Factors for Success and Collapse

Jared Diamond, "Collapse:
How Societies Choose to Fail or Succeed"

Momentum *Quick Takes*
April 28, 2005
Arlex

Factors for Success and Collapse

Environmental damage

Climate change

Hostile neighbors

Friendly trade partners

Society's ability to respond

Environmental Damage

- Rich vs. marginal environments

- Trees, soil, water, air, fish, non-renewable resources

Climate Change

- Marginal environments more vulnerable to climate change

Hostile Neighbors

- Cost of defense

- Inability to compensate for environmental deficits close by

- Disruption of ability to interact with friendly trade partners

- Accelerated environmental damage

Friendly Trade Partners

- Markets
- Resources
- Balance economic portfolio, reduce risks

Society's ability to respond

- Ability to identify problems, learn, cope, overcome, change
- Values: traditionalism vs. openness to new ideas – group decision-making

Case Studies

- Montana
- Greenland
- Japan

Montana (1 of 2)

- Environment
  - Cold, dry, flat, grassland, minerals, water, forest fires
  - Water pollution, overgrazing, fertilizer run-off, mining toxins, foreign plants/pests

Montana (2 of 2)

- Society's ability to respond effectively to challenges
  - Highly individualistic, suspicious of regulation ineffective to address environmental problems
  - Costs of environmental clean-up
  - Costs of misguided environmental protection – ban on controlled cutting => more forest fires

Greenland (1 of 5)

- Environment
  - Harsh, cold, few resources
  - Overgrazing, sod houses, cut trees for fuel, foreign cattle

Greenland (2 of 5)

- Climate Change
  - Mini-ice age in 13th century – even harsher
  - Colonized in warm period

Greenland (3 of 5)

- Hostile Neighbors
  - Inuit, native Americans of Canada – prevent timber trade

Greenland (4 of 5)

- Friendly Trade Partners
  - Distant: Iceland, Norway
  - Wrong exports: walrus tusks, bears, bear hides

Greenland (5 of 5)

- Society's ability to respond effectively
  - Traditional food – cattle, clothes, trade
  - Hierarchical, values – unable to learn from Inuit

Japan: Case-study for response (1 of 3)

- 17th century massive deforestation result of population growth/consumption
- Fire in 1657 = "wake-up call"
  - Killed 100,000
  - Destroyed half of capital
  - Top leaders recognized potential crisis and acted to institute legal, behavioral change

Japan: Case-study for response (2 of 3)

- Response:
  - Law enforcement
  - Detailed forest inventories
  - Shoguns Leading by example
- Environmental factors
  - Few goats/sheep
  - High rainfall
  - Good soil
  - Abundant seafood resources

Japan: Case-study for response (3 of 3)

- Today, despite large population, 80% of Japan is sparsely populated forested mountains

- Only 20% of Japan is arable, livable

- Traditions:
  - Strong scientific/analytical
  - Uniform cultural tradition
  - Central government

Conventional Wisdom

- The environment has to be balanced against the economy – short-term vs. long-term – sustainability

- Technology will solve our problems
  – Experience is often opposite – technology often causes problems, esp. when externalities are not considered

Conventional Wisdom

- If we exhaust one resource, we can switch to another –
    - Pastureland => over-fishing => animal protein
    - Renewable resources vs. fossil fuels
- No food problem: just bad distribution – or green revolution
    - 1st World Calories cost a lot more than 3rd World
    - No sign that 1st World will cut back, 3rd World aspires to 1st World lifestyle

Conventional Wisdom

- Things are still improving and getting better
  - GNP, 80% of 3rd world in poverty – doesn't take into account depletion of non-renewable Natural Capital
  - Doesn't take sustainability into account
- Predictions of doom have proved false alarms
  - Overpopulation is a real problem – not enough sunlight, land, water to feed this many

Conventional Wisdom

- Population Growth is leveling off
    - Lowest prediction another 2.5 billion
    - Two-fold increase
    - Right now many non-sustainable situations
    - Impact of aspiration for 1st world lifestyle

Conventional Wisdom

- Environmental issues – luxury of the rich
  - 1st world consumption impoverishing 3rd world
  - e.g., Japan and China are solving their deforestation problem, at the expense of Malaysia and other countries of South East Asia
- Environmental problems very far off – probably not, 2037 global warming

Conventional Wisdom

- Big differences from historical societies that have collapsed
  - More dangerous: globalization - overpopulated, consuming at 1st world levels, environmentally devastated - deforestation, over-fishing
  - Main failure: societal blindness to problems – unable to see problem coming or overcome it before it overcame them
- Individual can't do anything