

Can the world sustain a  
population of more than 4  
billion people? Some thoughts

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# An analogy to global warming

- Global warming threatens our existence
  - We have a clear goal: no more than 1.5C further increases in temperature
  - We know how to achieve that
  - It will “cost us” but it is well worthwhile
- Climate change already has serious, negative effects
  - While we seek to limit further damage, we need to contend with current damage

# Today's question

- Is this really a policy question? How do we get to 4 billion?
- Not like the issue of climate change
  - We are entering a period of long-term population decline
  - But decline will be slow; current UN projections imply decline before 2100
  - Are there policies (that anyone would defend) that will bring us to 4 billion people in any near future?
- It is more important to figure out how to deal with this population

# What kinds of policies to reduce population?

- The debate between “family planning programs really matter” and “no, they do not”
- No point in trying to argue this today, but:
  - High fertility today is increasingly restricted to a small number of countries
  - Much of the world’s population today has  $NRR < 1$
  - Continued population growth largely reflects momentum, not NRR
- What kind of policies will get us to 4 billion?

# Processing uncertainty

- We don't want to over-sell claims because it ends up making it harder to push serious policy proposals
- Yet uncertainty's effects are not always symmetric:
  - If we do "too much" to fight climate change, will end up spending more to have a nicer planet than we feared
  - There are costs to this, but costs are not extinction
- If we are wrong about the 4 billion figure, then the consequence may be worse

# 1. Uncertainty about future economic growth

- Will economic growth continue?
- If the planet cannot sustain more than 4 billion people, that might itself slow down rates of economic growth and thus limit the burden of humans.
- The distribution of world income may matter more than overall growth, in which case what matters is economic growth in poorer countries

## 2. Uncertainty about future technology

- As an economic historian I find assumptions about future technological change difficult to credit. This cuts two ways.
- Some economists like to assume “the market” will solve every problem.
  - The market cannot even find my missing socks
  - There are many “problems” that have not yet been “solved,” even though solving them would make someone very rich
- Others ignore the enormous technological change of the past 200+ years.
  - Some of this technology has made it possible to feed much larger populations
  - Some of this populations has dramatically reduced death rates and thus helped raise population sizes
  - To me, best to view future technological change as source of deep uncertainty

### 3. Uncertainty about future “consumption baskets”

- We are aware, today, that different societies have different impacts on the planet per-capita
  - Some eat little meat, do not fly a lot, use public transport
  - And then there is the US
- Less awareness that these patterns change over time. And seem to have a bias
  - In wealthy countries, higher incomes reflect increasing demand for personal services
  - This seems to be fundamental
    - Few people want a 3<sup>rd</sup> car
    - Instead, they want someone else to perform a task for them
- What does this mean for the planet?
  - We might find that future growth is not so bad for the planet as we assume