The Information Economy

Swaran Kopparty
CS 457 Fall 2013
Outline

- What is the information economy
- Issues that have arisen since the advent
- Evolution into a feedback economy
- Rights of creators of information goods
What is the information economy?

- Information technology Economy
- E-commerce
- Knowledge Economy
- Digital Economy
Question

- Do we need a “New Economics” for the new age? (I’ve definitely wondered this question - Internet is a pivotal part of the economy)
- Thesis - no we do not, refer to technological change that occurred because of the telephone revolution
What is Information

- Information = anything that can be digitized = encoded as a stream of bits
- Information goods = have value, different for different customers
- Information goods have high fixed costs, but low marginal costs
- Price information according to value, not cost
- Value based-pricing leads to differential pricing
- Differential pricing based on new vs. old versions of information goods
  - Ex: Delay in releasing newer versions of a game
Protecting Intellectual Property

- Important issue that we have discussed before
- Eg: Hollywood was petrified when video recorders came out, but now they make most of their money from video sales rather than theater
- Choose terms and conditions that maximize value, not maximize protection
Information is an experience good

- Consumers need to experience it to value it
- So how will people buy it before they know how much they value it? It needs to be experienced every time that it is consumed
- Solution: Branding and reputation
- WSJ online -> same logo, same format -> conveys the same quality, same brand, attracts the customer loyalty
- Tension between giving away your information and charging them to recover it is a fundamental problem -> discuss it later in the presentation
Economics of Attention

- “A wealth of information creates a poverty of attention” - economist Herbert Simon
- Competition for attention; people are forever searching to distill the vast information on the internet - most popular website are search engines!
- Internet is different because allows for one-to-one attention, customized ads (like we have discussed previously in this course)
Technology Takeover

- Value of the web lies in its ability to provide immediate access to knowledge
- How many of you still even read books? Curious about a topic - > go to the internet
- New -> ability to manipulate information
- Whole new arena of systems competition - > who can build the fastest processors, the sleekest computer
Information Economy and Network Effects

- Value of a product depends on how many users there are = network effects
- Important for a product to gain critical mass; then the going gets easier
- Can gain critical mass by having strategic important partners, being smart about timing
Evolution into A Feedback Economy
Evolution into a feedback Economy

- Internet has the ability to harness these word of mouth networks
- Bidirectionality of the internet -> organizations can reach audience of millions, but individuals can also voice their opinions on public forums
- Will discuss online feedback mechanisms (reputation systems)
- Reputation systems = individuals share opinions on companies, products, and world events
Best known application of reputation systems: used to build trust in online markets

The widespread presence of online feedback mechanisms is changing people’s behavior in various ways (movies, stocks, restaurants)
  - Amazon, Ebay, Epinions, Yelp

Affects different aspects of organizations
  - Brand building, gaining customers - good reputation = more customers, vice versa
  - Product development, quality control - use reaction to re-engineer products
  - Supply chain quality assurance - organizations can better assess suppliers

Intensifies relationship between producer and consumer; involves game theory
Online Feedback Mechanisms

- Modern instantiation of ancient concept of word-of-mouth
- Often the primary enabler of economic activity
- Differences
  - Enormous scale because of low-cost bidirectionality of internet
  - Automated feedback mediators (algorithmic analysis of feedback)
- Trust issues and problems with interpreting subjectivity
Case Study: EBay

- Best online feedback mechanism to date
- Transactions backed by trust, not by formal contracts
- Trading relationships are one-time deals usually (89 percent)
- Buyers feedback on sellers 60 percent of the time, sellers on buyers 52 percent of the time
- Feedback is positive: 99.1 percent positive, 0.6 negative, 0.3 neutral
Conclusions of all the work done on eBay feedback mechanisms: feedback affect price and occurrence of sale, but effects are ambiguous.

Impact is higher for more expensive/riskier transactions.

Most important aspects are:
- Overall number of positive and negative ratings
- Number of recently posted negative comments (posted in last week)
Evaluation Criteria

- Two most important concrete evaluation criteria (Dellarocas)
- 1) Expected payoffs of the outcomes induced by mechanism for various classes of stakeholders over their appropriate time horizon
- 2) Robustness of the outcomes against different assumptions about behavior
- 3) Thoughts?
  - How has feedback shaped your e-commerce experiences?
  - How has feedback shaped your everyday experiences?
  - Do you provide feedback?
Content Creation

- Tim Kreider on the struggles of content creators with the advent of the internet
- Abundance of information means diminished value
- Diminished value of creators of content
- Artists’ salary is exposure, not money - is this fair?
- Information/content is often distributed free of charge, so how do content creators make money?
- Thoughts?
References