Ebay Auctions

Jank and Shmueli, 2007
- 7-Day auctions for new Palm M515 PDAs
- 149 Auctions, collected May-June 2003
- Data provide
  - end date
  - seller id
  - seller rating
  - bid time, amount
  - bidder ID, rating

Auction Price
Only increases if bid is greater than current price.

Bid Histories

Other Quantities
Seller, Opening Bid
**Other Quantities**

**Number Bids, Closing Price**

**End Date, Number Bids**

**Possible Questions**

- Jank & Shmueli – dynamics of auctions
- But also:
  - Sources of variation – different types of auction?
  - Effect of seller rating? Bid opening time?
  - Forecasting closing price from initial data
  - Over-shoot/under-shoot of current price
  - Analysis by bidder?

**Swedish Mortality Data**

- Many countries centrally collect data on births and deaths
- mortality.org maintains a database of annual deaths, broken down by year of birth, for several countries
- In the case of Sweden, complete records go back to 1757.
- Common to consider the hazard function = “instantaneous probability of death”.
- Calculate for ages 0 - 80, on cohorts born in years 1757 - 1920.
Swedish Hazard Rates

Log hazard is usually more interpretable.

Swedish Log Hazard Rates

Example Curves Every 20 Years

Swedish Log Hazard Rates

Let's look locally
Swedish Log Hazard Rates
Development of Curves Over Time

Possible Questions of Interest

- Global trends in mortality rates – forecast your own hazard?
- Local correlation – functional data time-series.
- Changes in year-to-year variation.
- Effect of known events/types of events
- Other nations.
- Correlation/lag with other nations.