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**Lecture 11: Incentive Structures and Prediction Markets**

1. Incentives matter
   1. *Unintended consequences*—outcomes not original intended by an acting individual
      1. What you pay for versus what you want
      2. Strong incentives might help motivate people to action, but they also might incentivize them to do something unintended
   2. *Piece rates*—payment made directly for output
      1. Output may be hard to measure
   3. *Tournaments*—payment for relative performance to correct for environment
      1. May cause workers to turn on each other or not be motivated at all if a star always outshines everyone
   4. *Corporate culture*—shared collection of values and norms about how people interact
      1. Cannot be precisely constructed nor controlled
2. Behavioral economics
   1. The curious case of Israeli day-care.
      1. Daycares have a problem: if parents come late to pick up a kid, they must pay someone to look after the children, forcing them to stay late.
      2. So why not charge for a late fee? Economists implemented a $3 late fee for parents that came late in ten different daycares in Haifa, Israel.
      3. As a result of the fine, the number of late parents went *up*, from eight per week to *twenty*. Why?
   2. Because people see the world in not just strict economic turns, adding conventional incentives can have unintended consequences.
      1. *Behavioral economics* is the cross between economics and psychology.
      2. For example, if your friends pay you after you volunteer to make them dinner, you might feel cheap. What you meant as a friendly gesture becomes an impersonal market transaction.
      3. Some economists have tried paying their kids to do dishes. This usually fails because the kids feel less like part of a family.
   3. Money can be a weak incentive if:
      1. If there already is an intrinsic motivation. (Bob *likes* cooking for his parents…you don’t need to pay him. Indeed, paying him might spoil his intrinsic motivation.)
      2. If no social approval comes with the payment. (Bob getting paid by his parents for mowing the lawn can easily be seen as an elaborate allowance but being paid to mow strangers’ lawns is a sign of adulthood.)
      3. If the reward is very high. (Bob can easily answer any Jeopardy! question when he’s sitting on his couch but freaks out when he actually appears on the show.)
   4. The paradox of free
      1. Some economists went to some malls and offered people one of two choices: a $10 Amazon gift card for free or a $20 Amazon gift for $7.
      2. Most people took the free $10 card rather than the $20, even though they’d net $13 versus just $10. Why?
      3. Amazon gives you free shipping if you buy a certain amount of product. Sales skyrocketed save in France.
      4. Why? Because in France, it wasn’t free shipping. It was shipping that cost one franc (about 20 cents).
      5. When changed to free shipping, sales skyrocketed like in other countries.
3. Prediction Markets
   1. Talk is cheap. Saying something will happen without any punishment if you’re wrong means little. Betting on something says a lot more.
      1. Mere talk means it is cheap to indulge sloppy thinking like bias and poor logic. If you’re wrong, nothing happens.
   2. If we allow people to “bet” on future events, we get a more balanced assessment. People put their money where their mouth is.
   3. If we allow many people to bet, we can create a market. With the market, we’ll have prices which we can use to inform us about the future.
   4. *Prediction market*—speculative market designed so that prices can be interpreted as probabilities about future events.
      1. Suppose you buy “tickets” with some event on them (e.g. Obama is re-elected). If the event happens by a indicated date (2012), the ticket is worth $1.00 (or $10, or $100). If not, it is worth zero.
      2. Note this is an application of expected value.
      3. The price people are willing to pay for the ticket is the probability of the event (adjusted by how much the ticket is worth). If we know the expected value (the market price) and we know the value (what the ticket is worth), then we know the probability the event will happen.
   5. Intrade.com values its tickets at $10 each. As of September 27, 2012, the price of buying an Obama ticket was $7.56. Thus Obama has a 75.6% chance of winning, according to Intrade.