Freakonomics

Steven D. Levitt and Stephen J. Dubner

- A rogue economist explores the hidden side of everything
- 2005 William Morrow
- New York, NY
- A book with no "unifying theme" that might make you more skeptical of conventional wisdom.
- Excerpts of a book summary
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Why is this book important?

Levitt and Dubner take an out-of-the-box look at data from all kinds of sources. Since there is a big push in education to use data to improve instruction, this book just might give educators ideas and inspiration as they work to figure out how to take the data they have and use it effectively. If you like this partial summary, buy the book and look to this blog for information on the sequel, Superfreakonomics (2009).

Do Teachers Cheat?

- The data set here came from high stakes tests given by the Chicago Public School System which includes more than 700,000 sets of test answers.
- In the days of No Child Let Behind and its consequences, there is a lot of pressure on teachers and schools to produce good results. Does this result in teachers being tempted to cheat?

Do Teachers Cheat? II

- What would you look for to spot cheating?
 - OBlocks of identical answers from the same classroom among difficult questions.
 - Students getting the difficult questions right more often than the easy questions
 - A classroom of students who perform far better that their past scores and then went on to score significantly lower the following year

Do Teachers Cheat? III

- A cheating teacher may think they are helping their students. In fact they are setting them up for failure in later grades.
- An analysis of the Chicago data reveals evidence of teacher (principal?) cheating in more than 200 cases a year which is about 5% of the total. This is a conservative estimate as the analysis could only find the most egregious form of cheating.
- Teachers who give students extra time and change just a few answers, will not be caught.

Do Teachers Cheat? IV

- The Chicago study also showed
 - Male and female teachers are equally prone to cheating.
 - Younger and less qualified teachers cheat more than the average.
 - The higher the incentives the more cheating
 - Teachers in lowest-scoring classrooms are more likely to cheat.
 - A good teacher's students carried their gains into the next grade.
- 120 classrooms were selected for retesting and 12 teachers were fired. Cheating dropped 30% the next year.

Why do drug dealers still live with their mothers?

Data obtained from a Chicago gang revealed their financial workings. Individual gangs are like franchises. Each has a leader who reports to a board of directors and leads a group of foot soldiers who deal on the streets. There is also a rank and file who pay dues but who did not as yet deal. They often join for protection from other gangs and for the chance to someday earn a job as a foot soldier.

A Typical Balance Sheet for One Month

Monthly Revenue

Drug Sales	\$24,800
Dues	\$5,100
Extortionary taxes	\$2,100
Total	\$32,000

Monthly Costs

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Cost of	\$5,000
drugs	
Board of	\$5,000
Directors fee	
Mercenary	\$1,300
fighters	
Weapons	\$300
Misc.	\$2,400
Total	\$14,000

Where did the \$18,000 monthly profit go?

Wages	for c	officers	\$2,10	0
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Wages for foot soldiers \$	7,40	U
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Net profit for leader \$8,500

This means the average foot soldier makes about \$3.30 an hour while the leader makes about \$100,000 per year. Members of the Board of Directors take in about \$500,000 per year.

What Else Does a Foot Soldier Get?

- For the four years of data available the typical fate of a dealer looks like this:
 - Number of times arrested5.9
 - Nonfatal wounds or injuries 2.4
 - Chance of being killed1 in 4
- The most dangerous job according to the Bureau of Labor Statistics is a timber cutter.
 Their chance of being killed over four years is 1 in 200.
- During 2003 Texas only put 5% of it's death row inmates to death making it safer than dealing crack in Chicago.

Additional fallout of crack trade

- With the increased use of crack in black neighborhoods the following soared
 - Infant mortality
 - The incidence of low-birth weight babies
 - Parent abandonment
 - The gap between black and white school children
- The number of blacks sent to prison tripled
- Homicide rates quadrupled

But then crime started to go down

- Explanations ranged from improved economy to better police tactics, tougher gun laws, more police, and more prisons.
- At best some of these only counted for a small part of the total decrease.
- In 1973 abortion became legal in all states. Justice Blackmun wrote "There is also distress associated with the unwanted child, and there is the problem of bringing a child into a family already unable to, psychologically and otherwise, to care for it."

Abortion's Cost

- Before Roe v. Wade only upper and middle class women could afford safe illegal abortions at about \$500. After, safe legal abortions cost about \$100. The number of abortions in the US each year is about 1.6 million.
- The unborn were 50% more likely to be poor and 60% more likely to have a single parent. These two factors are among the strongest predictors that a child will have a criminal future.
- One could conclude that when a government gives a woman the opportunity to make her own decision about abortion, she generally does a good job figuring out if she is in a position to raise the baby well. The trade off between abortion and crime seems efficient.

The black-white gap

- Black and white children from the same socioeconomic background in the same schools perform at the same level.
- The gap does exist due to the fact that
 - Black children are more likely to come from low income homes where parents have less education and the mother is younger when her first child is born.
 - Black children are more likely to attend schools where the environment is less conducive to learning.

Factors strongly correlated with test scores

- The child ('s)
 - OHas highly educated parents +
 - Parents have high socioeconomic status +
 - Mother was thirty or older at the time of her first child's birth +
 - OHad low birth weight —
 - Parents speak English in the home +
 - The child is adopted -
 - Parents are involved in the PTA +
 - Many books in the home +

Factors not correlated with test scores

- The child ('s)
 - Family is intact
 - Parents moved recently into better neighborhood
 - Mother didn't work between birth and kindergarten
 - Attended Head Start
 - Parents regularly take them to museums
 - Regularly spanked
 - Frequently watches television
 - Parents read to them every day
 - Uses a computer at home

In short

- The things that correlate highly with test scores are associated with who the parents are, not what they do. If you are smart, hard working, educated, well paid, and married to someone equally fortunate, then your children are more likely to succeed.
- While adopted children don't do well at first, they are more likely to attend college, have a wellpaid job, and wait to get married. Parents do, therefore, seem to make a difference.

Two Paths to Harvard

- A white boy grew up outside Chicago. He had smart, solid, encouraging, loving parents who stressed education and family.
- A black boy from Daytona Beach was abandoned by his mother, beaten by his father, and became a full-fledged gangster in his teens.
- The second child is Roland Fryer a Harvard economist who studies black underachievement. The white child also made it to Harvard. But soon after things went badly. His name is Ted Kaczynski.