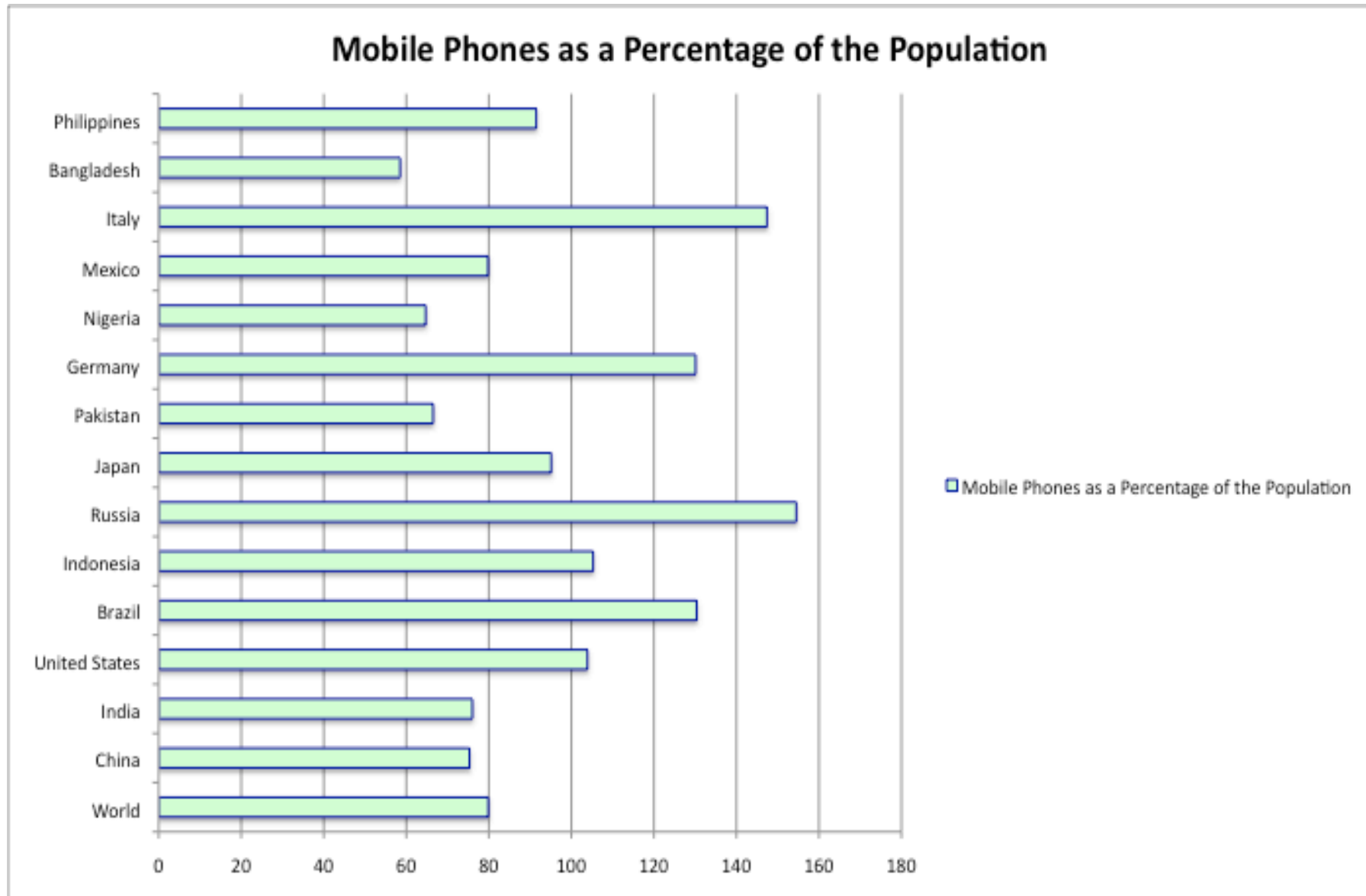
Conventional and Shale Gas Reserves



Mobile Phone Growth: Elimination of the Digital Divide



The Digital Divide is Vanishing



3D Printing Could Become a Manufacturing Technology

