Perspectives on behaviour in organizations

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Overview of presentation

• Historical perspective
• “Energy efficiency gap”-debate of the 1990’s
• The market and the firm in economic theories
Oil shock!
Energy conservation!

• USA:
  – Petrol rationing, speed limits, hatchbacks
  – Energy conservation programme 1977

• OECD: International Energy Agency 1974
  – Sharing information, reduce oil dependence, promote energy efficiency, coordinate oil storage

• OPEC in control, not multinational oil companies
  – Governments and firms became certain that the old times were gone
Sweden: Oil, nuclear and ee

• In May 1973: Moratorium on nuclear (8 had permit to build, of which 1 had started)

• An explosion in public debate on energy matters 1973-1975

• Pulp and paper industry:
  – Collaboration between firms
  – 37 conservation projects, 14 biofuel projects
  – Gathered information from all firms, comparisons
The energy efficiency gap

• A debate among researchers, technologists and economists
• Getting closer to organizations and behaviour
• “Bottom-up” methodology: Many efficient technologies available but not used!
Economists doubted “win-win”
The debate

Barriers (Sorrell 1999)
- Heterogeneity
- Access to capital
- Imperfect information
- Adverse selection
- Split incentives
- Principle-agent problems
- Bounded rationality
- Inertia
- Power
- And six more

“Market failures”
- Barriers exists but cannot be the base for policies, only market failures can. Some of the barriers are failures, but not all of them
- The market is a price system essentially
- The firm only combines factors of production according to their prices
Figure 1. Alternative Notions of the Energy-Efficiency Gap

- **Technologists’ Optimum**: Eliminate “market barriers” to energy efficiency, such as high discount rates and inertia, ignore heterogeneity.
- **Theoretical Social Optimum**: Eliminate environmental externalities and market failures in energy supply. Set aside corrective policies that cannot be implemented at acceptable cost.
- **Economists’ Narrow Optimum**: Eliminate market failures in the market for energy-efficient technologies.
- **True Social Optimum**: Net effect of corrective policies that can pass a benefit/cost test.
What about the firm?

• Coase (1937) there is no price mechanism within the firm: “Why is there any organization?” A cost using the price mechanism (transaction costs)

• Keynes (1936) uncertainty about the future, abstaining from long-term investments, following (imitating)
A biological metaphor

• Nelson & Winter (1982) *An Evolutionary Theory of Economic Change*

• Routines determine behaviour
  – heritable and selectable (genes)

• Search: irreversible, uncertainty, contingent
  – modifies routines (mutations)

• Firms selected in dynamic competition
  – some routines flourish and other disappear
Energy management routines

• Researchers have found a lack of attention on energy matters within organizations
• Stimulate the introduction of energy management systems
• Create an environment that selects firms with desired attention to energy efficiency
Conclusion

• The firm (organizations) is neglected in dominant economic theory
• Theories about organizations are important for analyses and policies
• A broader set of theories is needed
• It seems as some price changes are more important than others
The very long run

Graph: Toe/GDP (tusen USD 2010) over time from 1810 to 2010 for G Britain, USA, and Japan.
“Market failure”

The perfect market
• The market is a price system
• Everyone knows what is needed to know
• “The best information is an invoice”

Deviations
• Monopolies, oligopolies
• Externalities
• Asymmetric information
• Etc?