

# INEQUALITIES IN CHILD HEALTH: WHAT TO MEASURE AND WHY?

Nicholas B. King, PhD  
INRICH workshop  
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# Equality of What?

Every normative theory of social arrangement that has at all stood the test of time seems to demand equality of *something* - something that is regarded as particularly important in that theory. The theories involved are diverse and frequently at war with each other, but they still seem to have that common feature.

# Dilemmas of equity

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- Equality of what

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- Equality of what
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- Equality, causal inference, and the consonance of the good

# The Great Recession and Health: People, Populations, and Disparities

By  
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Two research traditions have evolved to assess links between recessions and health, with seemingly divergent findings. Aggregate-level studies generally find that mortality rates decline during recessionary periods. By contrast, individual-level studies generally find that events that frequently occur during recessions, like job loss, unemployment, and material hardship, carry negative health consequences. We comprehensively review evidence from these two bodies of research, illustrate key findings, and show how the different mechanisms can operate in parallel. We also outline some of the limitations of the extant evidence, discuss studies emerging to address these limits and directions for future research, and provide brief empirical examples to illustrate some of these limits and directions using the Health and Retirement Study and the Michigan Recession and Recovery Study. Our review emphasizes the importance of considering both the aggregate- and individual-level associations when evaluating the likely short- and longer-term consequences of the Great Recession for health and health disparities.

**Keywords:** Great Recession; unemployment; health; mortality; morbidity; material hardship

Individual and public health are linked to financial stability and economic well-being. As such, it is reasonable to expect that the Great Recession of 2007–2009, which caused turmoil in labor, housing, and financial markets, would have an impact on health and health behaviors. Two independent bodies of research assess these associations, with seemingly divergent findings. One focuses on aggregate-level associations between business cycle indicators (e.g., unemployment rates) and rates of

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SOCIAL EPIDEMIOLOGY (JM OAKES, SECTION EDITOR)

## Health Impacts of the Great Recession: a Critical Review

Claire Margerison-Zilko<sup>1</sup> · Sídrea Goldman-Mellor<sup>2</sup> · April Falconi<sup>3</sup> · Janelle Dowling<sup>4</sup>

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**Abstract** The severity, sudden onset, and multipronged nature of the Great Recession (2007–2009) provided a unique opportunity to examine the health impacts of macroeconomic downturn. We comprehensively review empirical literature examining the relationship between the Recession and mental and physical health outcomes in developed nations. Overall, studies reported detrimental impacts of the Recession on health, particularly mental health. Macro- and individual-level employment- and housing-related sequelae of the Recession were associated with declining fertility and self-rated health, and increasing morbidity, psychological distress, and suicide, although traffic fatalities and population-level alcohol consumption declined. Health impacts were stronger among men and racial/ethnic minorities. Importantly, strong

social safety nets in some European countries appear to have buffered those populations from negative health effects. This literature, however, still faces multiple methodological challenges, and more time may be needed to observe the Recession's full health impact. We conclude with suggestions for future work in this field.

**Keywords** Great Recession · Economy · Mental health · Mortality · Fertility · Health behavior

### Introduction



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Original article

## Recession and Suicide

### Economic downturns and suicide mortality in the USA, 1980–2010: observational study

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### Abstract

**Background:** Several studies have suggested strong associations between economic downturns and suicide mortality, but are at risk of bias due to unmeasured confounding. The rationale for our study was to provide more robust evidence by using a quasi-experimental design.

**Methods:** We analysed 955 561 suicides occurring in the USA from 1980 to 2010 and used a broad index of economic activity in each US state to measure economic conditions. We used a quasi-experimental, fixed-effects design and we also assessed whether the effects were heterogeneous by demographic group and during periods of official recession.

**Results:** After accounting for secular trends, seasonality and unmeasured fixed characteristics of states, we found that an economic downturn similar in magnitude to the 2007 Great Recession increased suicide mortality by 0.14 deaths per 100 000 population [95% confidence interval (CI) 0.00, 0.28] or around 350 deaths. Effects were stronger for men (0.28, 95% CI 0.07, 0.49) than women and for those with less than 12 years of education (1.22 95% CI 0.83, 1.60) compared with more than 12 years of education. The overall effect did not differ for recessionary (0.11, 95% CI –0.02, 0.25) vs non-recessionary periods (0.15, 95% CI 0.01, 0.29). The main study limitation is the potential for misclassified death certificates and we cannot definitively rule out unmeasured confounding.

**Conclusions:** We found limited evidence of a strong, population-wide detrimental effect of economic downturns on suicide mortality. The overall effect hides considerable heterogeneity by gender, socioeconomic position and time period.

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ANALYSIS

## The effect of economic recession on population health

Stephen Bezruchka MD MPH

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Economic recessions have paradoxical effects on the mortality trends of populations in rich countries. Contrary to what might have been expected, economic downturns during the 20th century were associated with declines in mortality rates. In terms of business cycles, mortality is procyclical, meaning it goes up with economic expansions and down with contractions, and not countercyclical (the opposite), as expected. So while most nations enjoyed sustained declines in mortality during the last century, the pace of the decline has been slower during economic booms and greater during so-called busts. The first

### Key points

- In rich countries, mortality declines faster during recessions than during periods of economic growth.
- Countries with strong social safety nets see smaller changes in the health of the population related to business cycles.
- The current economic crisis offers an opportunity for rich countries to rethink the social purposes of their economies.

world's health care bill.<sup>4</sup> The United States also has the great-

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- Equality, equity, and equality *per se*

An example

# The U.S. Is Failing in Infant Mortality, Starting at One Month Old

**Aaron E. Carroll**

THE NEW HEALTH CARE JUNE 6, 2016



Many more babies die in the United States than you might think. In 2014, more than [23,000 infants died](#) in their first year of life, or about six for every 1,000 born. According to the Centers for Disease Control and Prevention, [25 other industrialized nations do better](#) than the United States at keeping babies alive.

This fact is hard for some to comprehend. Some try to argue that the disparity isn't real. They assert that the United States [counts very premature births as infants](#) because we have better technology and work harder to save young lives. Therefore, our increased rate of infant death isn't due to deficiencies, but differences in classification. These differences are [not as common](#), nor as great, as many people think. Even when you [exclude very premature births from analyses](#), the United States ranks pretty poorly.

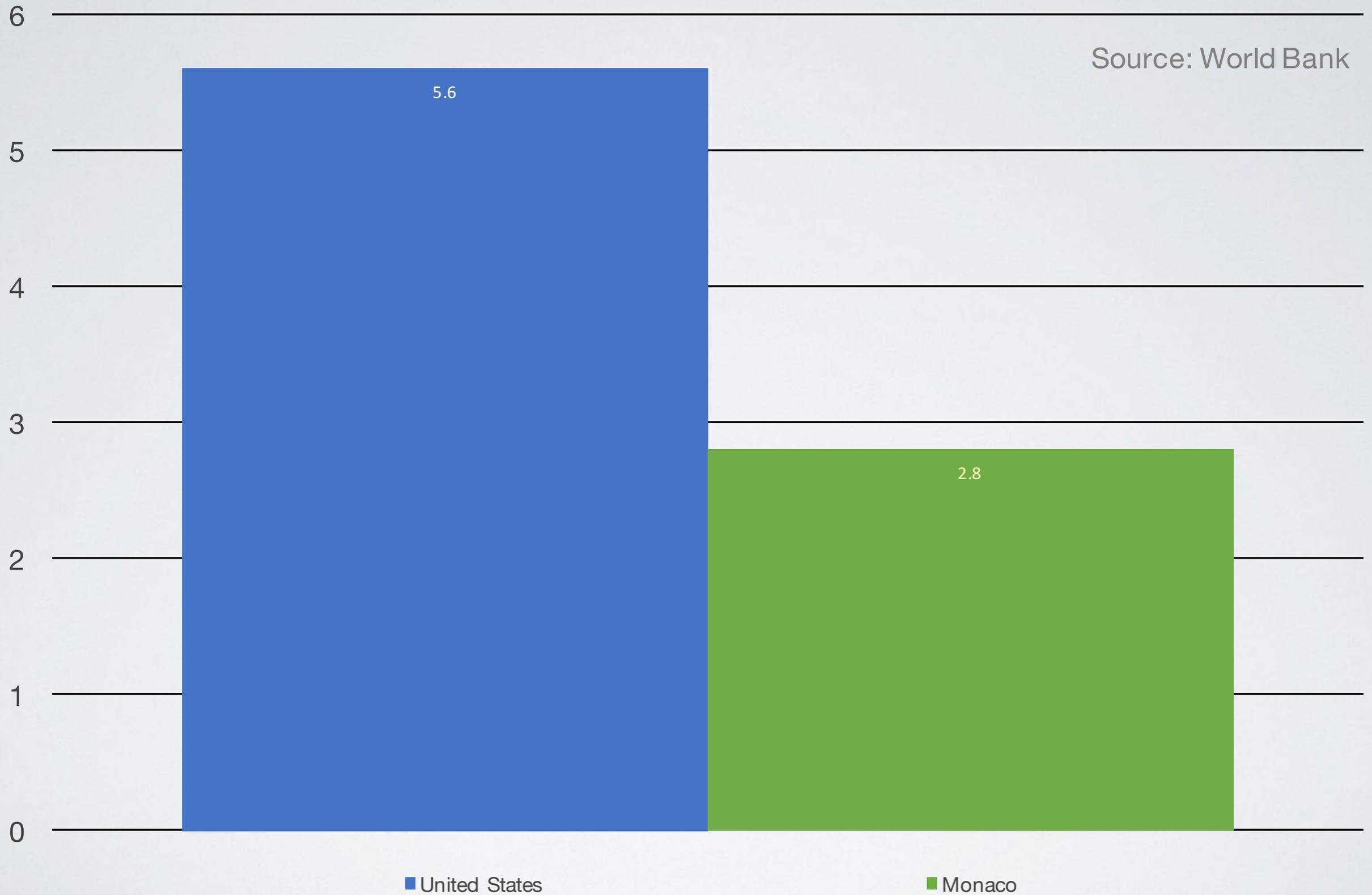
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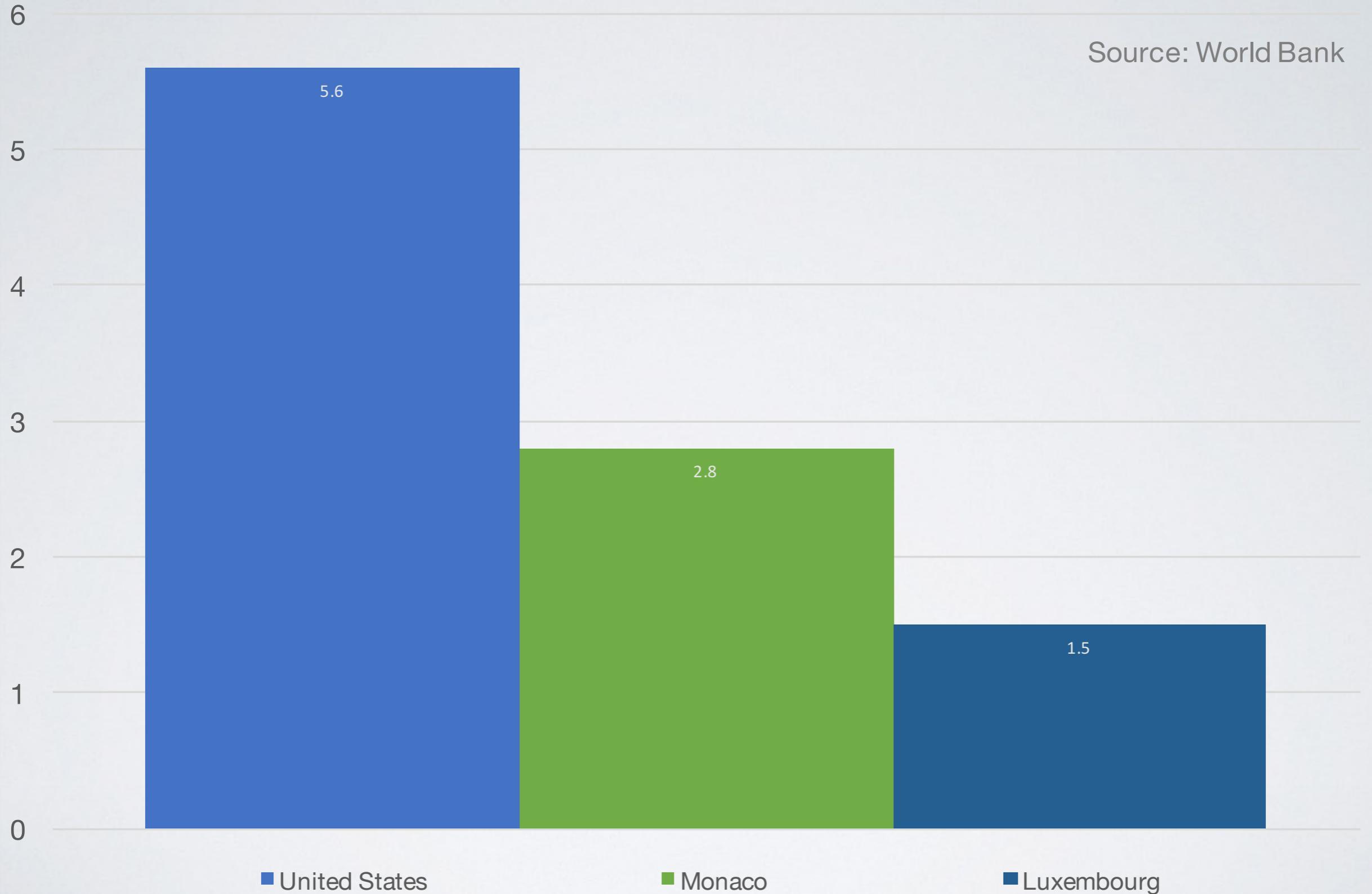
# Infant mortality per 1000 live births, 2015

Source: World Bank

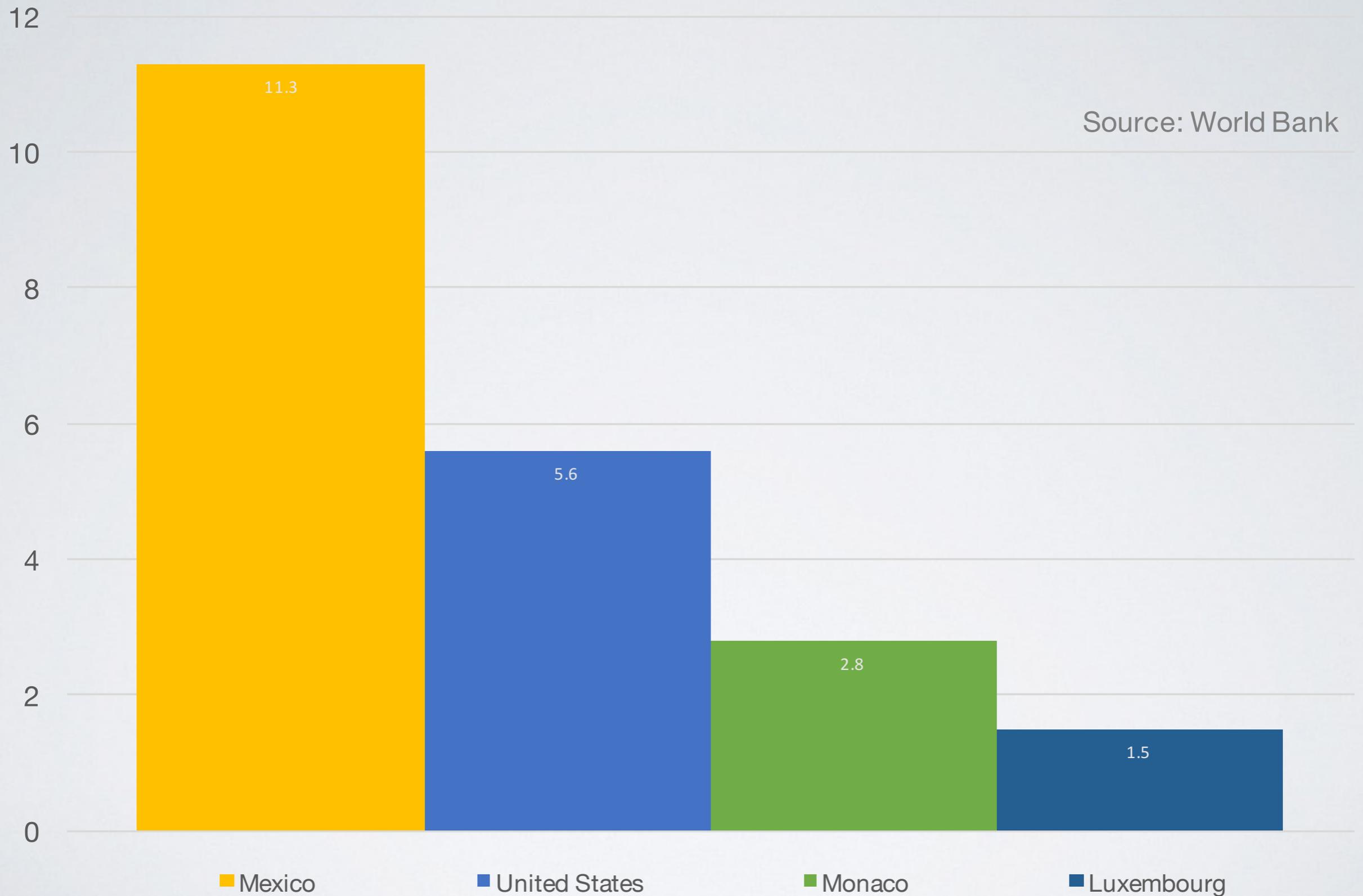


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Source: World Bank

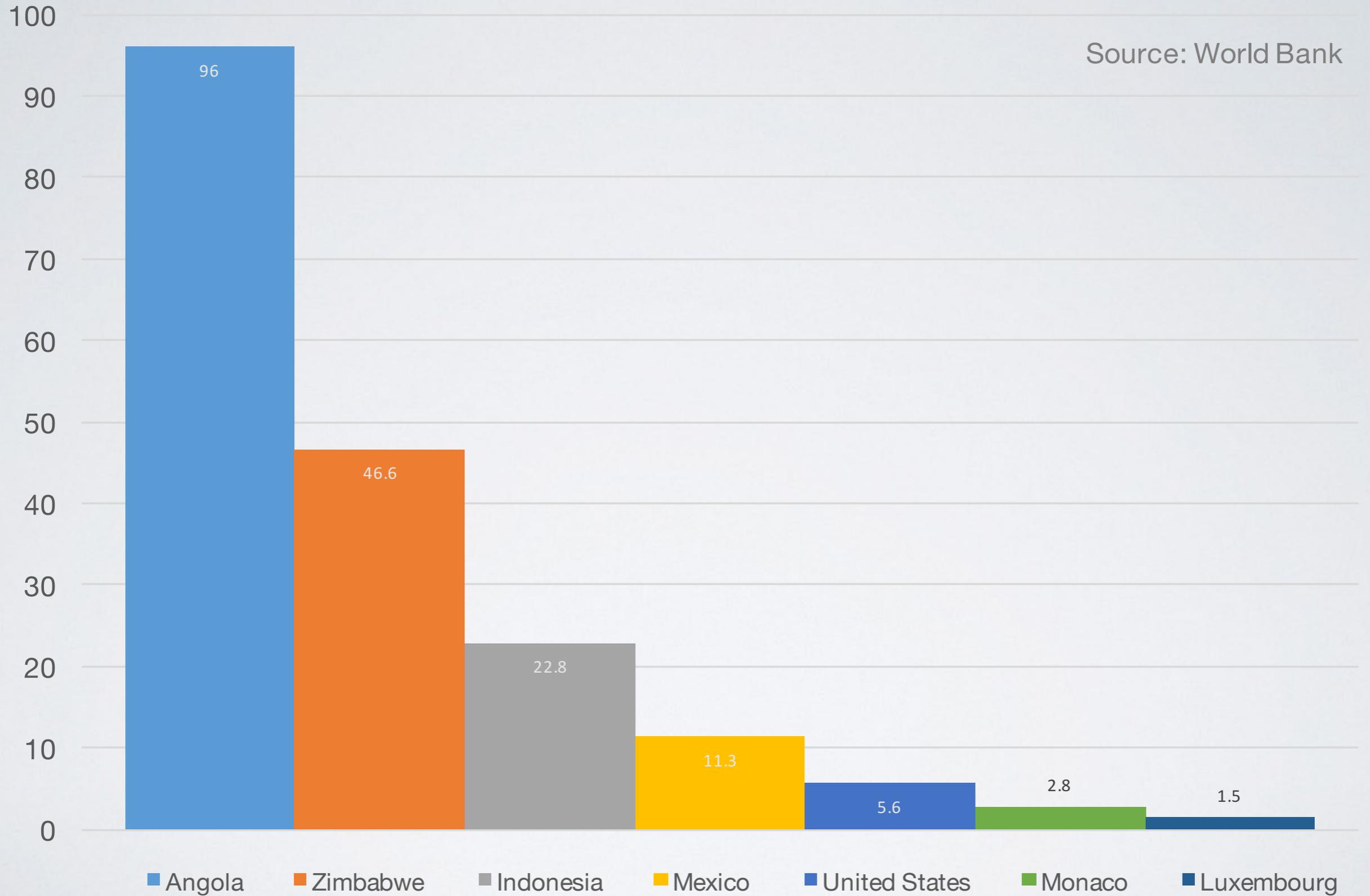


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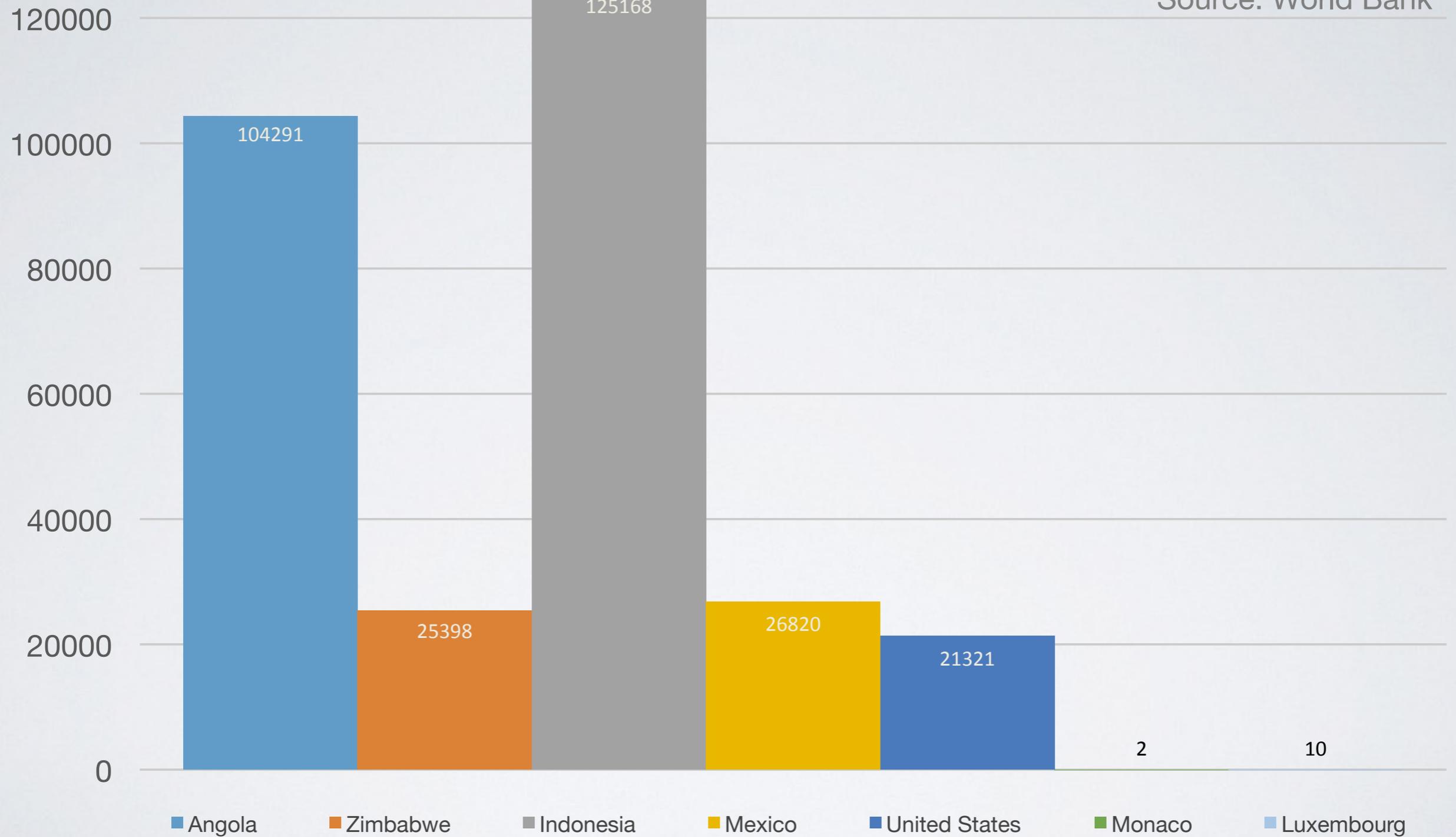
# Infant mortality per 1000 live births, 2015

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Source: World Bank



# Dilemmas of equity

Equality of what in child health?

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  - Relative difference (equality per se)
  - Absolute difference (priority to worst off)
  - Absolute number (greatest absolute benefit)

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  - Best possible (Luxembourg = 1.5/1000)
  - Best-off (High income = 5.8/1000)
  - Arbitrary (MDG 4.A: 2/3 reduction in U5 rate, 1990-2015)

# Equality of what in child health?

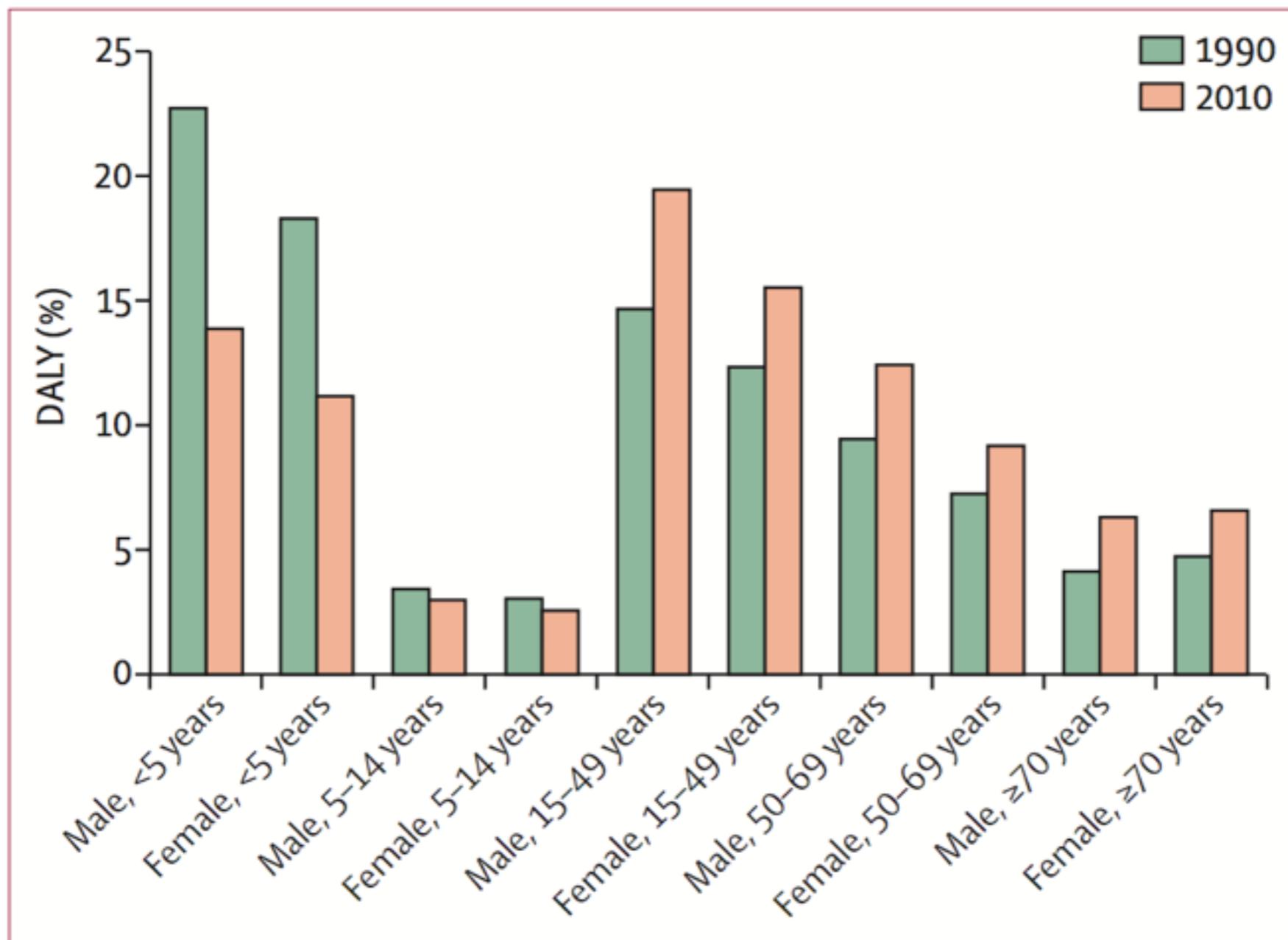
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- Aggregation & weighting
  - Political unit (country)
  - Social group (SES, race/ethnicity)

# What to measure...

- Mortality
- Morbidity (diagnosed conditions)
- Functional problems (hearing, vision, etc.)
- Health potential (cognitive development, birth weight)
- Health services (immunization, prenatal care, nutrition)
- Health determinants (family SES, environment)
- Composite indicators (DALYs, QALYs)

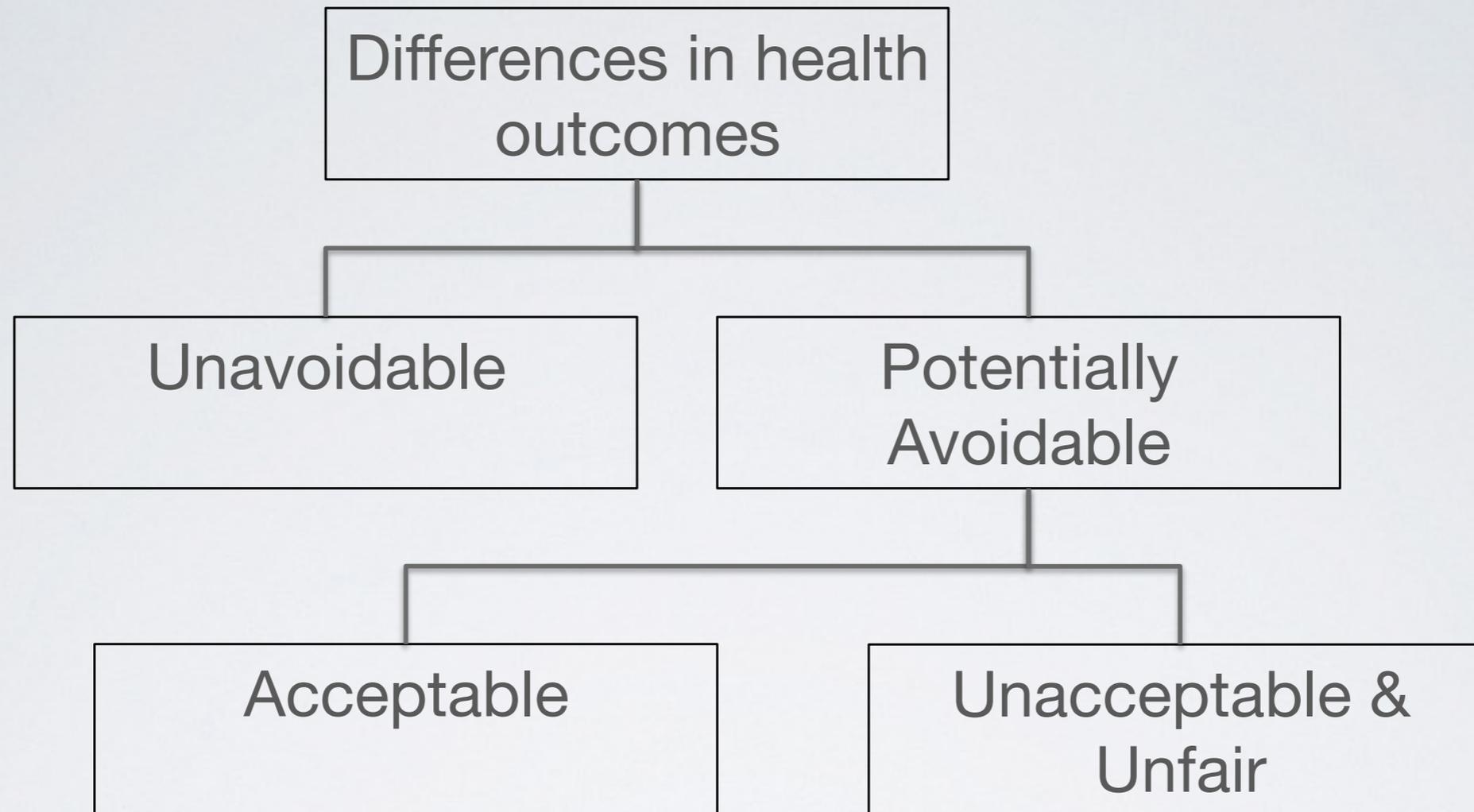
...and why.

- Lives (mortality)
- Total life-years (YLL, DALY)
- Capacities/opportunities (functional problems, health potential)
- Equal allocation of health resources (health services)
- Equal allocation of social resources (determinants)



**Figure 4: Proportion of disability-adjusted life years (DALYs) by age and sex, 1990 and 2010**

Conclusion



‘Fig. 1: Judging the equity of health outcomes’

Measurement

Differences in health outcomes

Causal Inference

Unavoidable

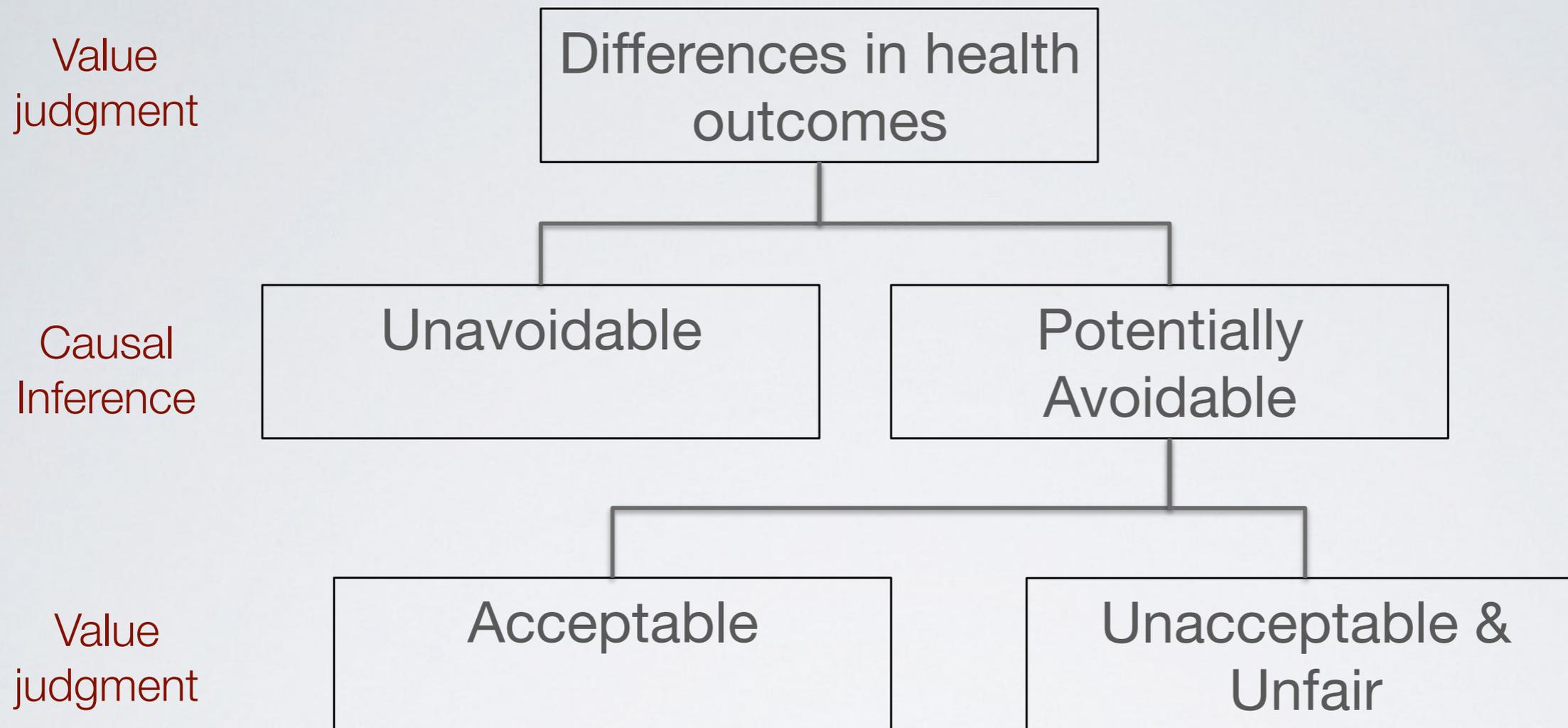
Potentially Avoidable

Value judgment

Acceptable

Unacceptable & Unfair

‘Fig. 1: Judging the equity of health outcomes’



‘Fig. 1: Judging the equity of health outcomes’

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