

**How our Current Theory of**  
**Economics and Practice of**  
**Finance have**  
**Unsustainability built in**

QCEA Brussels November 2013

# Outline

- Introduction/Background
- Neo-classical theory
  - Flaws in the theory
  - Myths about growth
- Financial markets
- Stock Markets/Corporate Governance

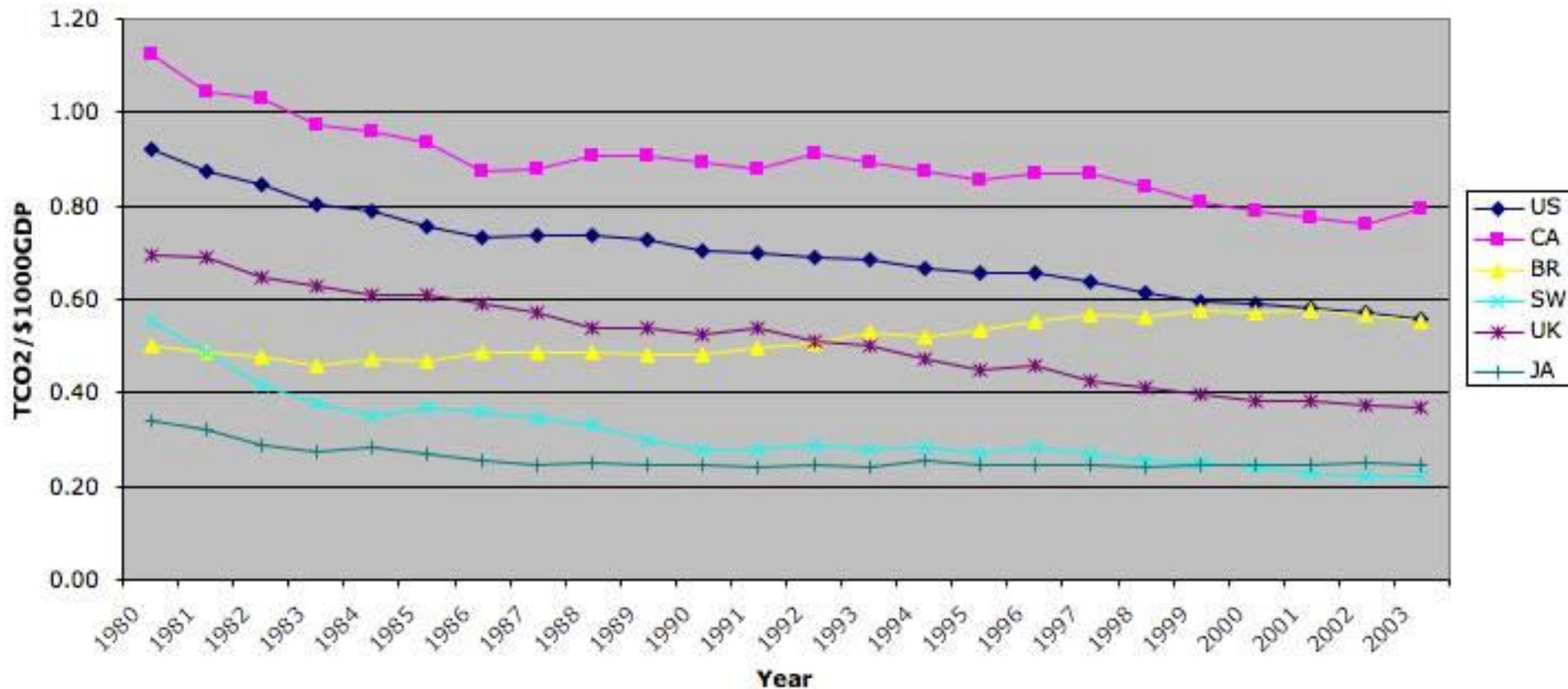
# Current Unsustainable Course

- Starting point for this talk is that our current trajectory is unsustainable
  - Climate change
  - Other Planetary boundaries
  - Non-renewable resources
  - Debt overhang

# Carbon Intensity of GDP

1980-2003 various countries ex China

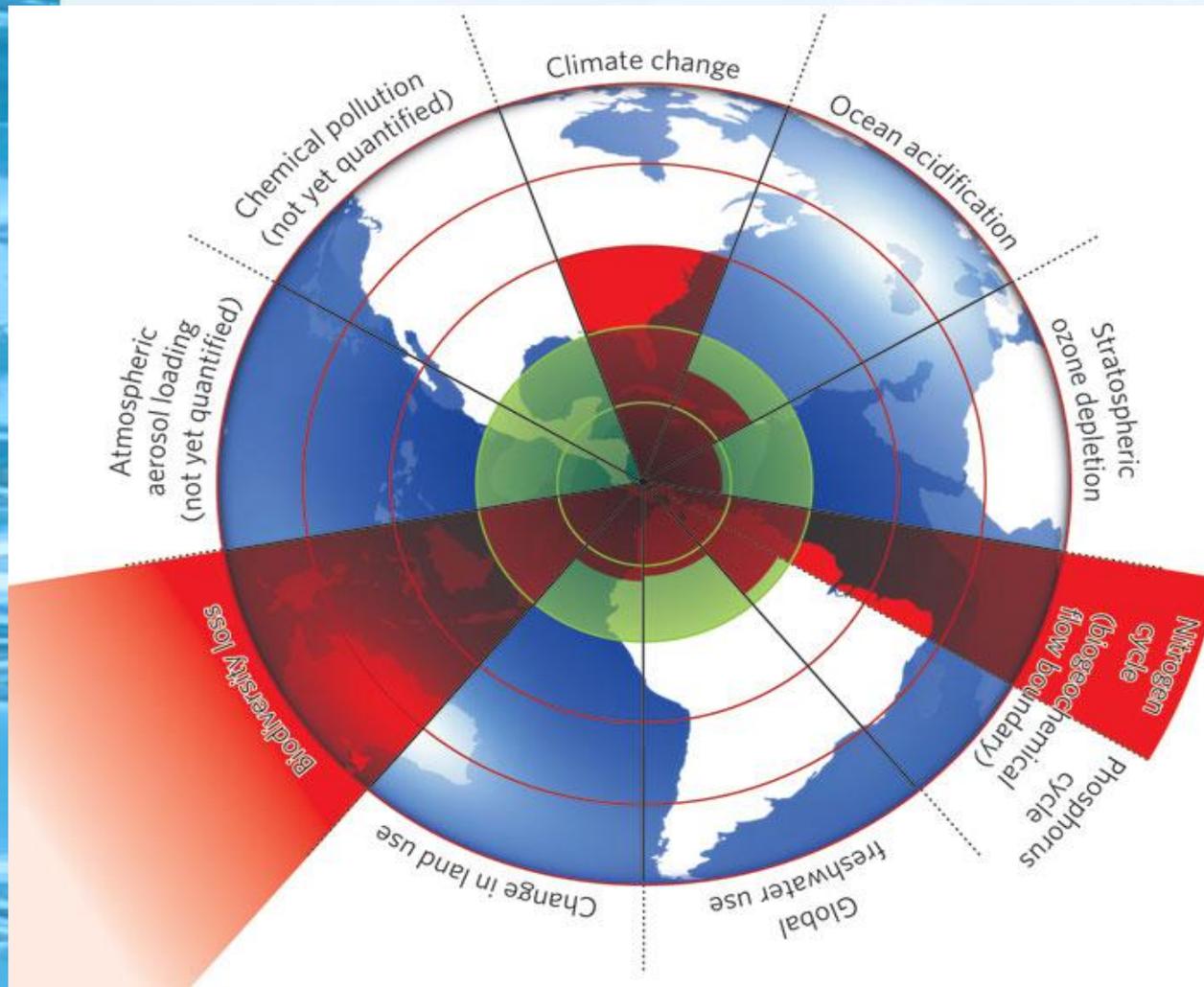
CO<sub>2</sub>/GDP (no China)



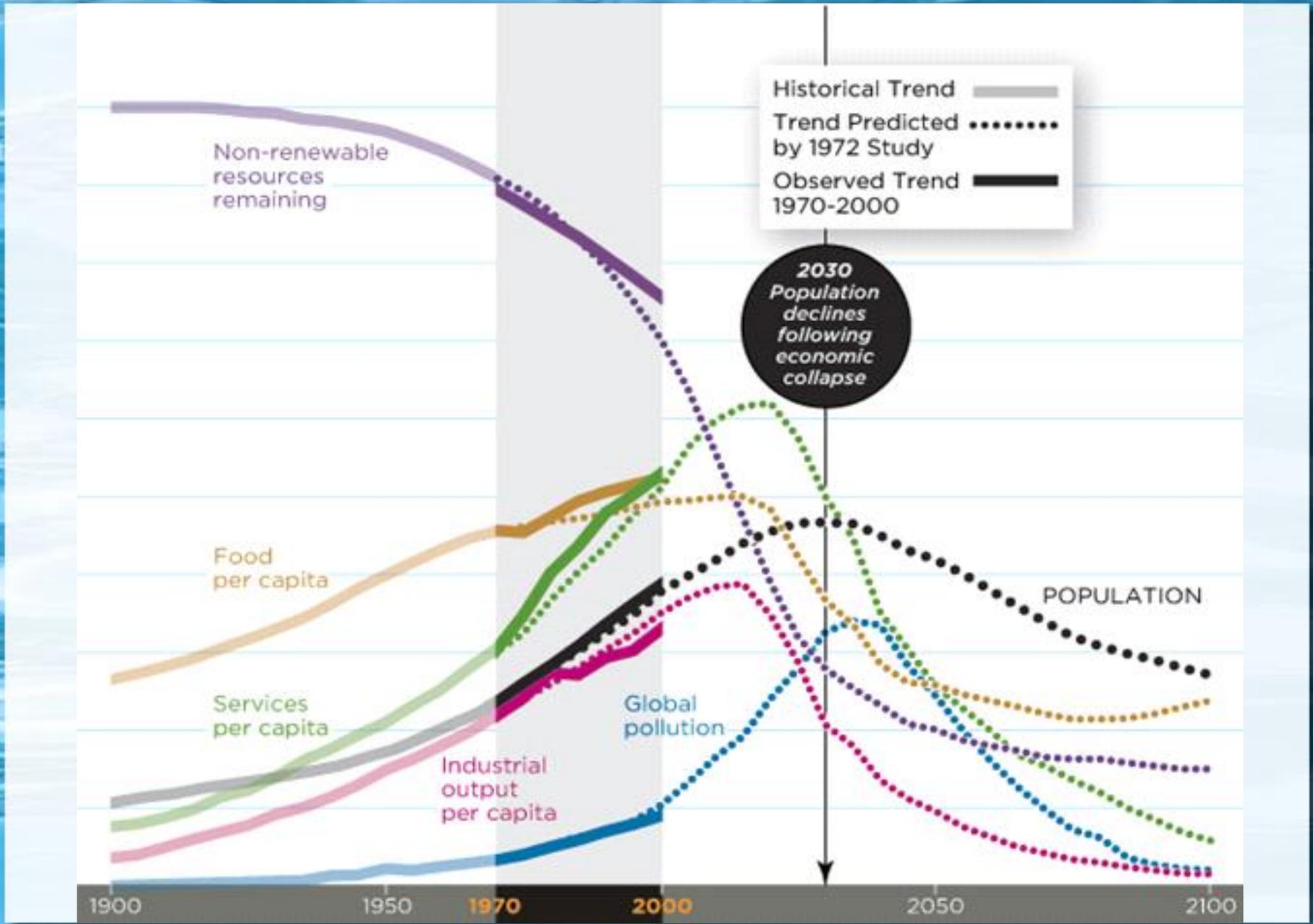
# We are running out of planet

## *Nine ecological boundaries*

Source: Rockstrom (2009) 'A safe operating space for humanity'



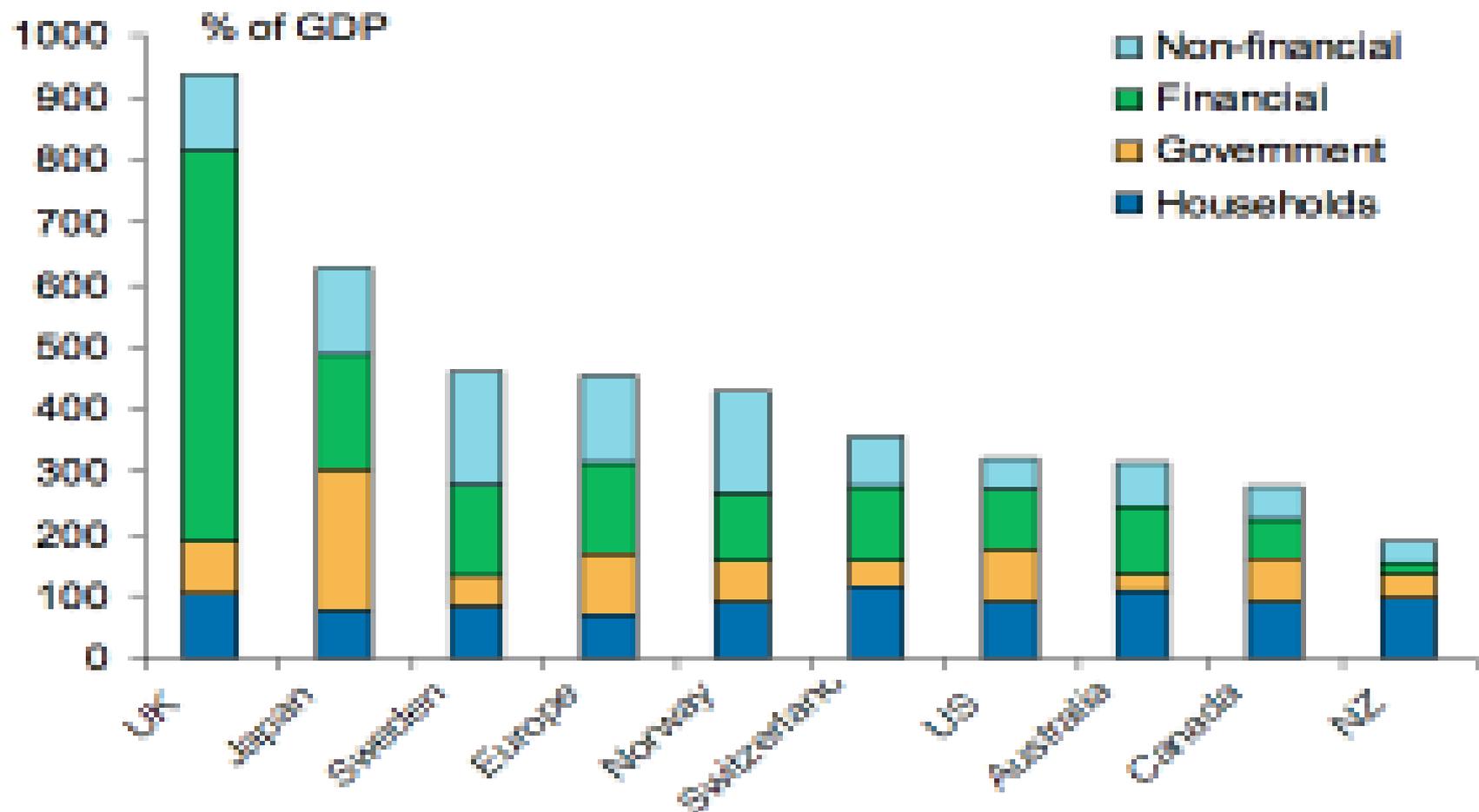
Earth-system process	Proposed boundary	Current status	Pre-industrial value
Climate change	350	387	280
Rate of biodiversity loss	1	1.5	0
Nitrogen cycle (part of a boundary with the phosphorus cycle)	35	121	0
Phosphorus cycle (part of a boundary with the nitrogen cycle)	11	8.5-9.5	-1
Stratospheric ozone depletion	276	283	290
Ocean acidification	2.75	2.90	3.44
Global freshwater use	4,000	2,600	415
Change in land use	15	11.7	Low
Atmospheric aerosol loading		To be determined	
Chemical pollution		To be determined	



# Debt as % GDP G10 countries

Exhibit 1

## G10 Debt Distribution



Source: Haver Analytics, Morgan Stanley Research

*The closed economy of the future might similarly be called the 'spaceman' economy, in which the earth has become a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system*

- Boulding, 1966



# Kenneth Boulding

“Anyone who thinks exponential growth can go on forever in a finite world is either a madman or an economist.”

1973



# Standard Economic Theory

- Builds models of economy
  - Clearing markets
  - Balance of supply and demand based on price
  - Prices supposedly reflect collective valuations
  - Claim of moral neutrality
  - Often mathematical – “scientific”

# Flaws in theory

- Non-traded items assumed of no value
- Equality of value between £1 spent by millionaire and by a beggar
- Externalities
  - Attempts to internalise
  - But no longer tenable to say marginal
- Only values expressed today count
- Only things/situations that can be valued count
- Consumers do not have perfect knowledge
- Assumes homo economicus

# CBA's Attempts to Correct Flaws

- Shadow Prices
- Opportunity Costs
  - Labour
  - Capital
  - Minerals?
- In practice treats externalities as minor
- False accounting with Nature
- Treats greater Consumption as the only goal
- Cannot bring future generations into account

# Simon Kuznets on GDP

The welfare of a nation can scarcely be inferred from a measurement of national income (Kuznets 1934).



# Stiglitz/Sen report:

- It is of particular concern ... when narrow measures of market performance are confused with broader measures of welfare
- What we measure affects what we do; and if our measurements are flawed, decisions may be distorted. Policies should be aimed at increasing societal welfare, not G.D.P

# Setting the right goals – what matters?



*Gross National Product counts air pollution, and cigarette advertising and...the destruction of the redwood and the loss of our natural wonder in chaotic sprawl.*

*It does not allow for the health of our children, the quality of their education or the joy of their play...the beauty of our poetry or the strength of our marriages.*

***It measures everything, in short, except that which makes life worthwhile.***

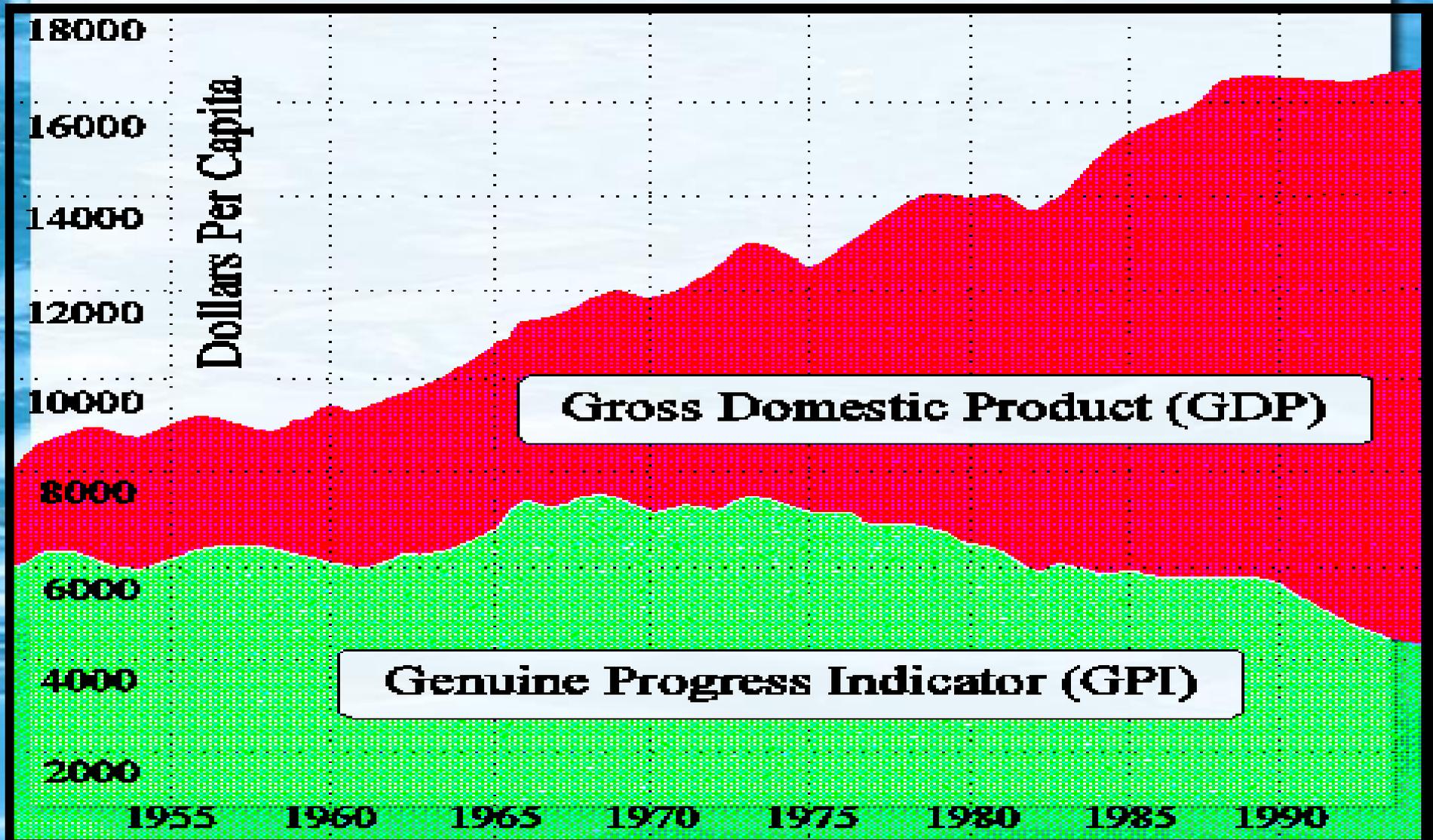
Robert Kennedy, 1968

# GDP or GPI?

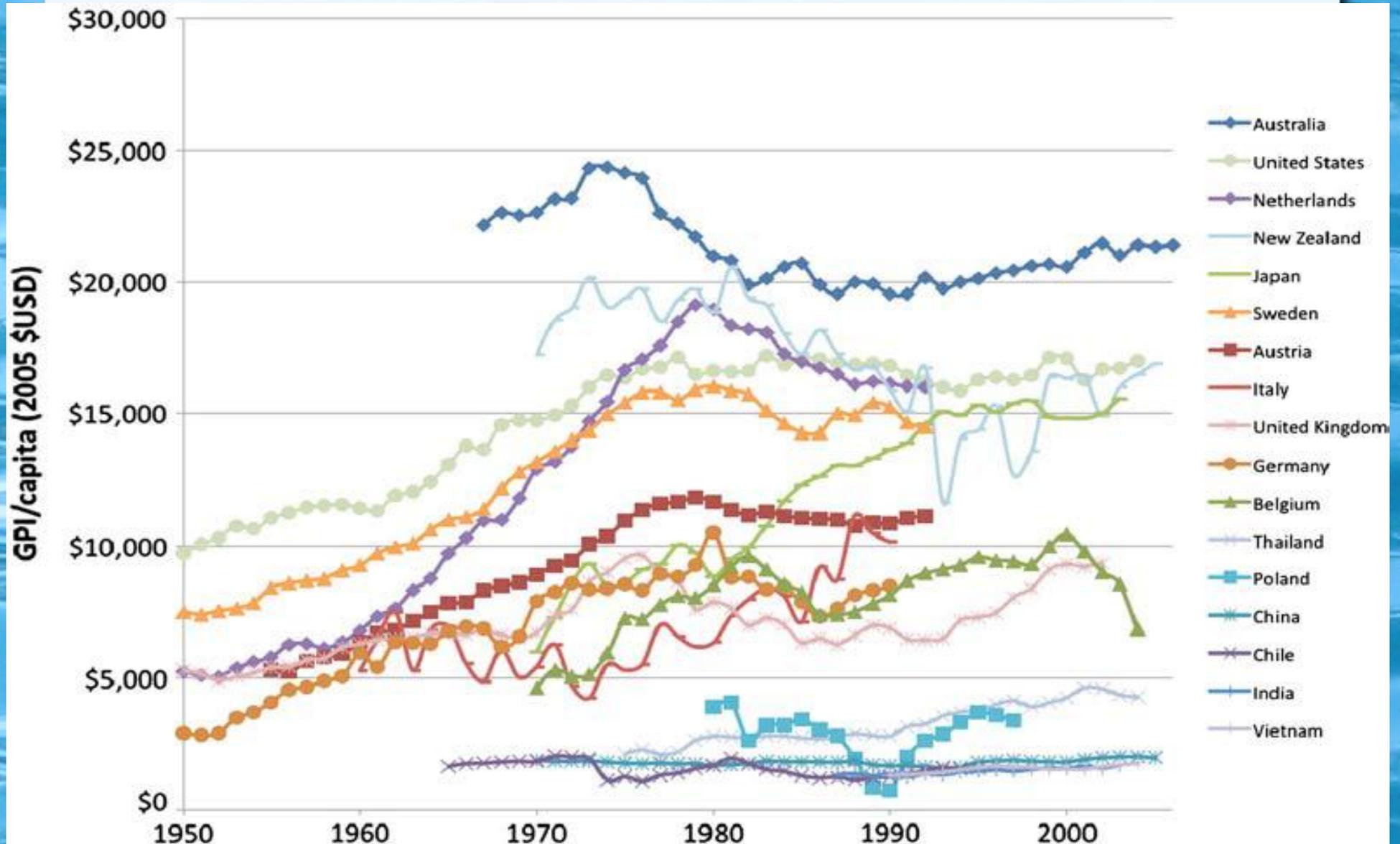
GPI starts with GDP, then adjusts for:

- income distribution
- non-traded activity
- economic "bads"
- carbon emissions,
- depletion of non-renewable energy sources
- Less investment
- Plus return on man-made capital

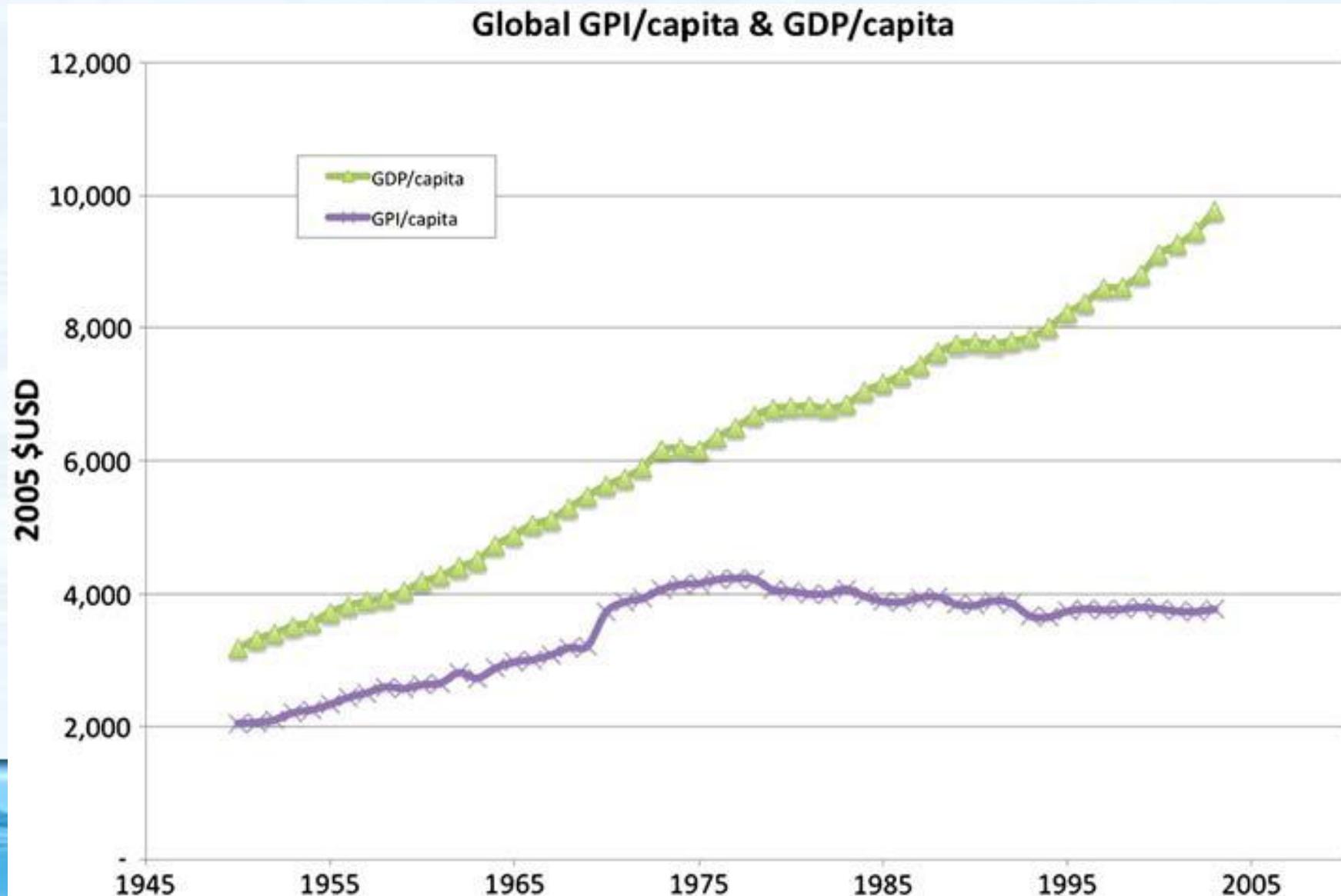
# GPI as opposed to GDP



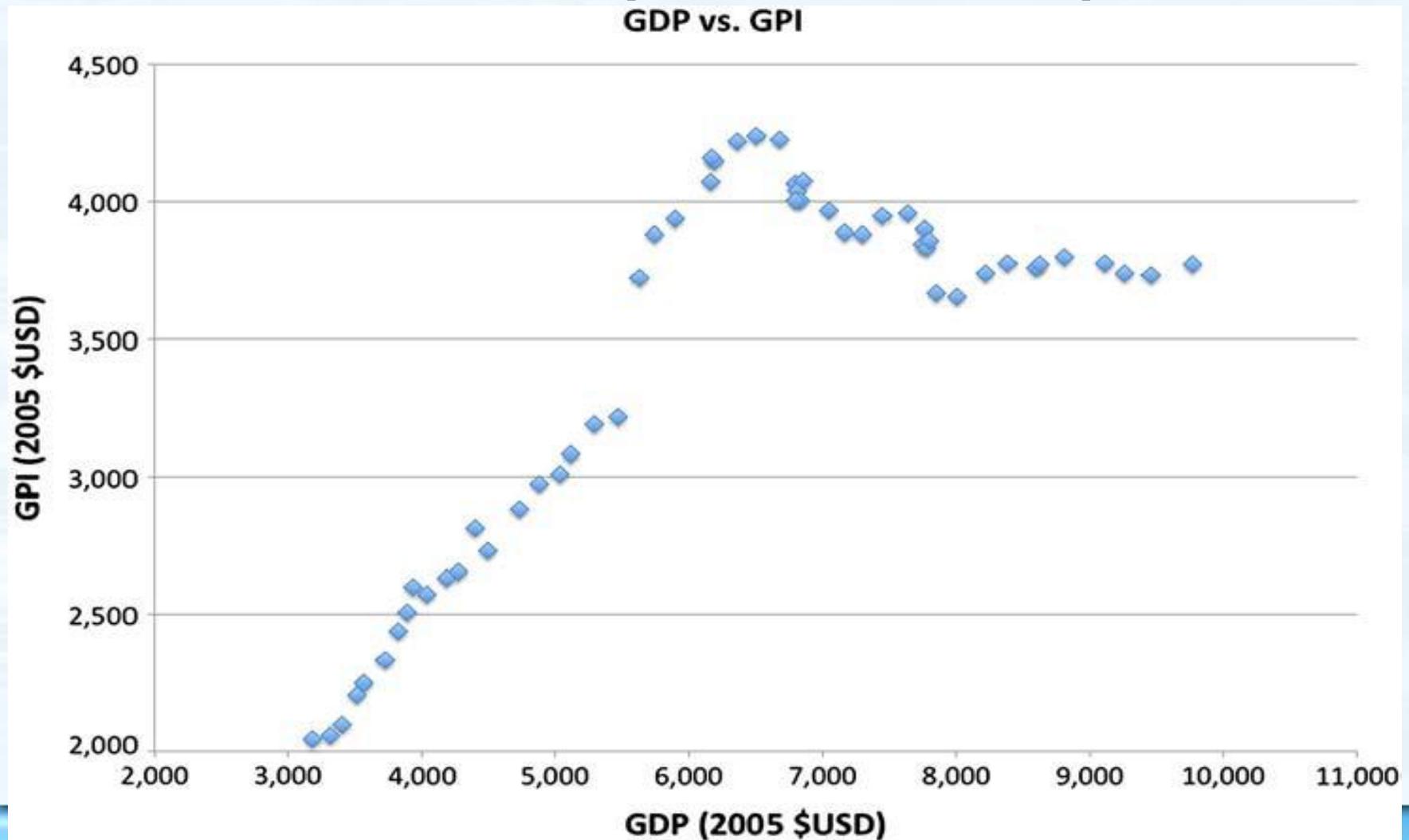
# GPI/Cap for 17 countries



# Comparison of Global GDP/cap and GPI/cap

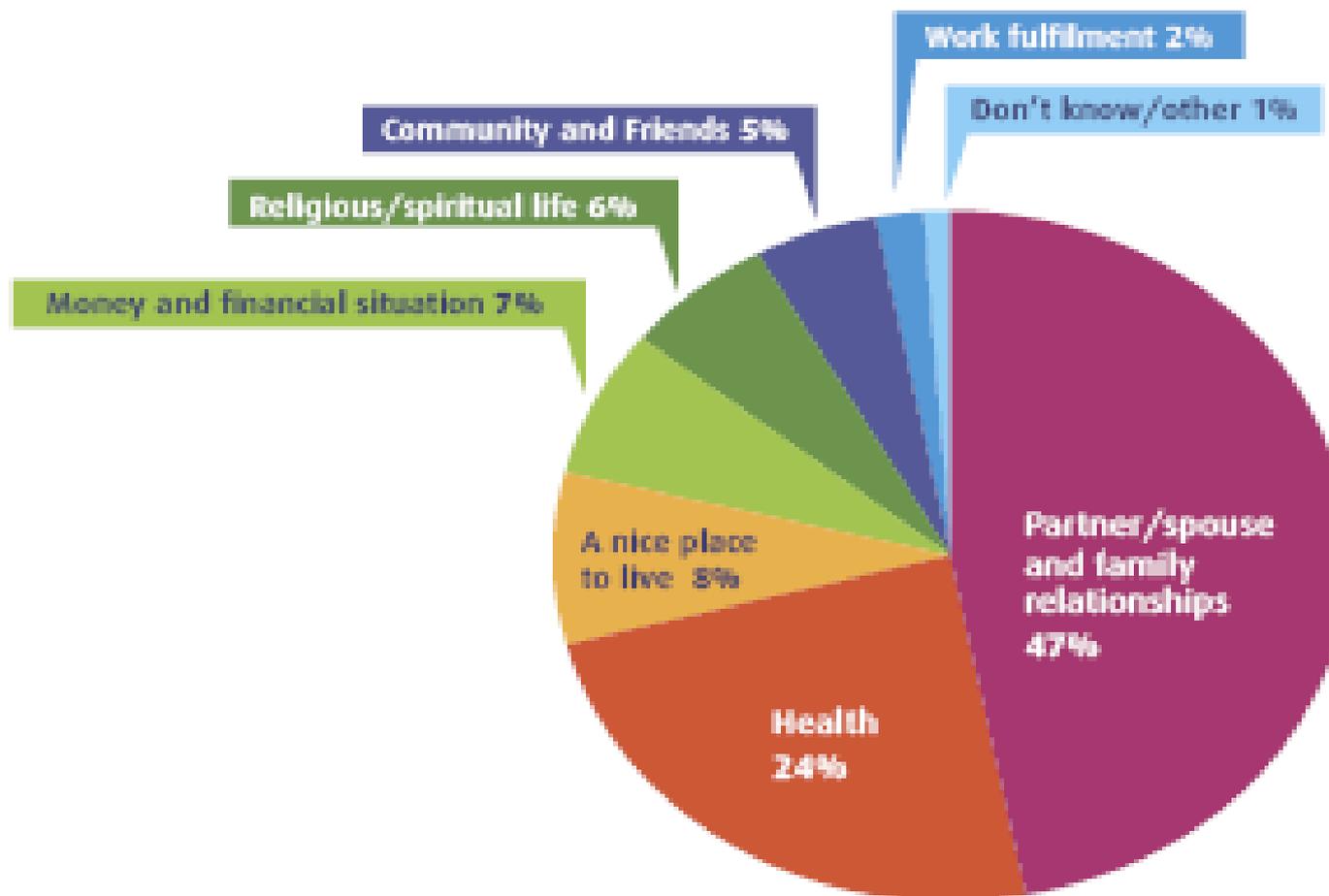


# Correlation between Global GDP/cap & GPI/cap



# Well being factors

Figure 5 Factors influencing subjective wellbeing (happiness)<sup>7</sup>





## CONSTITUENTS OF WELL-BEING

### Security

- PERSONAL SAFETY
- SECURE RESOURCE ACCESS
- SECURITY FROM DISASTERS

### Basic material for good life

- ADEQUATE LIVELIHOODS
- SUFFICIENT NUTRITIOUS FOOD
- SHELTER
- ACCESS TO GOODS

### Health

- STRENGTH
- FEELING WELL
- ACCESS TO CLEAN AIR AND WATER

### Good social relations

- SOCIAL COHESION
- MUTUAL RESPECT
- ABILITY TO HELP OTHERS

### Freedom of choice and action

OPPORTUNITY TO BE ABLE TO ACHIEVE WHAT AN INDIVIDUAL VALUES DOING AND BEING

Source: Millennium Ecosystem Assessment

**ARROW'S COLOR**  
Potential for mediation by socioeconomic factors

- Low
- Medium
- High

**ARROW'S WIDTH**  
Intensity of linkages between ecosystem services and human well-being

- Weak
- Medium
- Strong

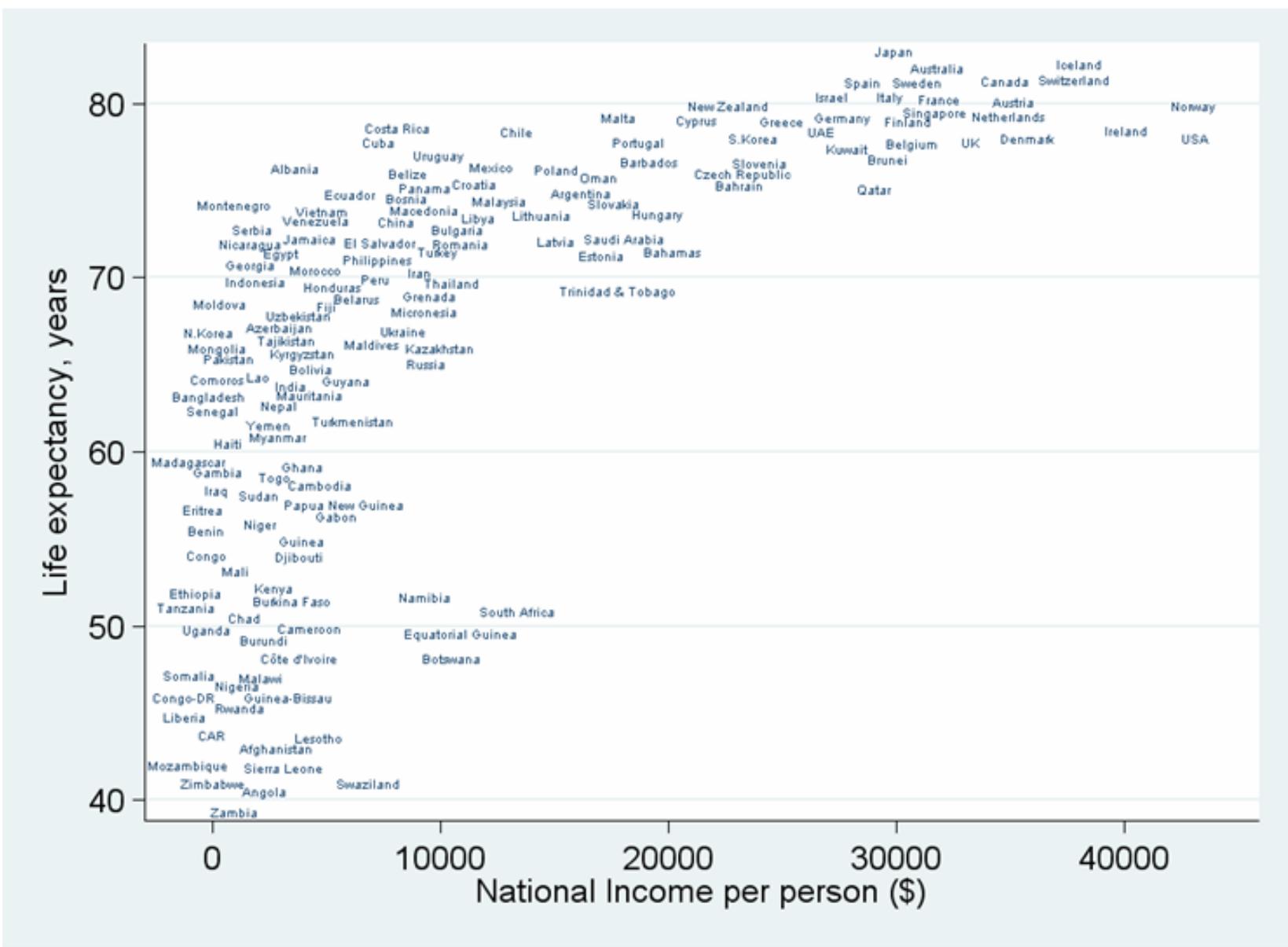
# Contributors to well-being

- A sense of inclusion
- A sense of empowerment
- A sense of meaning in life
- A sense of connection with other people
- Feeling valued – hence an ability to contribute
- Continued learning
- Physical activity
- Adequate health
- Equality

# Myths about Growth

- Necessary for improving well-being
- Necessary to defeat poverty
- Necessary to maintain employment
- Technical progress can substitute for all scarce natural resources
- We can reduce carbon emissions while output grows

# Income per head and life-expectancy: rich & poor countries



Source: Wilkinson & Pickett, *The Spirit Level* (2009)

# Conclusion on Theory

- Assumes greater Consumption is the only goal (thus echoing drawbacks of GDP as a measure)
- Value of non-renewables to future generations not taken into a/c
- Means ec analysis treats them as infinite
- If they are treated as infinite, unsustainable utilisation is inevitable in a finite world
- Remember Nauru!

# Financial Markets



- Bank Lending
- Stock Market

# What is Money?

## **social construct**

- Store of value
- Medium of exchange
- Unit of account

**Based on trust**

northern rock

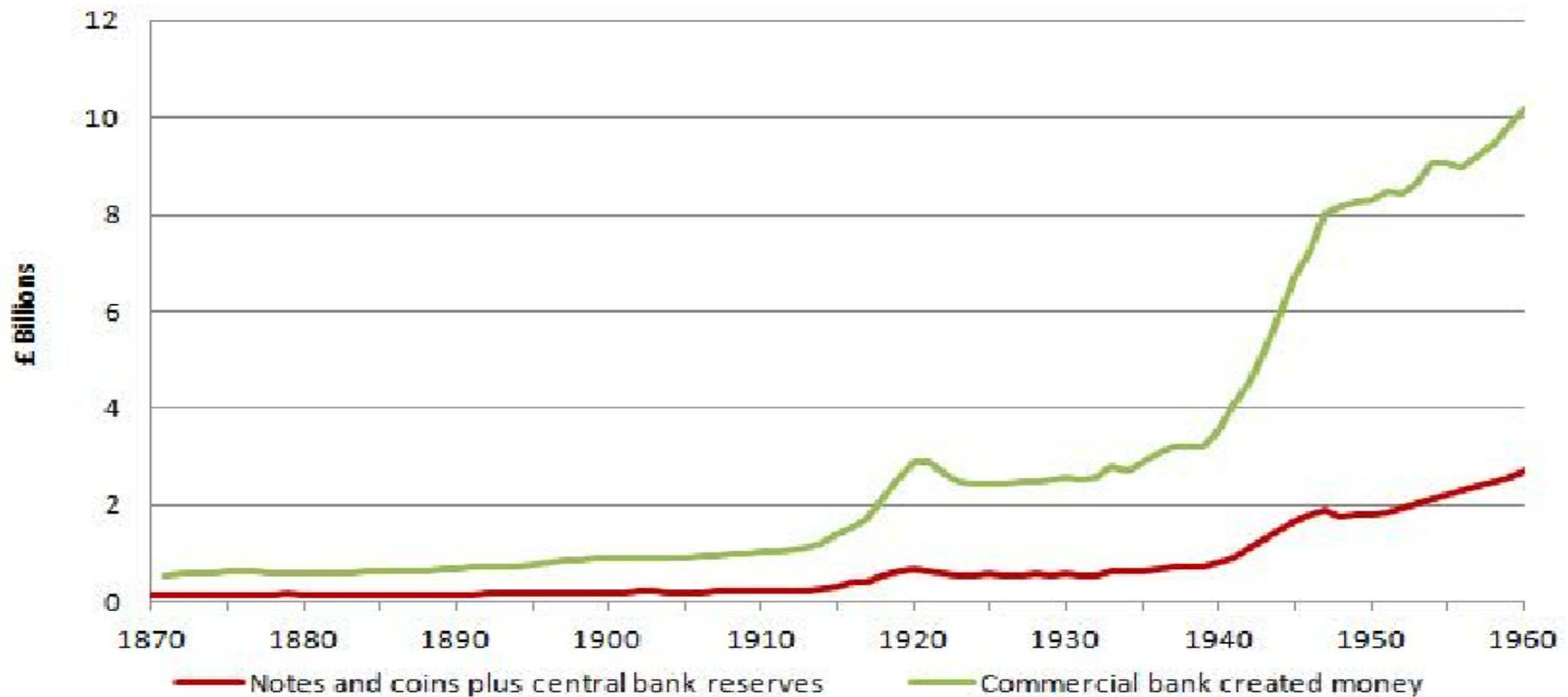


# Creation of Money

- 2.6% is notes and coins
- All the rest only exists as entries in an account
- 97.4% has been created by banks, lending it into existence
- When a bank makes a loan, it creates a liability for itself in the credit it puts into the recipient's account and balances that with an asset which is the loan

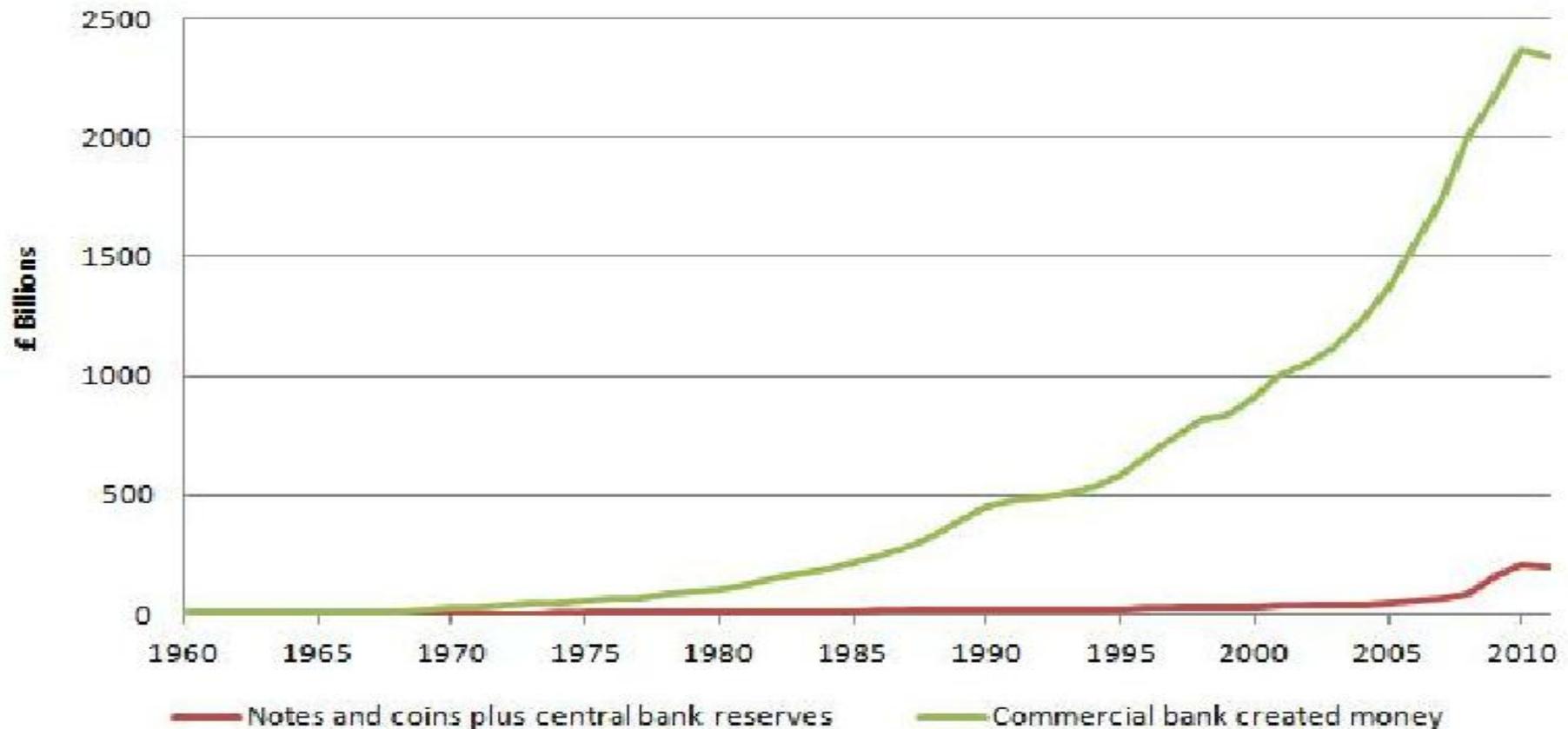
# Massive Growth in Debt-based Money (1)

Money Supply 1870 - 1960

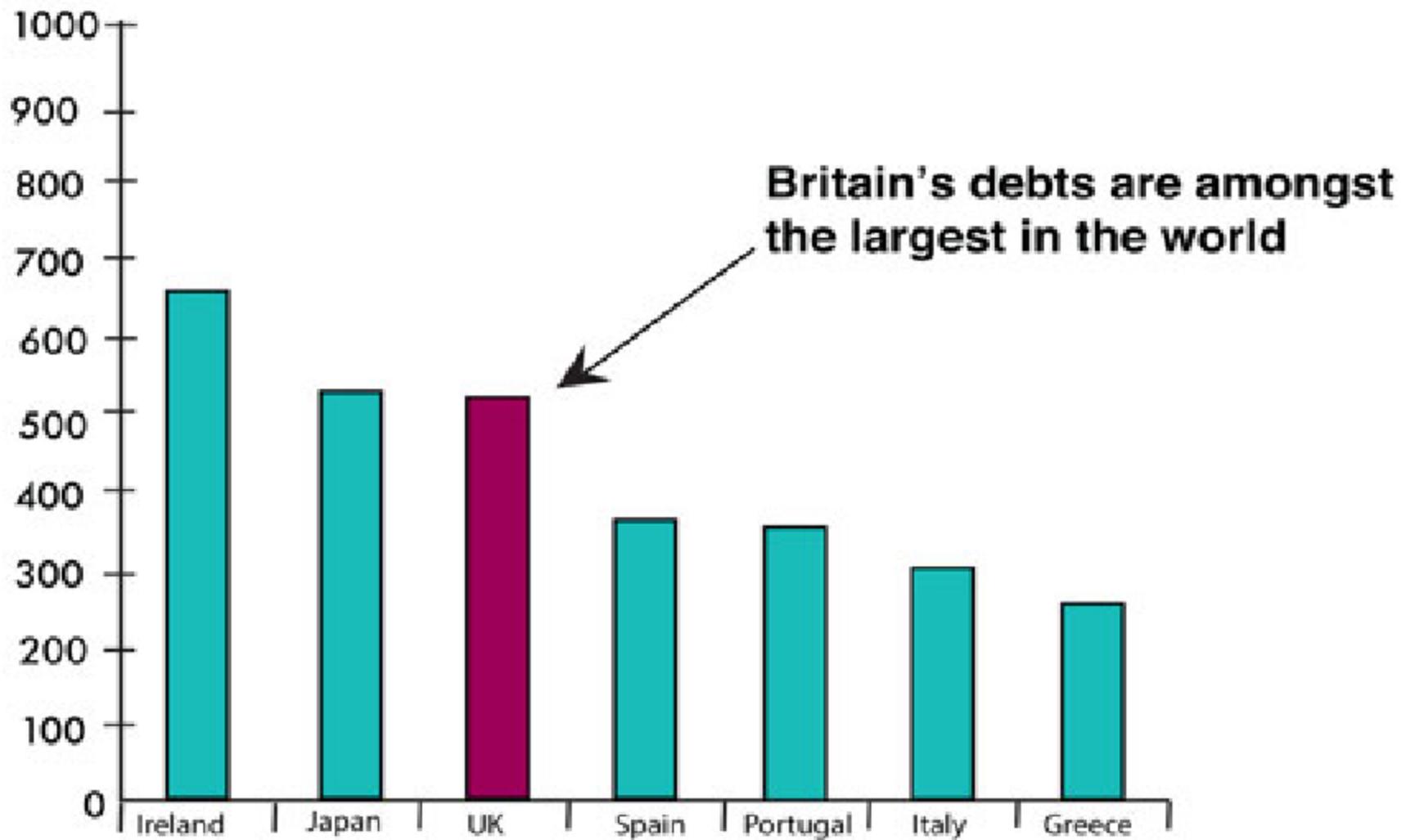


# Massive Growth in Debt-based Money (2)

Money Supply 1960 - 2010



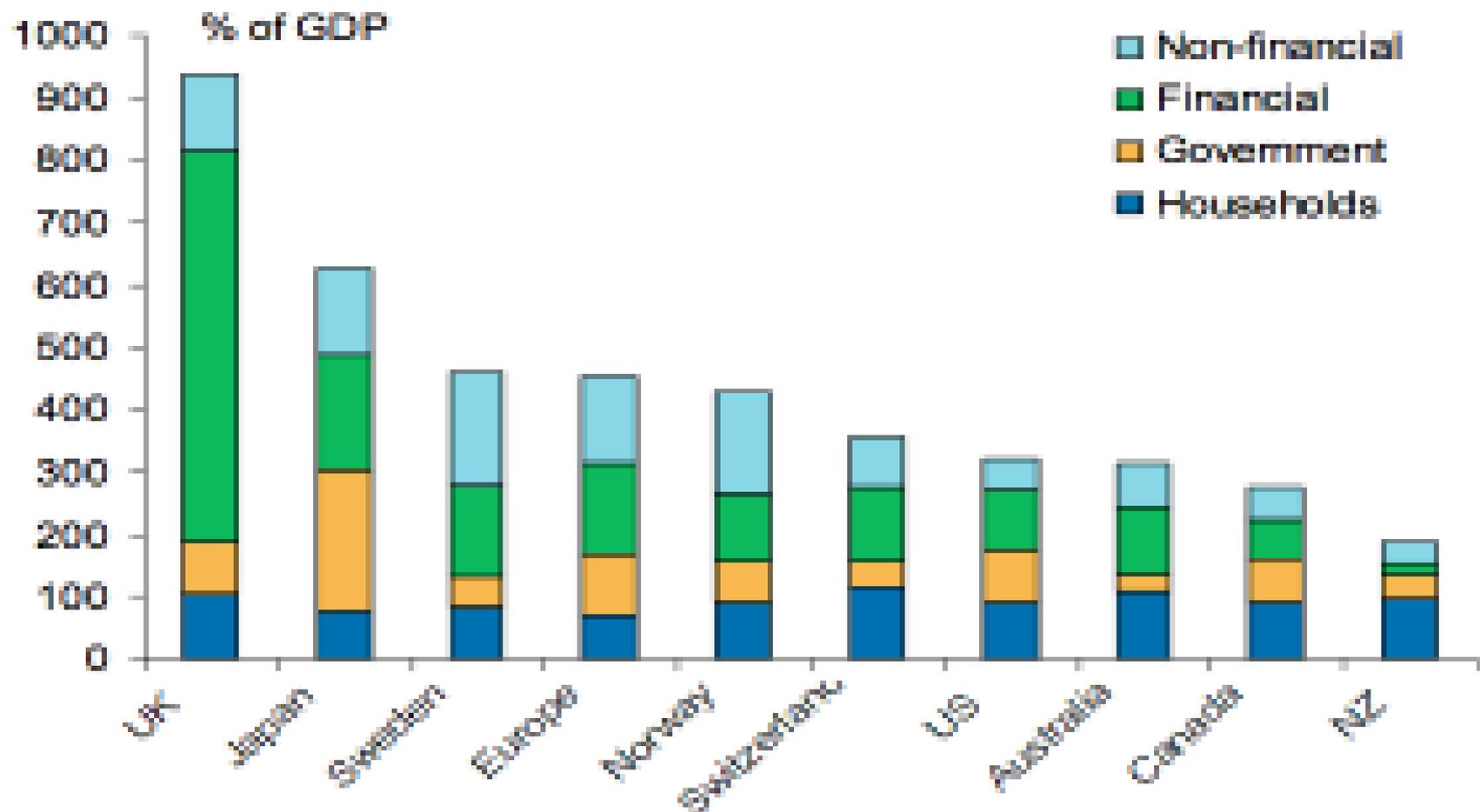
## UK Total Debt as a % of GDP



# Debt as % GDP G10 countries

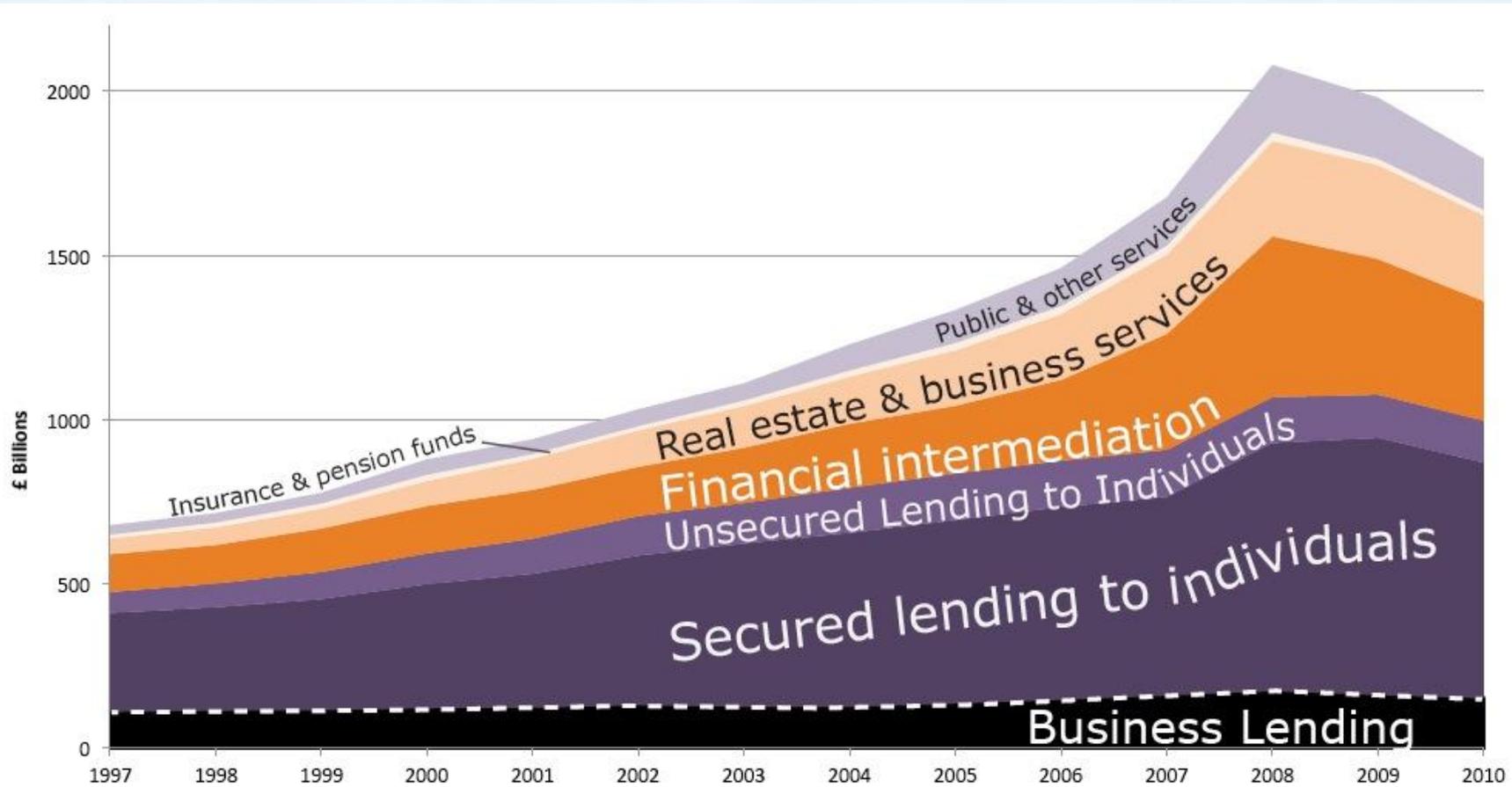
Exhibit 1

## G10 Debt Distribution



Source: Haver Analytics, Morgan Stanley Research

# Distribution of Bank Lending by Sector (UK)



# Quantitative Easing

- BoE creates money (Base Money (M0) with which it buys govt bonds from banks
- This increases the price of bonds, reducing effective interest rate
- It also increases the liquidity of the banks for settling transfers between each other
- No direct effect on bank lending



# Results of debt-created money

- Volatility of M4
- Expansion of financial sector
- Banks decide who gets loans (perverse incentives of variable reserve ratios)
- Increased inequality
- Asset price inflation, bubbles
- Pro-cyclical behaviour
- Govt dependent on financial markets for funds
- Temptation for banks to overstretch themselves

# Conclusions – Bank lending

- Thought experiment
- Lending at interest requires perpetual growth in money supply to make repayment of loans and interest possible.
- Requires (at present) perpetual growth in debt
- As debt becomes ever greater in ratio to GDP, increasingly unstable
- Greater GDP only way to reduce debt ratios
- This, as we have seen, is clearly unsustainable

# Stock Market

- Foundation stone of modern economy
- Enabled major investments that made industrial achievements of 19<sup>th</sup> and 20<sup>th</sup> centuries possible
- Separated ownership from management
- Shortened time horizons of investors in shares
- Advent of computer trading took this to extremes and biased trading towards anticipation of others' actions and away from firms' fundamentals

# Effect on Management

- Focus on growth in sales (and dividends)
- Encourages take-overs as easy way to grow
- Concentration on stock value with very short term horizon
- Forces ignoring of other stake-holders' interests
- Forces concentration on single (as opposed to triple) bottom line
- applies to banks at least as much as other firms
- Big Bang of 1980 meant most financial firms now joint stock instead of partnerships and mutuals

# Conclusions – Stock Exchange

- The effects listed above prevent enlightened management from taking a sustainable view
- Boards that focus on factors other than those affecting stock prices in the short term get taken over and replaced by those that concentrate on the latter.
- This builds unsustainability into the way joint stock companies operate.

# Overall Conclusions

- Our current economic theory, our money system and our main model of corporate governance all have elements that to me appear to lead inevitably to an unsustainable fixation with GDP growth.
- Not only is this trashing the planet, it isn't even the right goal, only a proxy for it.
- It is hard to step outside this paradigm, since it is all-pervasive and seems natural.
- Vested interests in status quo.
- Nevertheless, this system is made by humans. So it must be possible to change it.
- What is the alternative?

# Where do we go from here?

- Need a new economics, based on a recognition that a healthy economy is based upon a healthy ecology and that our resources are finite
- Need a new approach to finance
- Need a new approach to business
- Need a new measure of well-being against which to measure the value of policies and programmes
- ESP is in process of preparing a pamphlet, provisionally entitled “Towards a Quaker View of an Economy in which our Testimonies can Flourish”.

# How to proceed?

- Value things differently – social value included, tax “bads” not “goods”.
- Share our resources more equally
- Rebalance the role of the state, private sector and civil society. Preserve collective choices.
- Promote co-ops and other forms of co-production and social enterprise
  - Local decision-making where appropriate
  - Learn new skills and re-learn old ones
- Channel resources effectively to support a sustainable and equitable system – banking and monetary reform.
- Monetary reform

# What if the deniers are right?

