

Judging Economic Performance as *Quality of Life*

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Goal: Sustainable economic system that produces a high quality of life for all

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- What is the problem?
 - Climate change must immediately be addressed by all countries or cost of reducing GHGs becomes astronomical...or face the 6th extinction.
 - Inequality is at historic highs in the U.S. and is a problem around the world.
 - Economic growth no longer a “rising tide lifts all ships”.

Does how we measure economic growth matter?

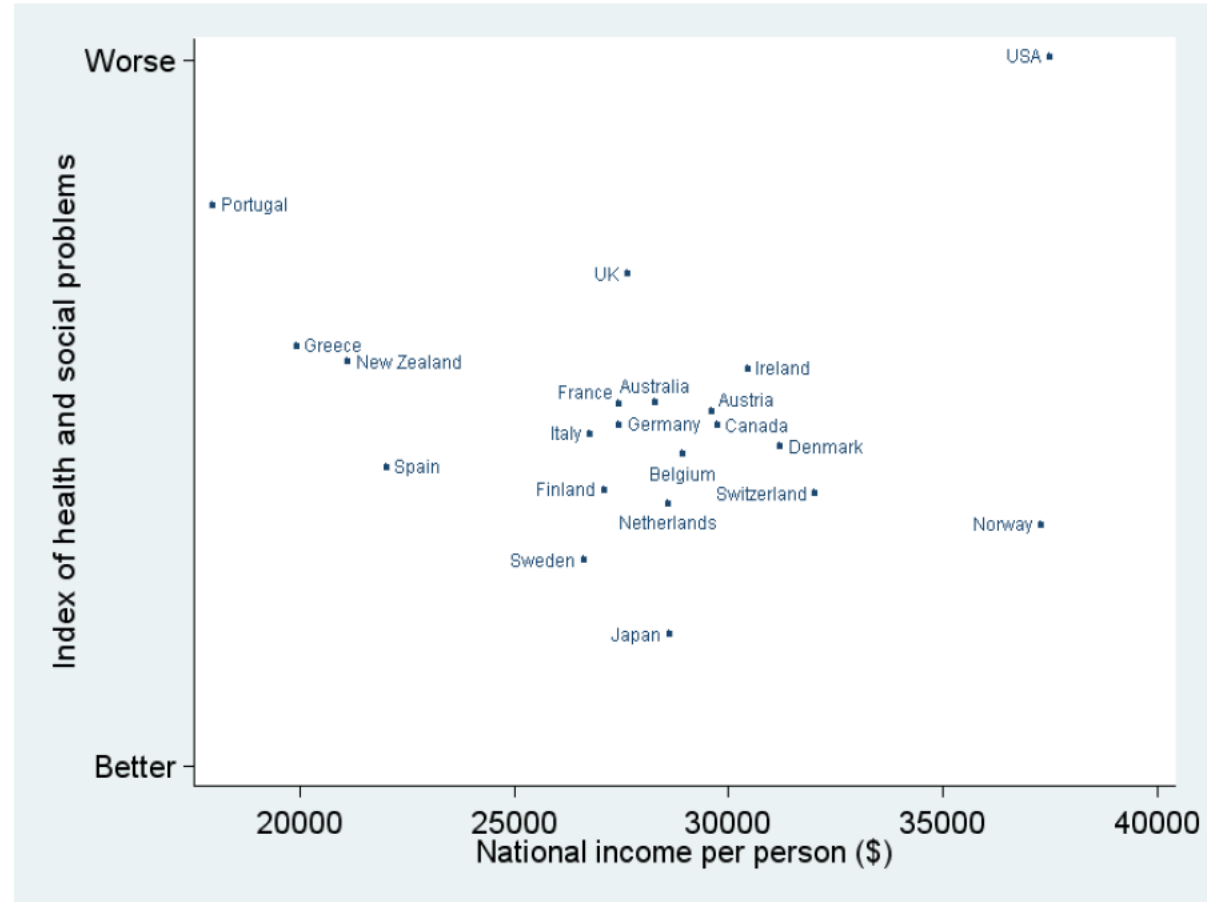
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- Growth in national income does *not* translate into improving quality of life in advanced economies.
 - Easterlin Paradox—over the long run in developed countries, national happiness does not increase with national income.
 - Specific measures of health, education, and social problems are not related to *average* national income.

Health and Social Problems are not Related to Average Income in Rich Countries

Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility



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

www.equalitytrust.org.uk

The Equality Trust

Does how we measure economic growth matter?

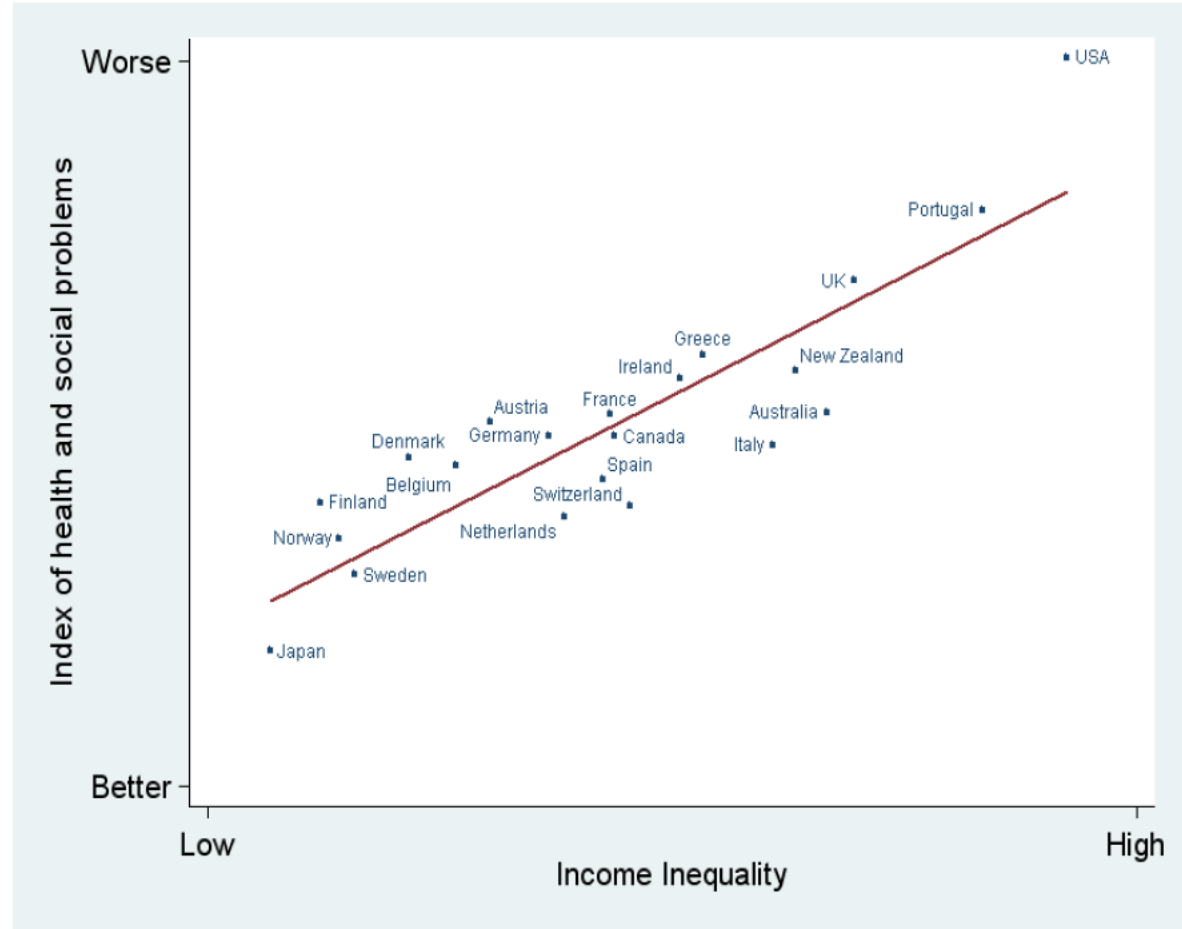
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- Distribution of income (inequality) *does* matter in quality of life across advanced countries.
 - Quality of life indicators worsen as income inequality rises across countries.
 - Within a country, quality of life indicators improve with income.

Health and Social Problems are Worse in More Unequal Countries

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Earth's system is becoming unstable

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- Global research report (*Science* Jan 2015)
 - 4 of the 9 systems essential to stabilize the earth system have *become dangerously compromised by human activity*
 - Climate change
 - Loss of biodiversity
 - Deforestation
 - Phosphorus & nitrogen cycles

Policy Solution: Tie growth to equity and sustainability

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- Climate change is eclipsed in the U.S. by stagnant wages and slow growth.
- Focus on growth does not necessarily reduce inequality, and growth could worsen CO2 emissions.
- We need a ***new measurement of economic performance*** as quality of life that includes distribution across people and sustainability across generations.

How would a holistic measurement of economic performance help?

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- Measurement of well-being of people and environment will provide a better way to evaluate economic growth and policies.
 - UK, France, OECD, UN have led the way in creating economic performance measures that include quality of life, its distribution and the sustainability of the economic system.

Key components in measuring economic performance

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- Quality of life
- Distribution of well-being (inequality)
- Sustainability

Measuring Economic Performance: Three approaches

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- Gross national product (GDP) (monthly)
plus unemployment rate (monthly)
plus poverty rate (annual): **Current approach**
- *National income accounts approach* measures both
market and nonmarket activities of households
(adjusted for inequality and environmental
degradation): **Genuine Progress Indicator**
- *Capabilities approach* measure human capabilities
and freedoms, including a sustainable environment:
Better Life Index

Strengths of the three approaches

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- *GDP* (monthly) is measured consistently and frequently over time and across countries.
 - Compares economic (market) growth across countries and within a country over time.
 - No indicators of income distribution, sustainability, or nonmarket activities.
- *GPI* (annual) shows annual growth in quality of life over time.
 - Based on national income accounts. So far cannot be used to compare countries.
- *BLI* (annual) is an index of how a group of countries compare in quality of life (annual).
 - Does not indicate a country's improvement or growth in quality of life over time.

Human Development Index (HDI) UN

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- Single index number that combines three dimensions (up to 187 countries, 1990 on)
 - Health (life expectancy)
 - Education (mean and expected years of schooling)
 - Living standards (income per capita)

- Index calculated using fixed minimum and maximum goalposts for each dimension.

- In 2010, two measures of inequality also calculated
 - IHDI adjusts HDI for inequality in a country's distribution of each of the three dimensions
 - Gender Inequality Index (GII) measures reproductive health, empowerment and labor market participation

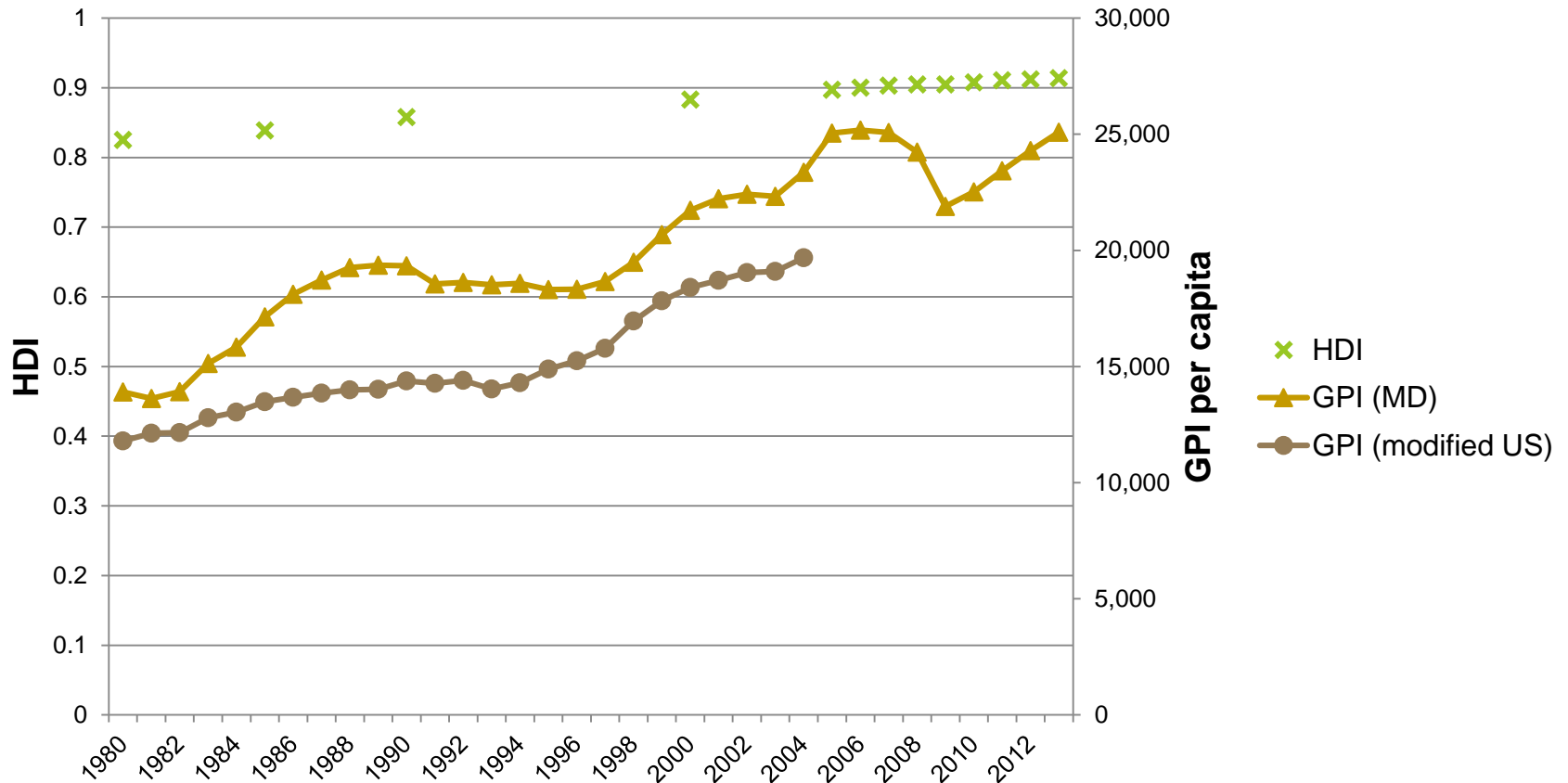
Genuine Progress Indicator (GPI)

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- Calculation of GPI (26 indicators)
 - Personal consumption, adjusted for inequality (Gini coefficient)
 - Adds value of nonmarket work, leisure (adjusted for unemployment) and volunteer work
 - Subtracts defensive expenditures (commuting, crime)
 - Subtracts externalities (depletion of natural capital, CO2 emissions, costs of pollution)
 - Adds public goods (roads)
- Used by states of Maryland and Vermont

HDI vs GPI

United States HDI vs GPI measures



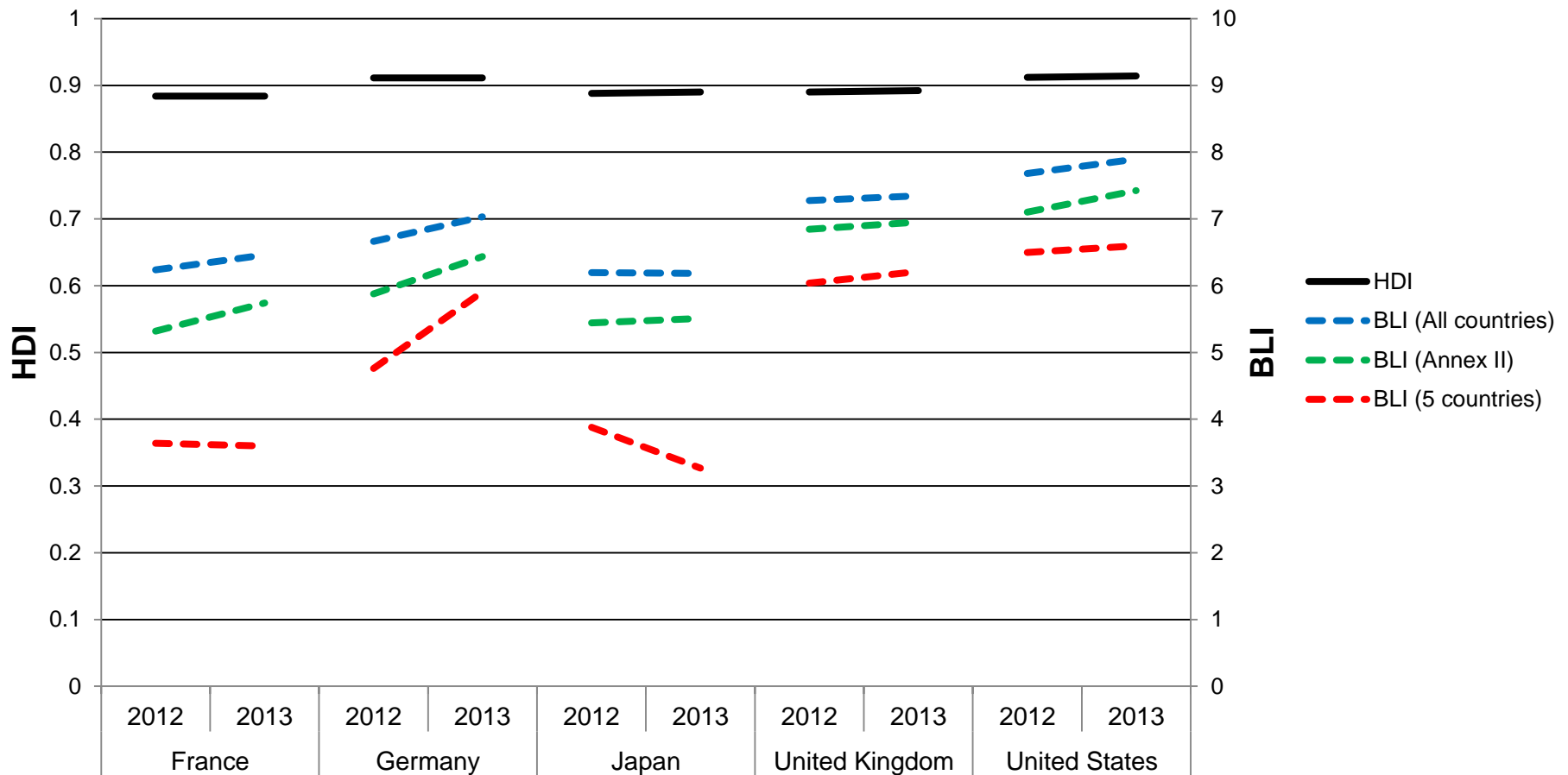
Better Life Index (BLI) OECD--36 countries

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- Capabilities represented with 11 dimensions
 - Housing, income, jobs, community, education, environment, governance, health, life satisfaction, safety, work-life balance
- Dimensions use 24 indicators
 - Indicators normalized by sample's minimum and maximum of average country values
 - Divide (country's average – sample minimum value) by (sample maximum - minimum).
 - Normalized indicators aggregated (equal weights) to calculate dimension.
- BLI not presented as aggregated index, but online users can plug in weights to calculate national BLIs for OECD countries.

HDI vs BLI for 5 Rich Countries 2012-2013

HDI vs BLI 2012-2013 for 5 major OECD economies



Important differences in GPI and BLI

- GPI provides an annual measure to indicate changes in economic performance over time.
 - Method needs to be standardized.
 - Does not rely upon survey of consumer perceptions.

- BLI provides a dashboard of indicators of quality of life to compare countries.
 - Provides a relative ranking for a group of countries, without indicating improvements over time.
 - Uses subjective well-being measure of “life satisfaction”.
 - Many economists think this is a critical variable in measuring quality of life.
 - No specific adjustments for inequality.

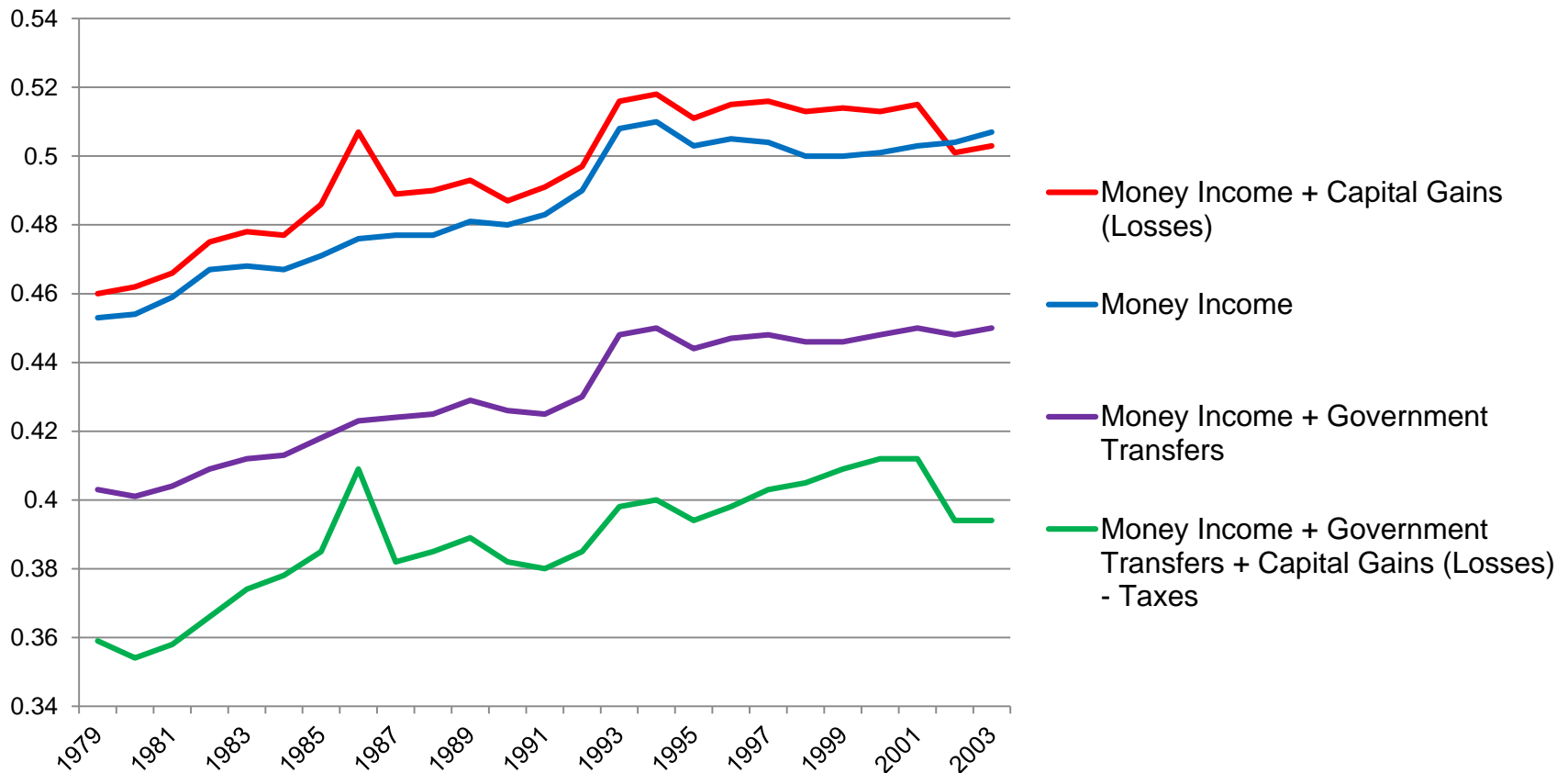
How to measure inequality

- How consumer expenditures are adjusted for inequality in GPI matters
- Many Gini coefficients of income distribution
 - Depends on whether or not capital gains, taxes and government transfers are included in income.
- Gini plots indicate that government tax and transfer policies are important determinants of inequality.

Movement of Gini coefficient over time

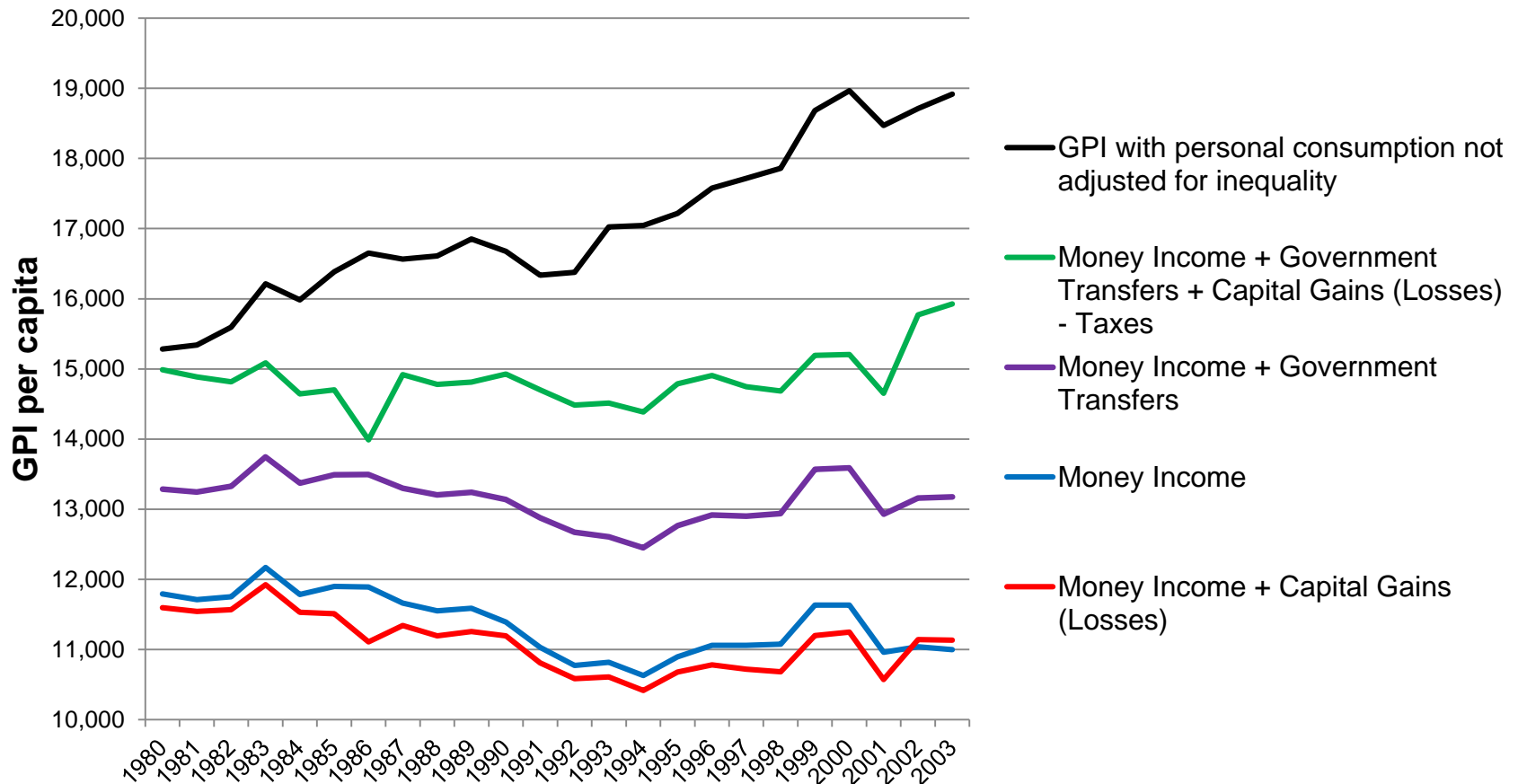
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Gini Coefficients from 1979-2003



US GPI using different Gini coefficients

GPI per capita under different Gini definitions



Problem: Measurement of sustainability

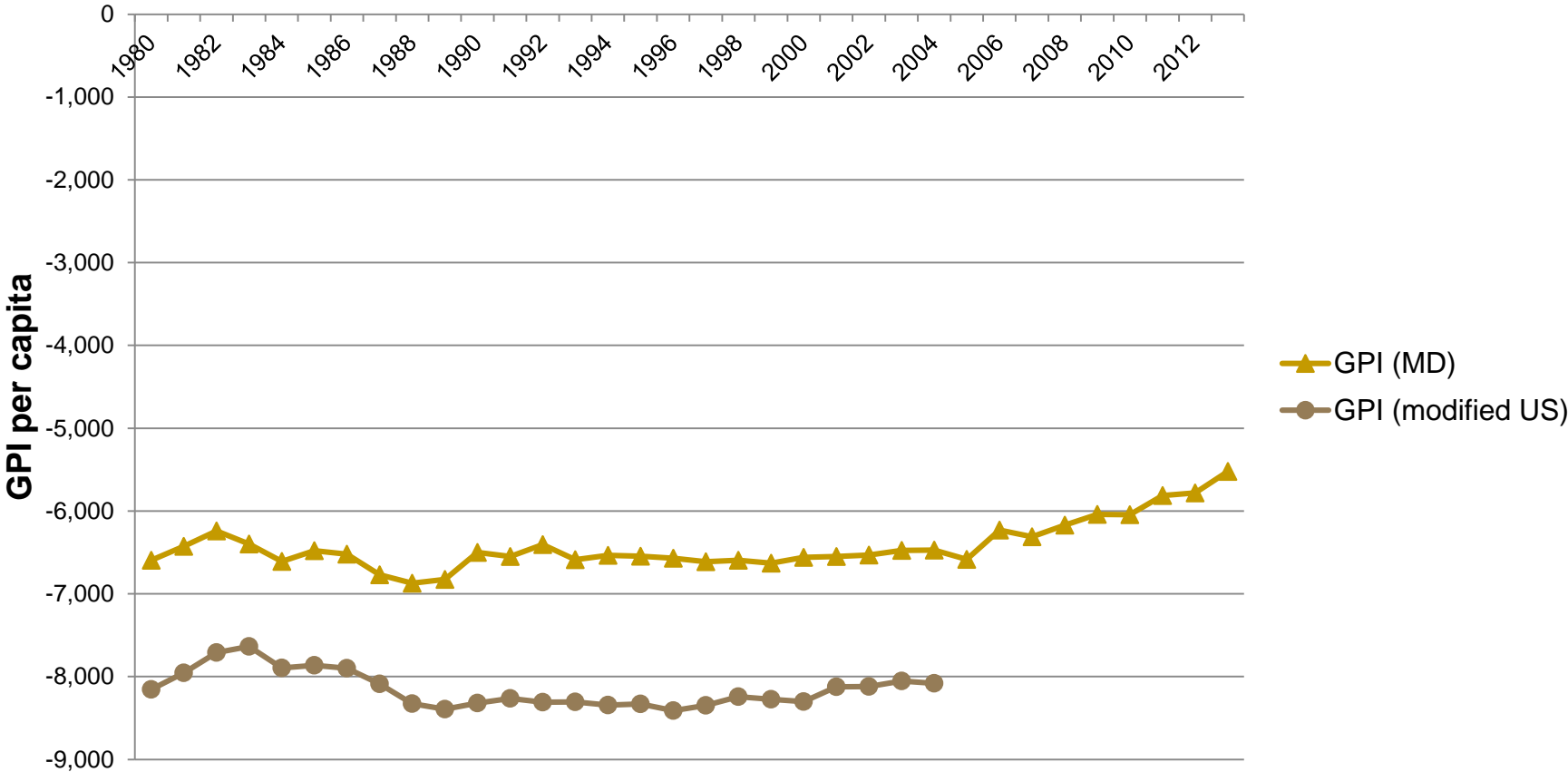
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- Sustainability is a complex issue because it asks if today's quality of life can be replicated in future generations.
 - Four kinds of capital to pass on: natural, social, human, and human made
- Sustainability depends on critical assumption:
 - Weak sustainability: allows trade-offs among types of capital and among inputs (capital, labor, resources, technology), with output capability not decreasing.
 - Strong sustainability: trade-offs with natural capital have physical limits, and critical levels for most natural resources must be preserved.

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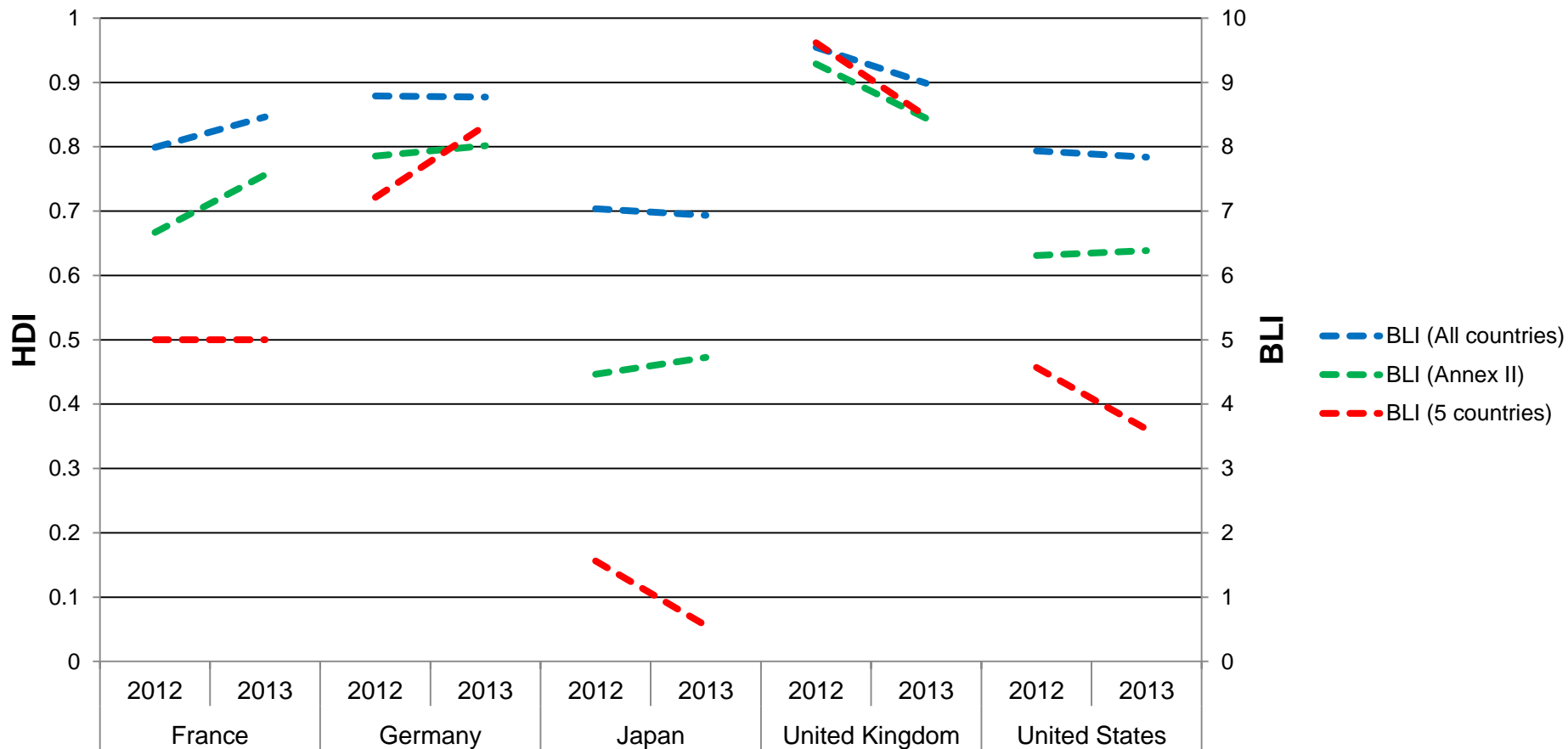
GPI Environmental Indicators

United States and Maryland GPI Environmental indicators



BLI Environmental Indicators

BLI 2012-2013 for 5 major OECD economies Environmental Indicators



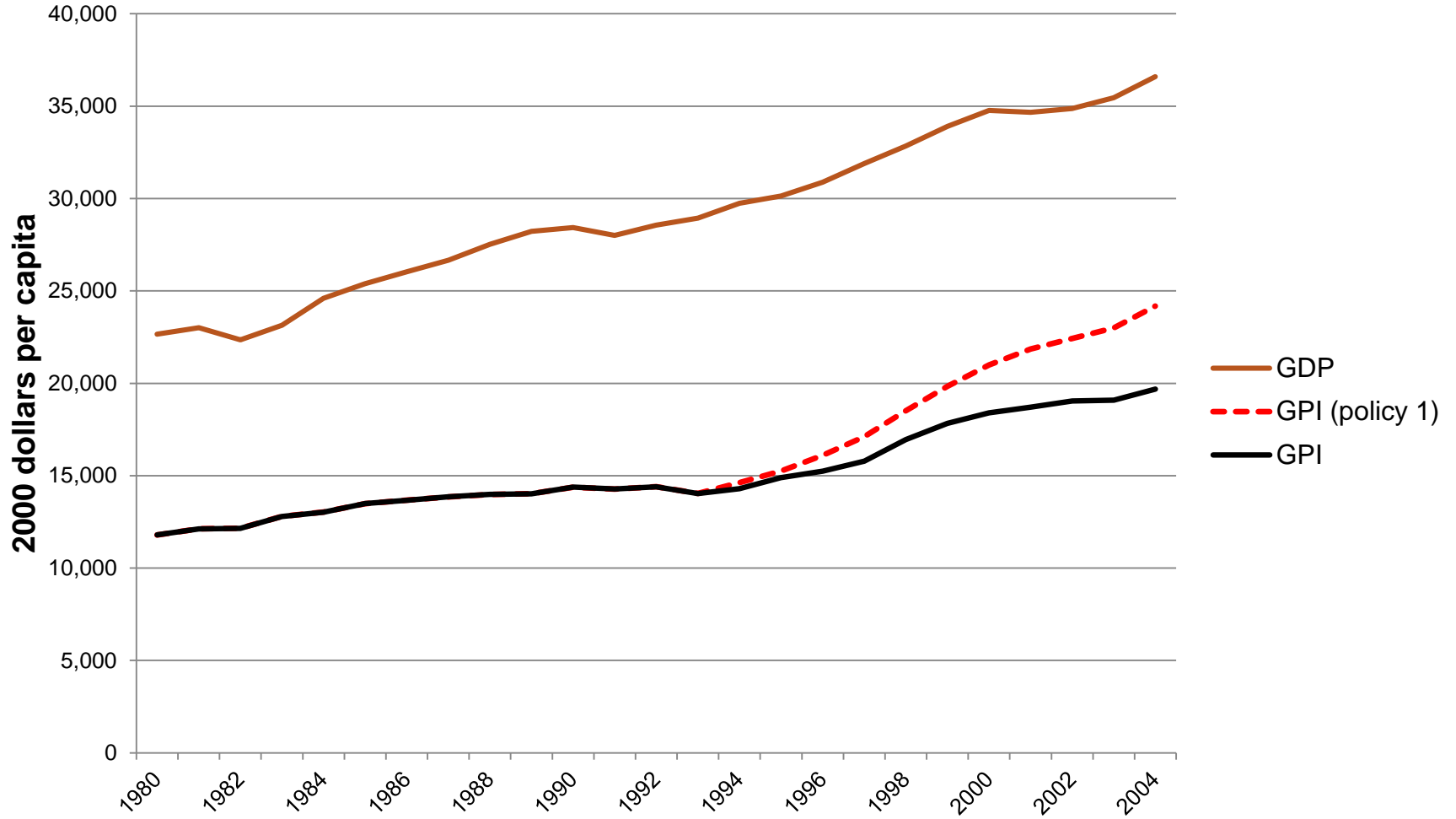
Policy 1: Inequality falls by 1.5% annually (Gini coefficient)

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- Measurement of GDP not directly affected by change in income distribution.
 - Changes in consumption, savings and investment may be affected, which then affects GDP.

- GPI directly affected, because consumer expenditures adjusted for change in Gini.
 - GPI rises steadily with reduced inequality.

Policy 1: Gini ratio falls 1.5% each year from 1994-2004

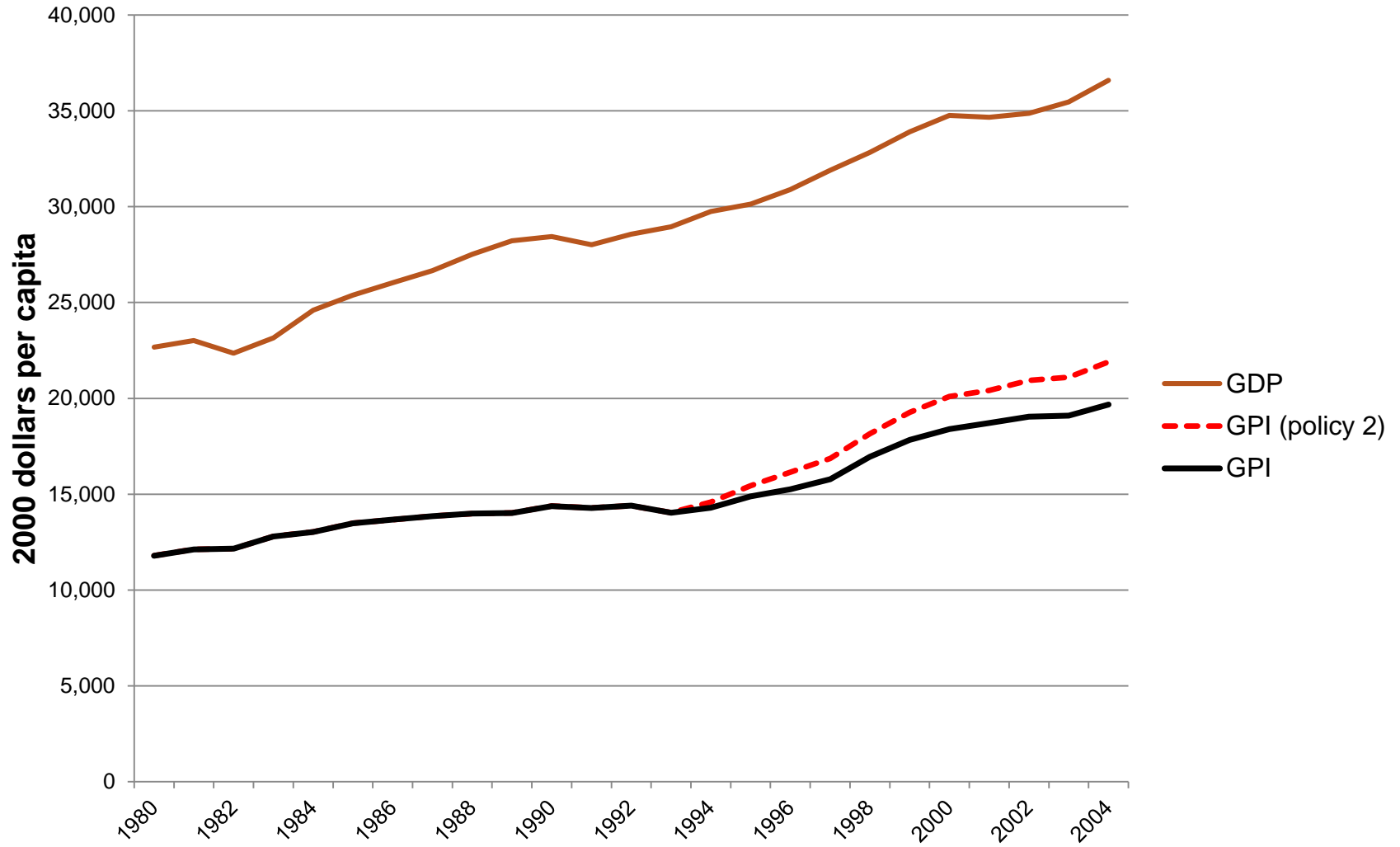


Policy 2: 5% annual decrease in non-renewable resource consumption? (1994-2004)

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- GDP not affected by pollution or environmental degradation.
 - Net change in GDP is increase in renewable energy minus decrease in fossil fuels.
- GPI is directly affected and increases as consumption of non-renewable resources drops.

Scenario 2: Decrease per capita non-renewable resource consumption by 5% from 1994-2004



How we measure economic performance matters!

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Economic growth must improve quality of life for all people, now and in future generations.

Thank you!

Resources are provided on next slide.

Resources 1 of 3

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- *Mismeasuring Our Lives*, Stiglitz, Sen, and Fitoussi
http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf
- UN Human Development Index (HDI)
2013 Human Development Report: <http://hdr.undp.org/en/2013-report>
HDI datasets: <http://hdr.undp.org/en/data>
- Genuine Progress Index (GPI)
<http://genuineprogress.net/genuine-progress-indicator/>
State of Maryland's web site provides methodology and data:
<http://www.dnr.maryland.gov/mdgpi/>
“Methodological developments in US state-level Genuine Progress Indicators: Toward GPI 2.0”, Bagstad et al, *Ecological Economics* 45 (2014) 474-485
“Beyond GDP: Measuring and Achieving Global Genuine Progress”, Kubiszewski et al, *Ecological Economics* 93 (2013) 57-68

Resources 2 of 3

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- OECD Better Life Index (BLI)
<http://www.oecdbetterlifeindex.org/>
- Happy Planet Index (HPI)
<http://www.happyplanetindex.org/>
- UN World Happiness Reports, 2012 and 2013
2012 report:
<http://www.earth.columbia.edu/sitefiles/file/Sachs%20Writing/2012/World%20Happiness%20Report.pdf>
2013 report:
http://unsdsn.org/files/2013/09/WorldHappinessReport2013_online.pdf
- Bhutan Gross National Happiness:
<http://www.grossnationalhappiness.com/wp-content/uploads/2012/04/Short-GNH-Index-edited.pdf>

Resources 3 of 3

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- *Magic of Awareness*, Anam Thubten, Snow Lion Publications, 2012
-
- *Development as Freedom*, Amartya Sen, Knopf, 1999
-
- Clair Brown, *American Standards of Living 1918-1988*, Blackwell, 1994
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