Emotions and uncertainty in decision making: Implications for policy

Hobby School, University of Houston, October 2016

Paul Ormerod

Volterra Partners LLP, London and Centre for Decision Making, University College London

www.paulormerod.com

Policy makers and incentives

- Like all agents, policy makers respond to incentives
- This does not necessarily mean that they respond in the manner described in the rational agent model of economics, but they respond
- Decision makers themselves are not in general interested in the science which underlies the policy recommendation
- if an existing methodology appears to be useful to policy makers, and also appears to have underlying scientific backing, a policy maker has little incentive to take advice from those who use a different methodology, even if it is scientifically superior
- "What matters is to have a strong story, backed up by strong evidence on the main elements of the story" Bridget Rosewell in *Non-Equilibrium Social Science*, Springer, 2016

Value at Risk (VaR)

- This tool was used by banks and regulators prior to the financial crisis

- It measures how much a financial institution can lose with a given probability

- VaR assumed a Gaussian distribution of individual asset price changes

- VaR assumed that the correlation matrix between individual asset price changes, and between classes of assets is well determined

- Both assumptions has been shown scientifically beyond reasonable doubt to be wrong – by 2000!

Crossrail 1

- Crossrail 1 is the biggest transport infrastructure project in Europe
- The policy battles over it were fought in the 2000s
- The Department of Transport were fierce opponents
- The Treasury (finance ministry) was initially sceptical but won round
- The intellectual arguments involved innovation in a policy context
- It basically went ahead because of the narrative which leading politicians wanted to hear about it

Should austerity be abandoned?

- What is the size of the fiscal multiplier?
- Neither time series econometrics nor DSGE models have resolved this fundamental policy question
- Laury, Lewis, Ormerod (*Nat Inst Ec Review,*1978) for the UK, the range is 0.5 to 1.2; Ramey (*J Ec Lit* 2011) range for the US is 0.8 to 1.5; Barro and Redlick *QJE* 2011 argue it is even less
- *Narratives* make it very hard to estimate
- Why did companies and individuals run down savings in the global financial crisis of the 1930s, but build them up in the next global crisis in the 2000s?
- *Narratives* about public debt
- **Narratives remove the one-to-one correspondence between inputs and output which characterises economic theory**
- Good central bankers have understood this implicitly for a long time

Why are economists so influential? (1)

- 50 years ago, the newly elected centre-left UK government doubled the number of economists employed - from 6 to 12

- Now, there are 1400, plus economists in the central bank and the regulatory authorities

- In part, the influence arises because the subject is not an empty box

- At the micro level, it has the great insight that agents react to incentives

- At the micro level, it has made important advances

- But, equally, the influence arises because economists understand how to supply what policy makers want

Why are economists so influential? (2)

- To have influence, it is not enough to do 'good science'
- "Economics has authority simply *because* it has authority, and has had authority for decades. Decision makers, who in general are *not* experts in any particular discipline, are often predisposed to consider the recommendations based on economic models favourably. They are tried and trusted. Further, economists have the advantage in that they often purport to give *the* answer."
- They present the policy maker with an acceptable narrative
- Policy makers want *the* answer, not a set of options with uncertain outcomes
- The promise of 'optimality' is seductive

The impact of incentives is often uncertain

- Is taxing cigarettes beneficial to health?
- Tax is usually passed on, and higher prices do reduce consumption
- Adda and Cornaglia, *Am Ec Review*, 2013
- Smokers switch to higher tar brands
- Increased propensity to smoke down to the butt, where the concentration of harmful substances is very high

Implications

- A great deal of policy is now essentially about narratives, and how they either spread or are contained on the relevant networks

- Health, macro economic policy, climate change

- Incentives still have a role, but it is the dominant narrative which matters

- Both the theory and the practice of percolation across networks have advanced dramatically this century

- Analysis of unstructured text should appeal to economists – we like people to reveal preferences/opinions rather than be asked about them

Average sentiment in all tweets in London, 15.06.2016 to 23.09.2016
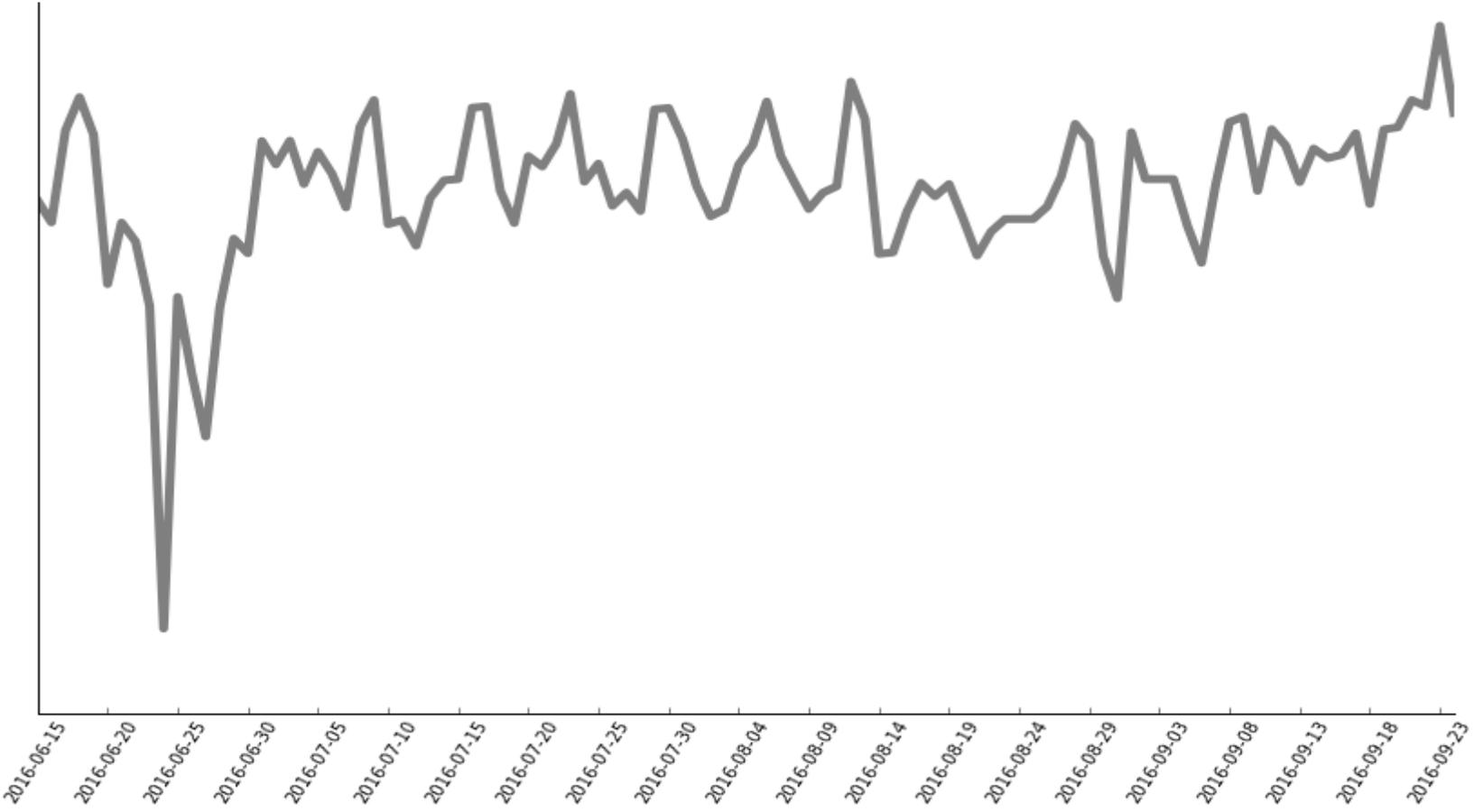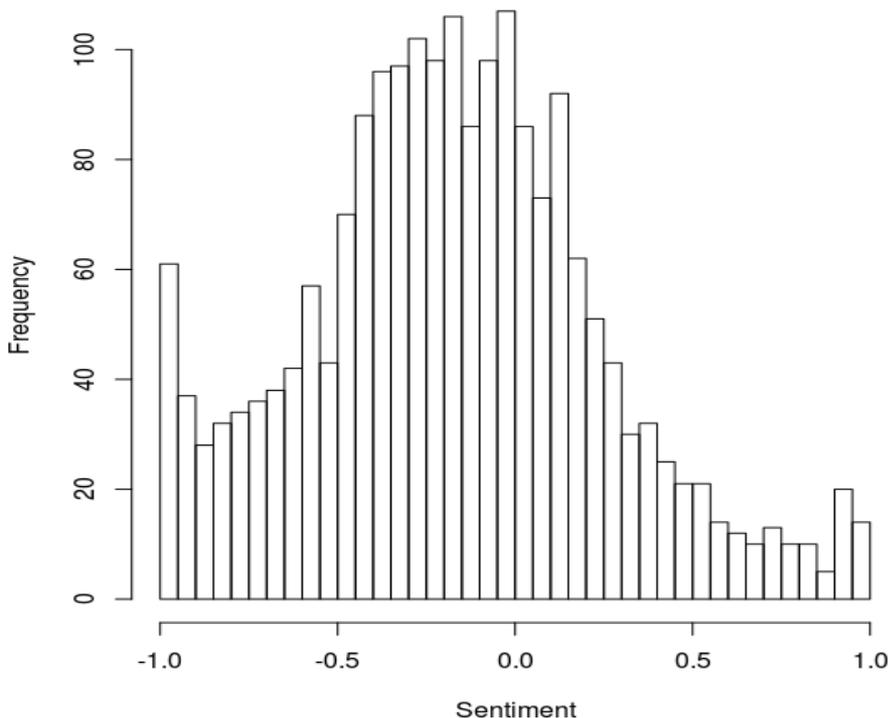

Source: Volterra

Characterising influencers (4)

- **Characterising influencers by positive vs. negative sentiment**
- Degree of positive tweets minus negative tweets for each user
  - Top 2000 influencers, average positive-negative score is -0.03
  - For a random sample of 2000 users the average is -0.17

Twitter network during Brexit campaign, May and June 2016.

Size of name shows level of importance