

Thriving in a No-Growth Economy

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Personal Background

- Philosophical interest in topic of Sustainable Development (SD)
- Doctoral thesis on knowledge production for SD by universities
- Co-coordinator, Regional Centre of Expertise on Education for SD in Saskatchewan
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Presentation Overview

- The current need for economic growth: the role of investment
- A *no growth* scenario: the shift from “consumer” to “sustainable livelihood”
- Recycling to support innovation for local production
- A need for balance: (1) intermediate technology, (2) value-added recyclables, and (3) new material inputs
- Concluding reflections

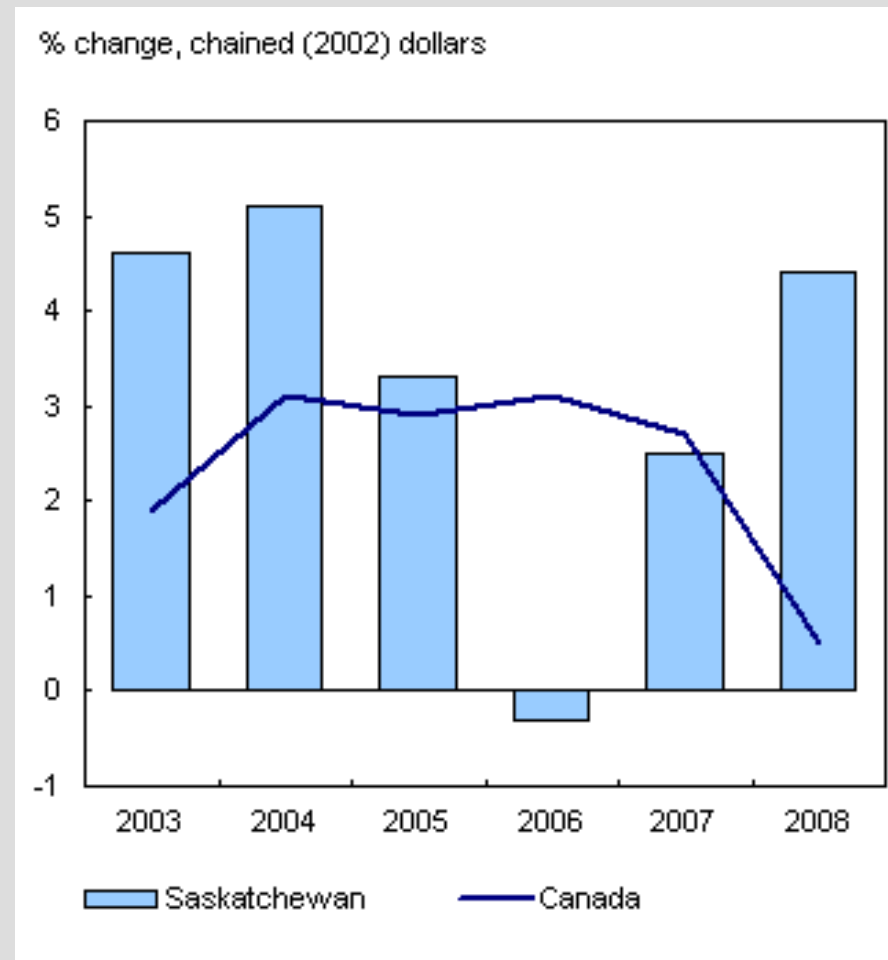
What Kind of Growth?

Defining Economic Growth

- *Economic Growth*: “the persistent expansion of our production possibilities” (Parkin&Bade, 1991, p. G-3)
- Frequently measured in growth of Gross Domestic Product (GDP)
- GDP (defined): “[t]he value of all the final goods and services produced in an economy in a year”. (Parkin&Bade, 1991, p. 575)

Why do We Need Economic Growth?

- Stable amount of well-being intuitively possible with no growth
- If the total value of goods and services are constant this produces same utility assuming:
 - Human population is constant
 - Goods and services:
 - Have same value (in real dollars)
 - Provide same degree of benefit to consumers



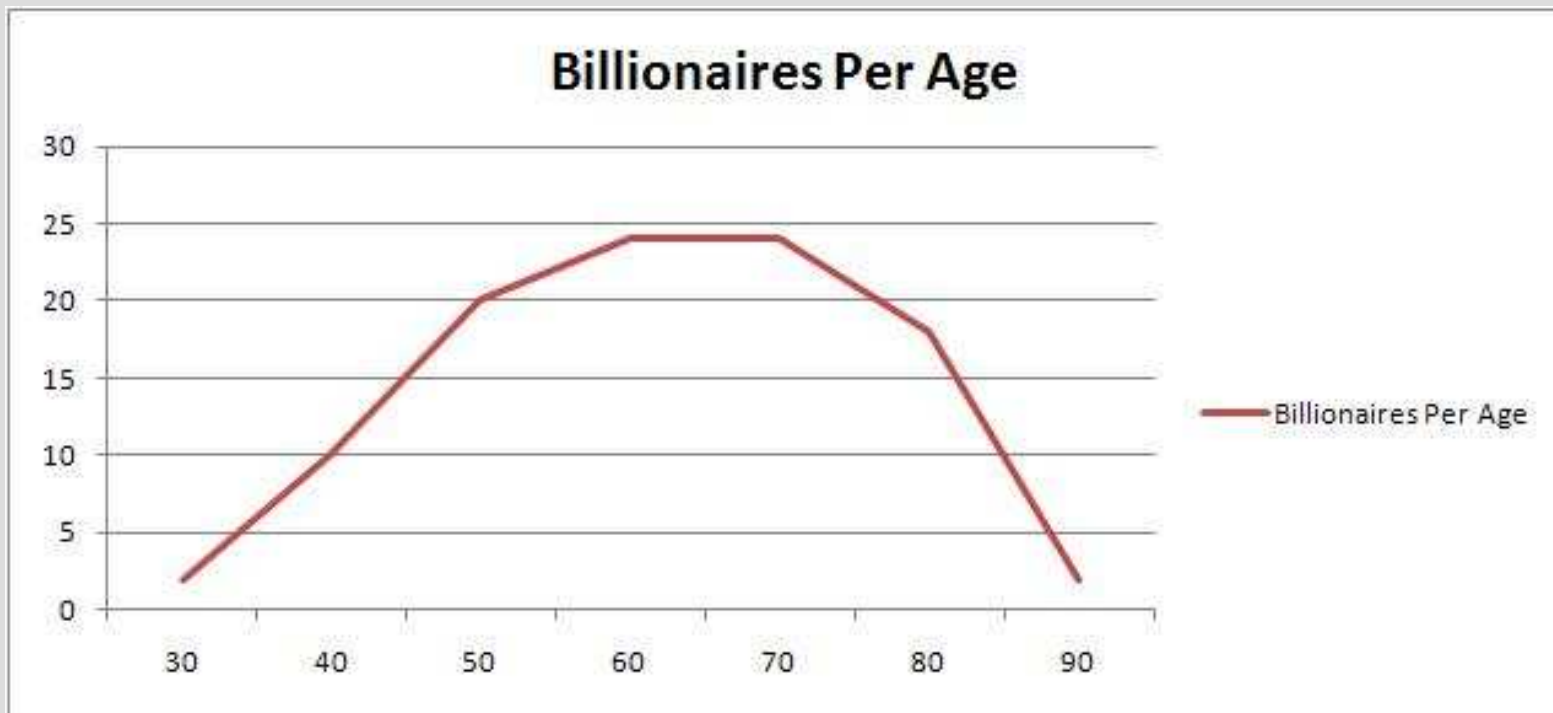
Sustaining an Economy: The Challenge of Sustaining Return on Investments

- Amount of wealth held by high net-worth individuals (defined as individuals with investible assets of \$1 million or more) grew from \$19.1 Trillion in 1997 to \$26.5 Trillion in 2000
 - annual growth rate of 11.5%
 - “Every cloud has a satin lining”. *The Economist* (Online Edition, 2002).
- Global GNP grew 2.4%/year from 1990 to 1998
 - UNDP, *Human Development Report* (Oxford: Oxford University Press, 2000) p. 205
 - global GNP valued at \$28.4 Trillion in 1998 (ibid, p. 209)

Inability to Sustain Returns on Investment

- A 10% rate of return on \$26.5 Trillion invested = \$2.65 Trillion earned/year
 - Where most wealthy primarily reinvest get a compounding pool of investment
 - Need an increasing sale of final goods and services to sustain this return (that is, economic growth)
- Challenge sustaining return over long-term
 - Example of Caesar's cent: 1 penny with interest reinvested at 2% per year for 2000 years = \$1,586,147 Billion!

Billionaires by Age (2009)

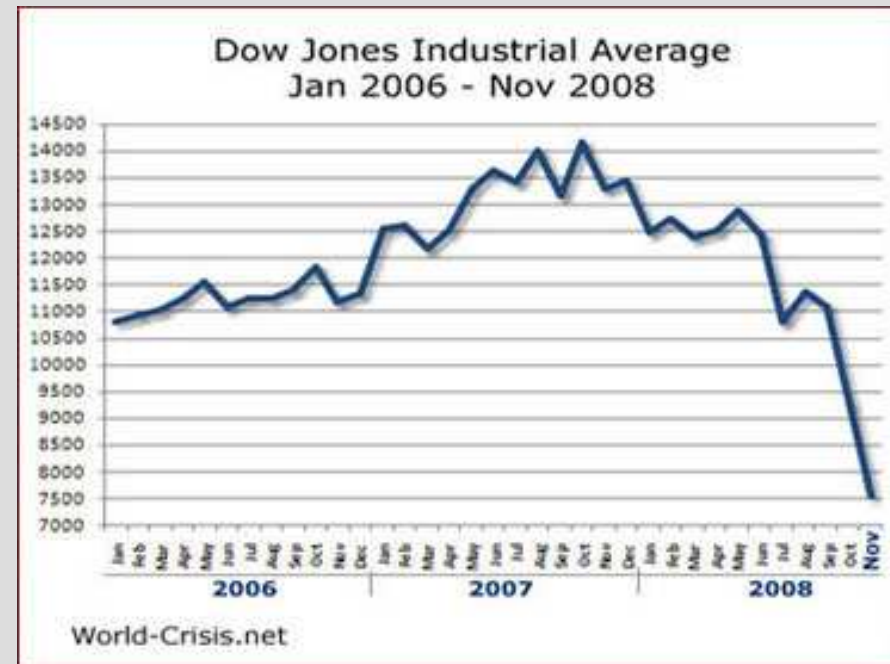


Growth Needed to Avoid Periodic Collapse?

- A study of western economics is a study of discontinuous economies/periodic collapses
- Long-Wave Economic Cycles thought to occur every 45 to 60 years
 - Sudden or rolling depressions in the 1780s, 1840s, 1890s, 1930s, and 2000's
 - Also concern in ancient economies
 - Israelites call for a *Year of Jubilee*: redistribution of wealth every 50 years (see Leviticus ch. 25)
- Suggests a lack of longterm sustainability

Common Features Ending Long Wave Economic Cycles

- Speculation and market volatility
- Depression (fall in market activity)
- Fall in wholesale and commodity prices
- High levels of public and private debt
- Demands for wealth redistribution
 - e.g., through social choice (e.g., taxation, redistribution, and welfare state), revolution, or warfare



Wealth (Re) Distribution in a *No Growth Economy*

- Find market mechanisms encouraging equitable wealth distribution over time
- Focus on how to provide competitive advantage to:
 - Those most economically marginalized
 - the poorest and those excluded from the marketplace
 - Firms with a relative lack of physical and financial assets
 - small and medium-sized enterprises (SMEs)

Shifting Our Market Identity: From *Consumers* to *Sustainable Livelihoods*

- Individuals increasingly take control of their own production strategies
 - No longer simply end users/consumers of final goods & services
 - Citizens (and their communities) increasingly contribute to their own production of food, shelter, clothing, etc.
- Competitive advantage of poorest individuals:
 - Own human capital and social capital/local networks
 - Knowledge of local community:
 - Locally available resources
 - Knowledge of local needs/niche markets

Role of the Recycling Sector: *Innovation for Competitive Transformation*



- Synergies with recycling sector promoting competitiveness of local livelihoods and SMEs
- Support local innovation that makes use of recycled materials in products and services
 - increase local/regional demand

Example of a Low-Cost Innovation Strategy

- *The Frisian Challenge* (Government of Friesland, Netherlands)
 - Created an annual competition to advance its interest in (1) solar economy and (2) shipbuilding
 - Invited businesses, schools, universities, communities to compete in the development of solar boats
- Recycling sector could have an annual competition for incorporation of recycled materials for particular sectors (e.g., housing, food production, etc.)
 - Provide recycled materials to participants and awards/recognition

Role of Free/Open Licensed Technologies

- Allows shared financial costs among multiple stakeholders/sectors
- Allows non-market and non-financial contributions (e.g., volunteerism) at various stages of innovation, e.g.:
 - research/development phase, testing phase, distribution phase
- Allows access to technology by those ordinarily unable to purchase technology
- Allows construction of competitive livelihoods from bundle of freely available technologies
 - Internet sites built on Free Software programs (LAMP)

Creating Spaces for Shared Experiential Knowledge of Recycling

- Innovation in use of recycled materials at different market scales & non-market uses
 - Firms learn from local livelihood practices (and vice versa)
- Develop a local culture and competency for incorporating recycling materials into local livelihood activities
 - Everyone is in the recycling business
 - Martin Luther & *the Priesthood of All Believers*
- Increased popular consciousness of economic potential for recycled materials



A Question of Balance: *Intermediate Technology*

- By starting at the individual livelihood and smallest firm:
 - Encourages a *shift from low technology to intermediate technology* (vs. high technology)
 - People gradually gain experience in a diversity of areas of production
 - e.g., straw bale home construction
 - e.g., solar ovens for cooking/baking/drying food
 - Allows new equipment and goods to emerge
 - new uses (and markets) for recycled materials

A Question of Balance: *Value-added Recyclables*

- Recycling beyond end-use consumer items
- Added value to recyclable materials when part of local production processes
 - Refurbishing pieces of specialized equipment
 - versus costs of making new from raw resources or traditional recycled materials
 - Increases competitiveness of recycled goods (particularly those designed with multiple uses/functionality) over newly extracted resources
 - New attitude towards “waste” when one sees its potential functionality (e.g. canning jars)
- Provides further market differentiation of recyclables

A Question of Balance: *New Material Inputs*

- Michael Renner in 1991 identified 5 manufacturing industries noted for their *high energy and capital use* and *low labour* inputs:
 - **primary metal**
 - **paper**
 - **oil refining and coal products**
 - **chemicals**
 - **stone, clay, glass**
- Account for 80-85% of “energy use and toxics released within the U.S. manufacturing sector”, 21% of energy consumed, and only 3% of jobs



Implications of Renner's Analysis

- Economy self-selected material inputs that were physical capital and energy intensive while minimizing labour
- Individuals focusing on their own livelihoods can balance their labour vs. physical asset/energy contributions to maximize their livelihood benefits
 - i.e., I don't need to minimize my own labour to personally profit
- This allows for a selection of additional material types (not only plastics, metal, glass, paper, etc.)

New Material Inputs and Bioregional Production

- Individuals can focus on additional materials available in their local ecological context
 - e.g., plant fibres from prairie ecosystems
- Individuals can combine locally available materials with existing recyclables (e.g., materials made from plant fibres and recycled plastics)
- Creates new value added and regionally specific materials for recycling
- Allows for decommoditization of recyclables market:
 - Higher prices
 - Role for further specialized knowledge

Think Regionally: “The Saskatchewan Advantage”

- relative lack of large industry; predominance of SMEs; communities with low-income/poverty
- small rural communities and small cities
- distance from large urban centres/markets
- costly transportation: distance from ports (landlocked) and lack of navigable water systems
- risks: e.g., seasonal/weather, economic (agriculture and other commodity prices)



Saskatchewan: From Many Peoples Strength



- institutional and organizational adaptation to risk through diversified livelihoods, cooperatives, crown sectors
- culture of mutual aid, support, and volunteerism
- historic global connectivity through immigration, outmigration & trade

Concluding Reflections

- Invest some resources in local livelihood strategies and shared technologies that make use of existing and new materials
- Be open to local and/or regional participation in your efforts
- Value in processes of recycling, uses, and capabilities broadly shared
- Allow consideration of new materials for recycling and combinations with existing recyclables
- Blur industry boundaries (e.g., link recycling business with local/regional manufacturing, research/innovation, ecotourism, etc.)