

Unusual Days in Births and Deaths

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Datasets

- Birth counts by day
- Death counts by day

- How endogenous is birth and death timing?
- Do non-medical factors drive these?
- Does economic policy drive these?

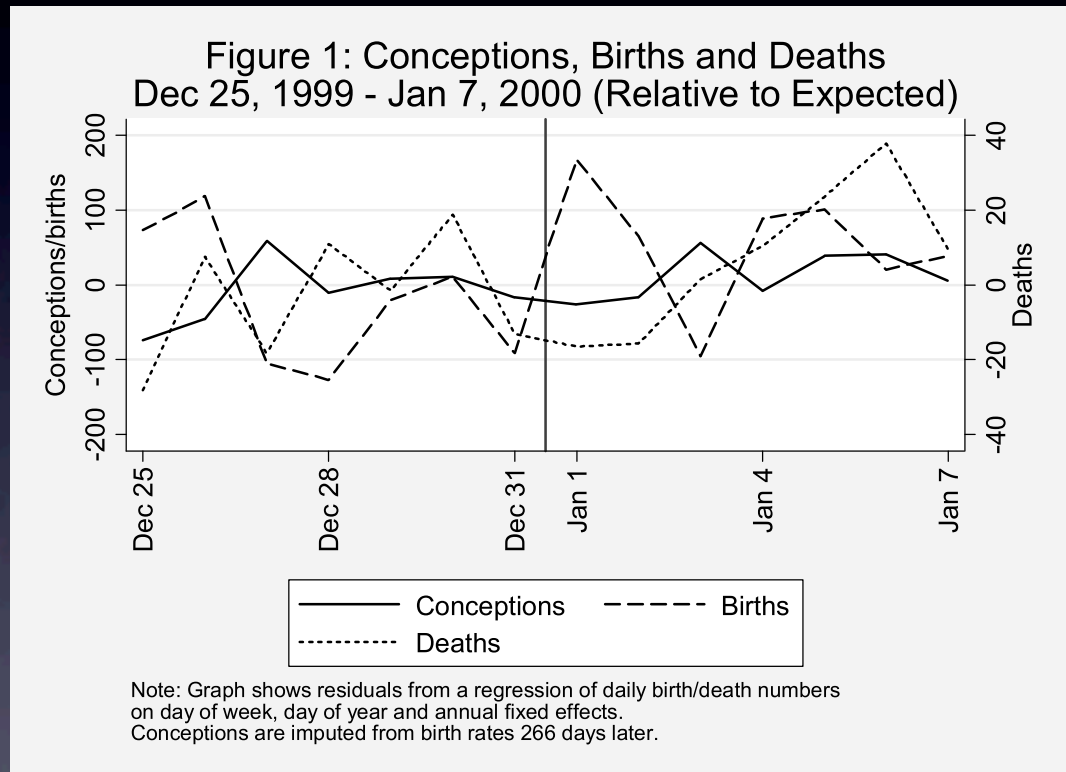
- What are the “unusual days”?

Unusual Day I

1st January 2000

The Millennium Bub

- Births
 - Rose by 12%
- Conceptions
 - Rose by 4%
- Deaths
 - + but statistically insignificant increase

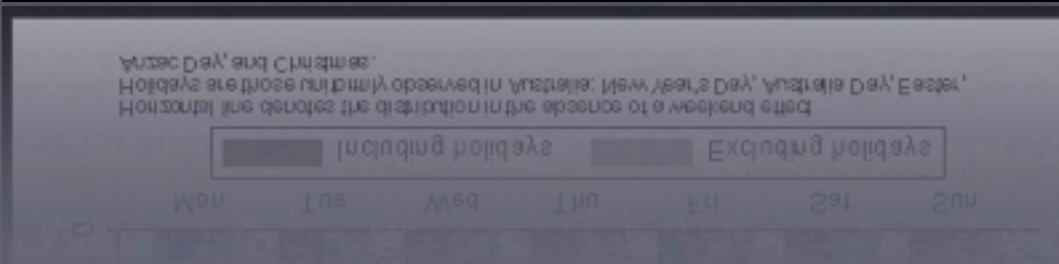
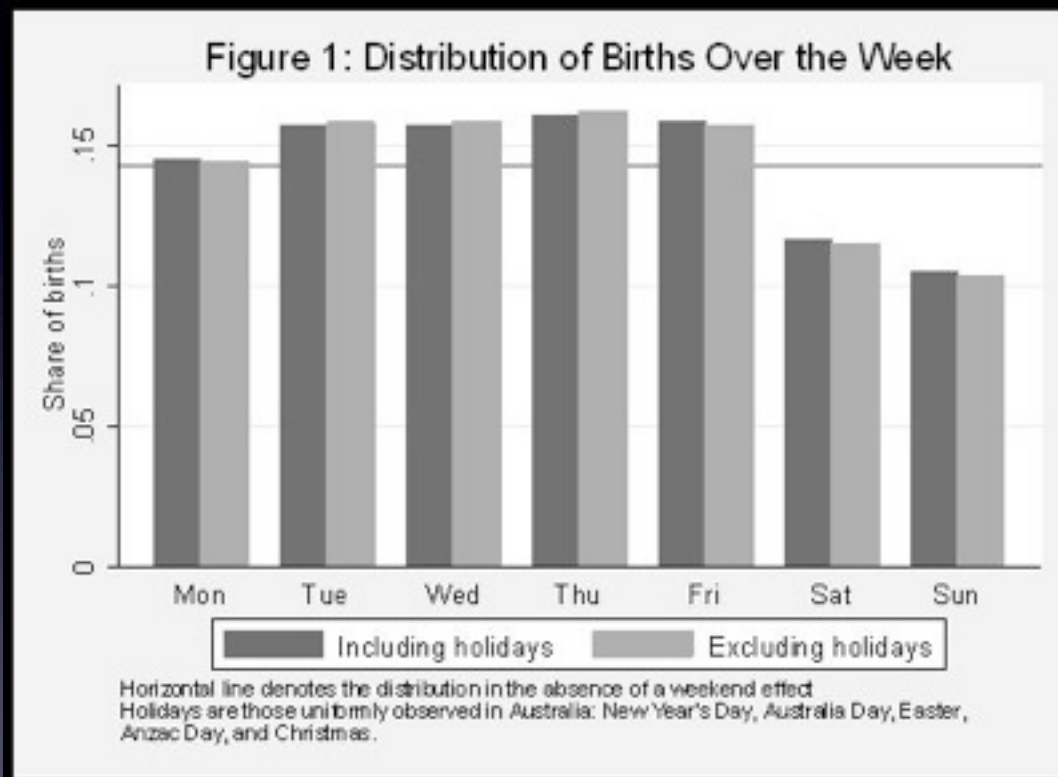


Unusual Days 2

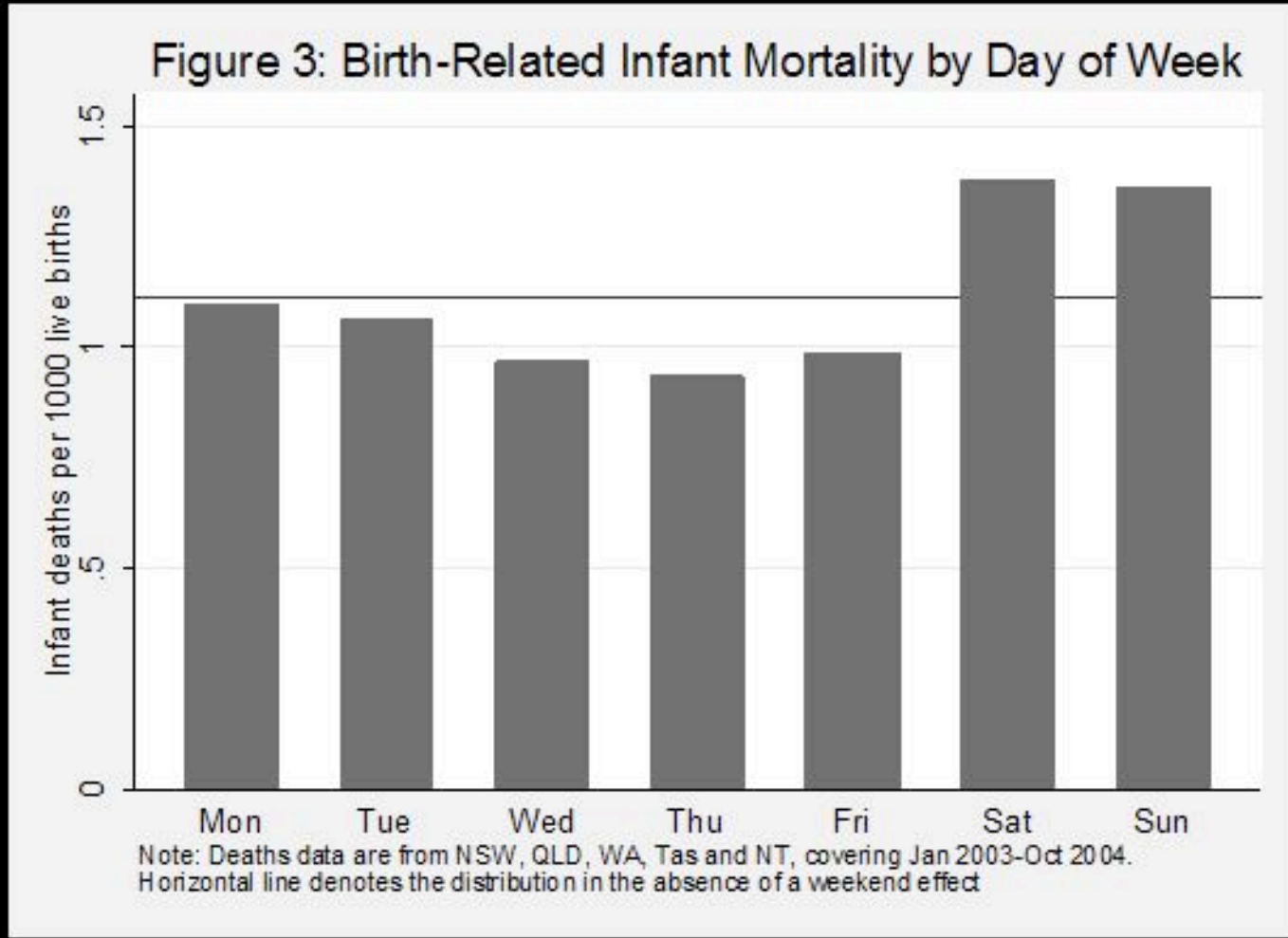
Weekends (and Fridays and Mondays)

Fewer Births on Weekends

- 29% of births pushed off weekends
- Planned birth timing
 - Caesarians
 - Inducements
- “Weekend effect” growing over time
- Whose preferences?
Doctors or patients



What is at stake?



Horizontal line denotes the distribution in the absence of a weekend effect

How do doctors truly feel about weekend births?

- HILDA survey
- Looked at birth timing of medical professionals (doctors, nurses etc.)
- Freakonomics result: *medical professionals statistically significantly less likely to have births on weekends.*
- Children of health professionals are 5% less likely to be born in weekends (significant).
- Children of doctors are 9-10% less likely to be born in weekends (not significant).
- Similar results when we look just at medico mums.
- Suggestive evidence that weekend births are more dangerous.

Unusual Days 4

Obstetrics Conferences

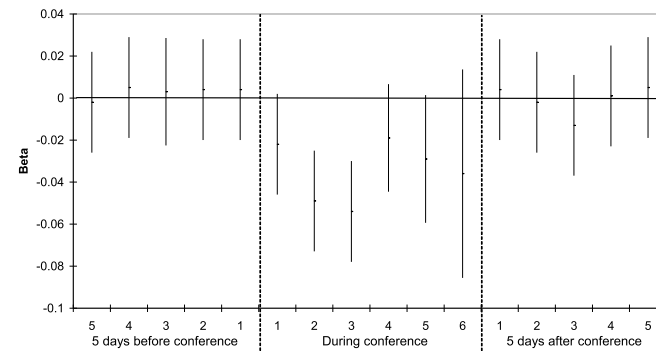
Who minds the shop?

- Australia
 - 3.6% fall in births
- US
 - 1.3% fall in births

1. Figure 3: Obstetrics Conferences

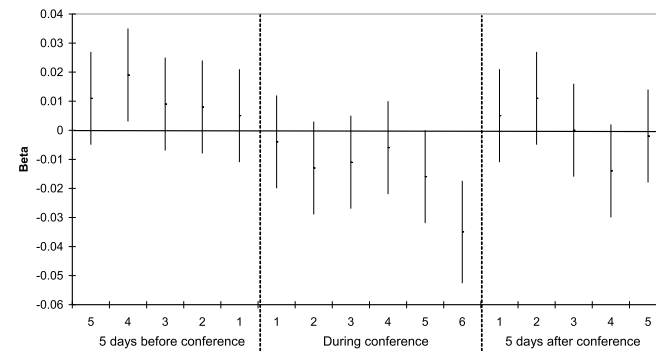
2. (All Available Years)

Australia (1990-2003)



3.

United States (1969-2001)

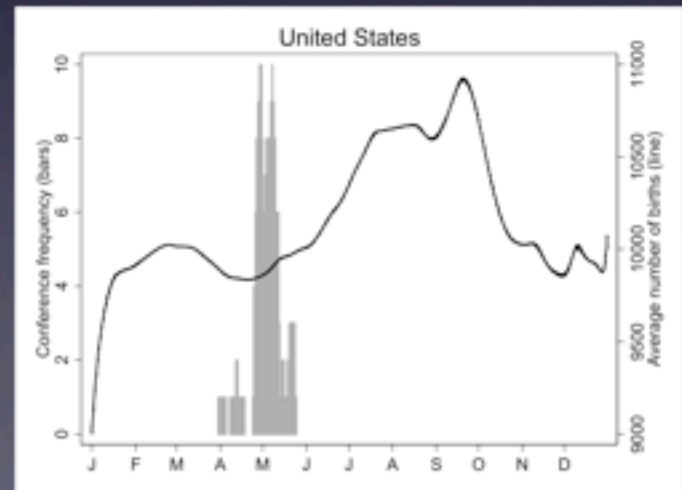
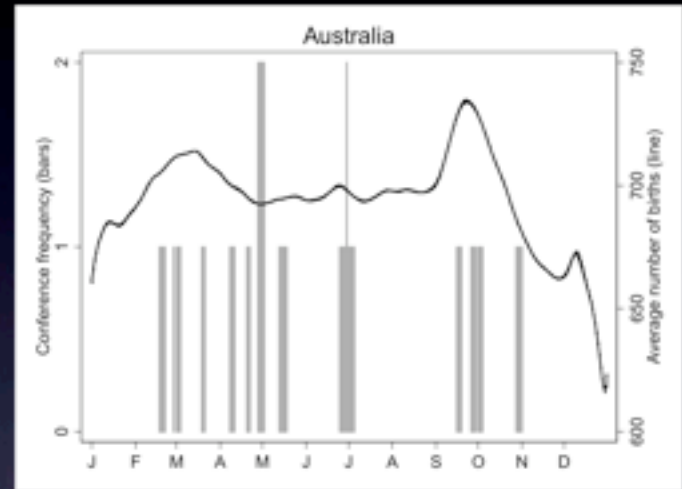


4.

5. Note: Dots denote the point estimates from a regression of log(births) on the 16 indicator variables shown, plus day of week, day of year, and year fixed effects. Intervals show 90 percent confidence ranges.

When is the conference?

- Australia
 - Recently moved conference to October!
- US
 - Could have it a month or so earlier



3.

Unusual Days 5

April 1st, every year
February 29th, leap years

Inauspicious Days

- 11-16% of babies shifted from April 1 and Feb 29
- Has grown in magnitude over time (0.5% per year)
- Same effects occur in US data but with lower magnitude but stronger significance.
- Pure parental preferences

Patients vs Doctors

- If weekends are driven by doctor preferences and inauspicious days driven by parents, what happens when they conflict?
- Bargaining model
 - Compare non-conflict situations to conflict situations and measure bargaining power of doctors (should be 100% if medical drivers are everything)
- Doctor bargaining power = 75%
 - When there is a conflict, doctors win $\frac{3}{4}$ of the time.

The Most Unusual Day

1st July 2004

The Baby Bonus

- On 11 May 2004, the Australian government announced that it would pay \$3000 to any baby born on or after 1 July 2004.
- A baby born at 11.59pm on 30 June 2004 would be ineligible.
- There was widespread publicity about the change.

The Baby Bonus

TIM LESTER: Minister, with the benefit of hindsight, would it have been better to have announced and introduced this policy on the same day?

KAY PATTERSON: This policy is a bonus to families.

TIM LESTER: That doesn't answer my question, though, with respect, Minister. Would it have been better to have announced and introduced this policy at the same time?

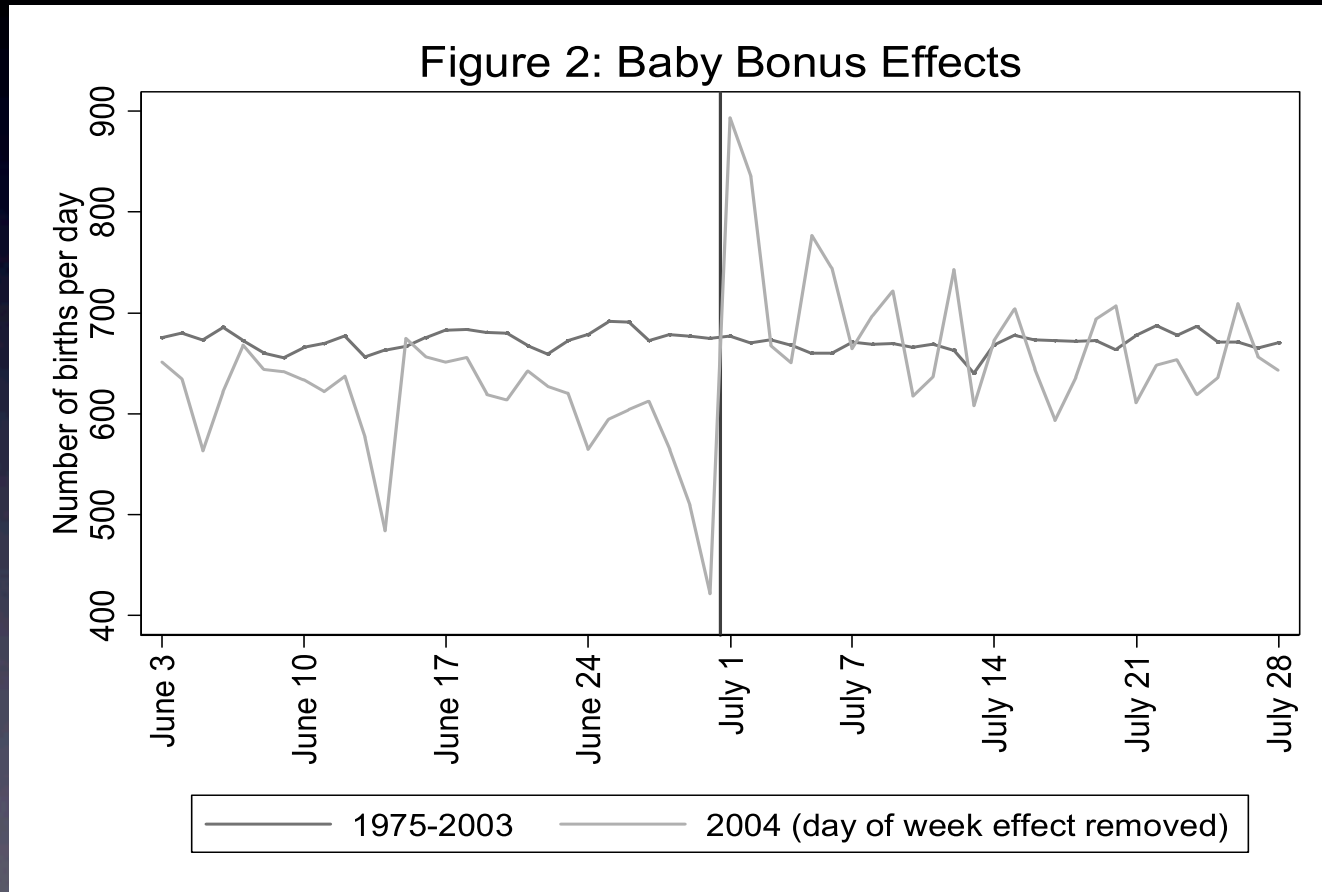
KAY PATTERSON: I believe this is a fantastic policy for mothers, they're going to get \$3,000 –

TIM LESTER: Minister, that still doesn't answer my question with respect. Would it have been better to have announced and introduced this policy at the same time?

KAY PATTERSON: Well if I thought that mothers would put their babies at risk, but I don't believe mothers would put them at risk.

The Experiment

The Experiment



1975-2003 2004 (day of week effect removed)

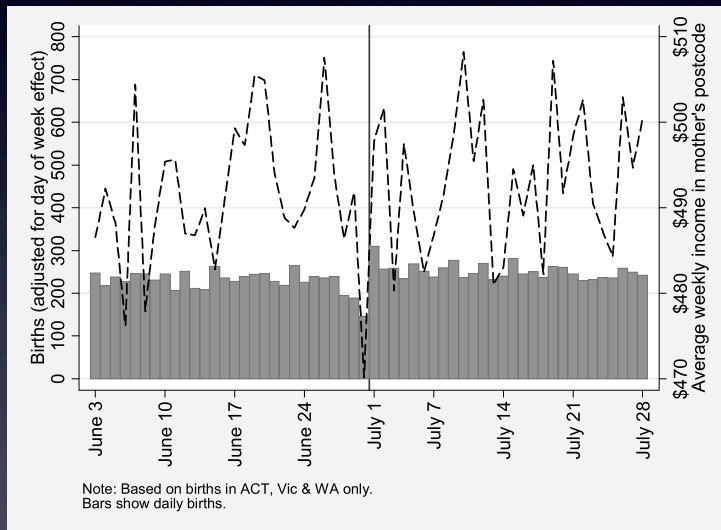
Results

- Across the 10,957 days in the last thirty years, the highest number of births recorded was on 1 July 2004 (1005 babies).
- This was the day on which the Baby Bonus was introduced.
- Our results suggest that 1170 births were “shifted” so that their parents could become eligible for the bonus.
- Most of this shifting (800+ births) occurred within ± 1 week of the policy change.
- But 300 births were moved by over a week 150 births were moved by more than a fortnight.

Who moved?

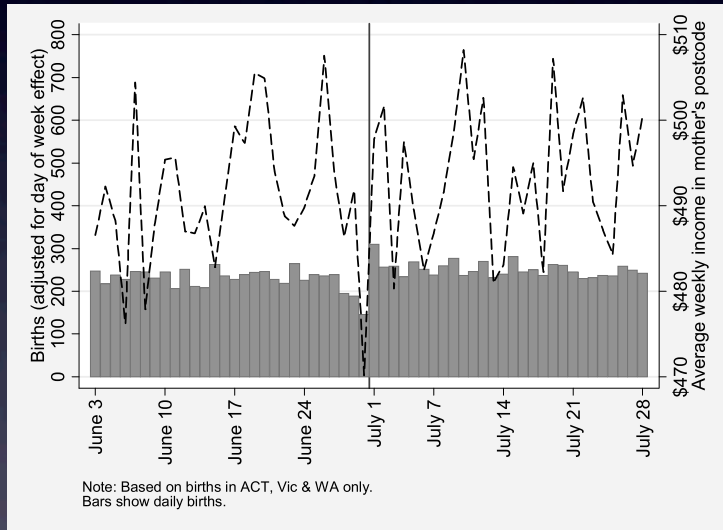
Who moved?

The rich

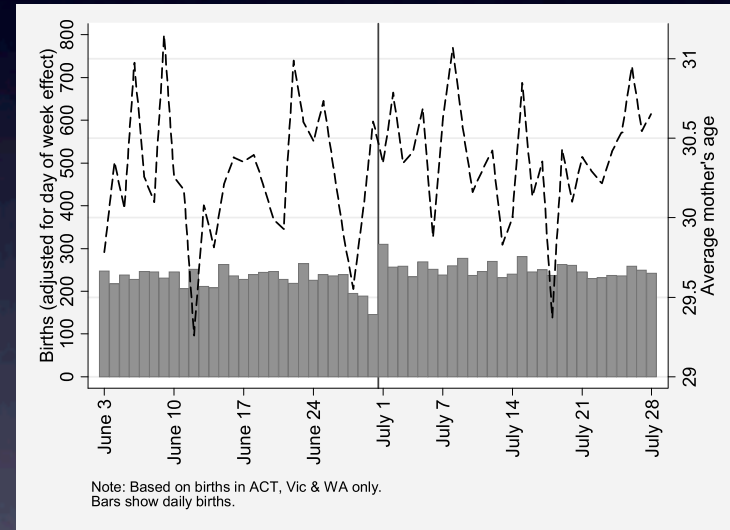


Who moved?

The rich



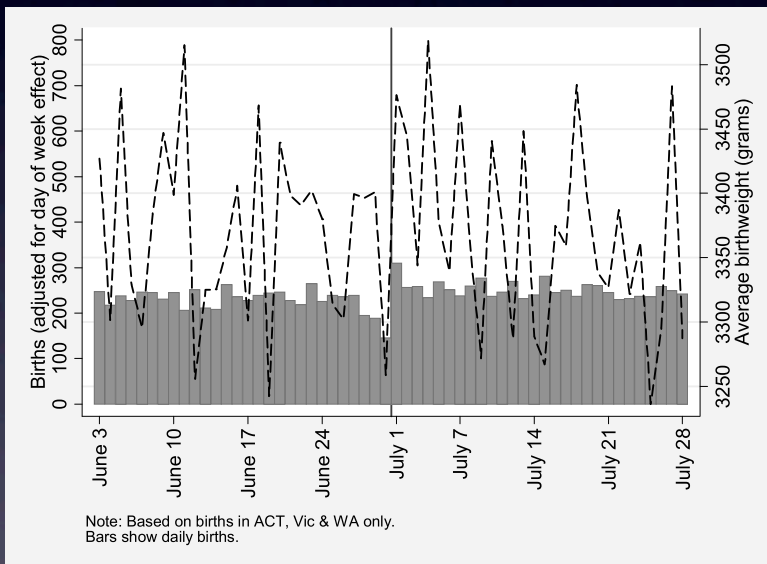
The old



Health consequences?

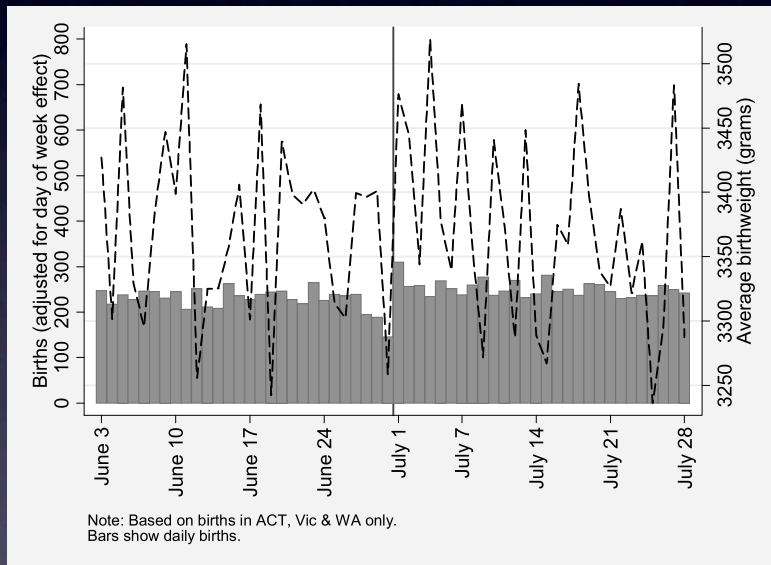
Health consequences?

Birth weight

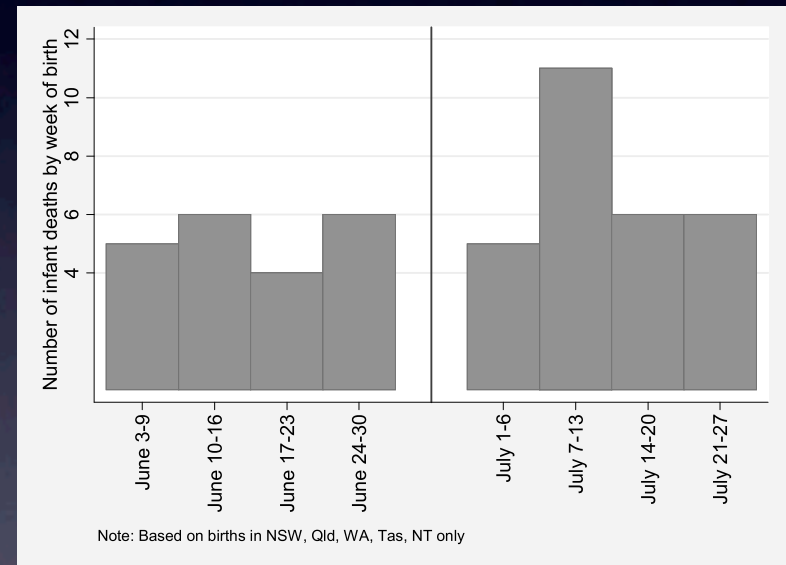


Health consequences?

Birth weight



Infant mortality



The Most Unusual Day (Round 2)

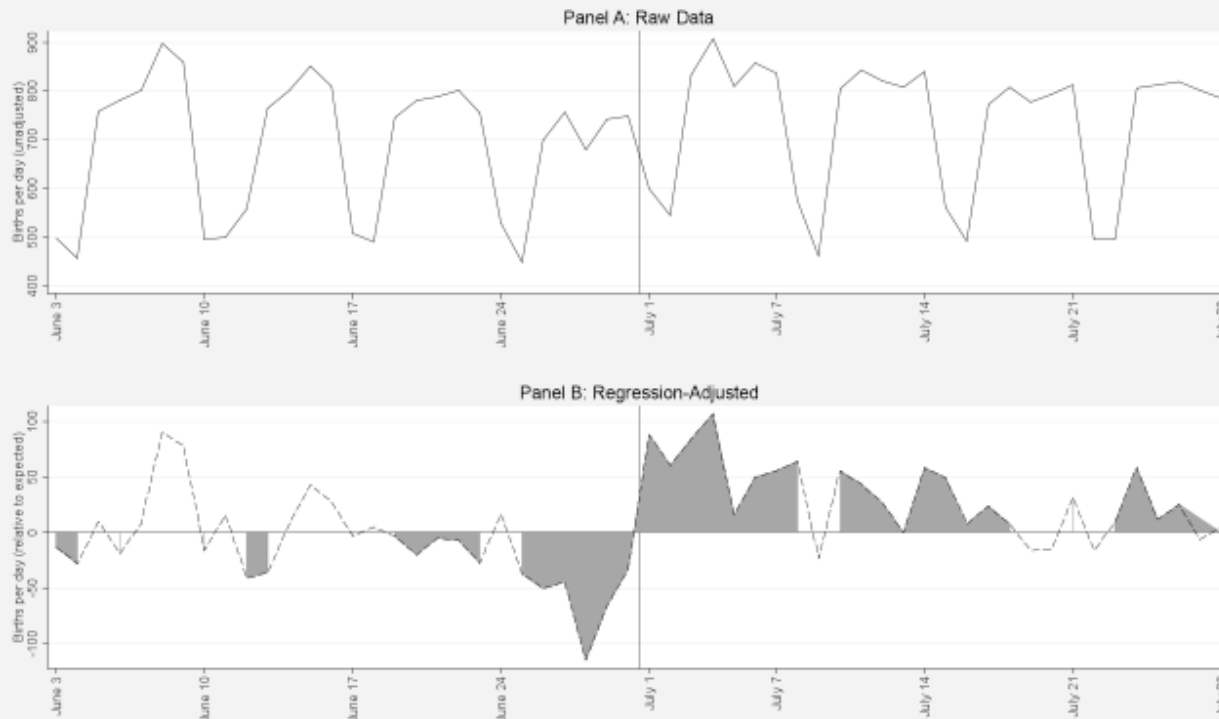
1st July, 2006

Second round

- On 1st July, 2006, the baby bonus increased from \$3166 to \$4000
- A much smaller marginal effect than in 2004
- What was the impact?

687 births shifted

Figure 8: The Introduction Effect in 2006



Panel A shows daily birth counts. Panel B shows births relative to expected, accounting for year, day of week, day of year, and public holidays. In Panel B, shading shows days of unusually low births in June and unusually high births in July.

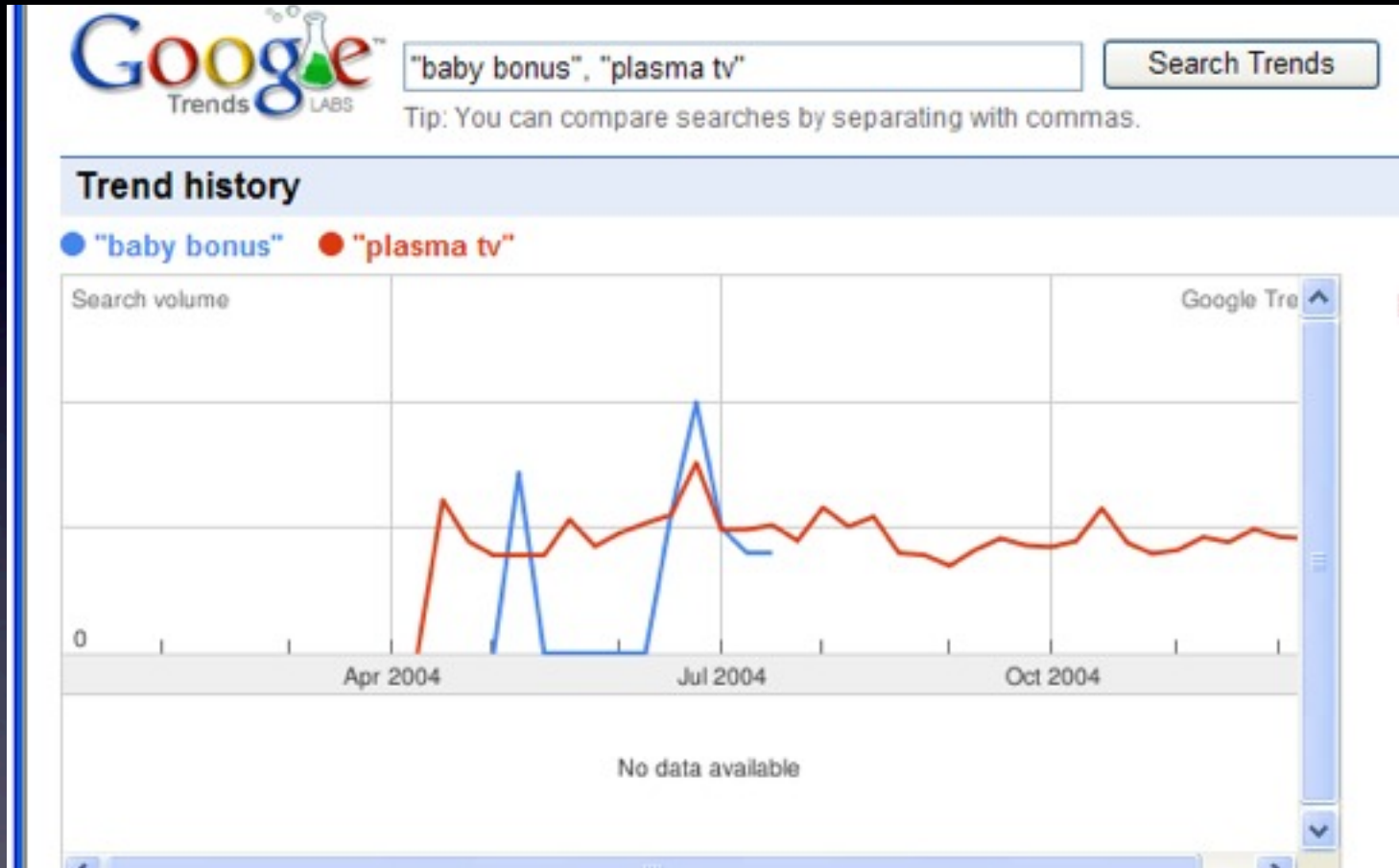
Round three

- On the 1st July, 2008, it will all happen again when the baby bonus rises to \$5,000
- The increase will cost the government \$250m per annum forever.
- We know what will happen
- It is a different government
- Will some adjustment be made?

EMILY RICE: Minister, just on another issue - the baby bonus is set to rise to \$5,000 coming in June. In the past, some women have delayed the birth of their children to ensure they get the full financial windfall. Two economists have written to you, I understand, asking you to phase in the next bonus so we don't have this occurring again. Are you considering a phase-in of the baby bonus next month?

NICOLA ROXON: No. Look, we're not. The dates are fixed for when that change occurs on July 1. I must say, I think this is a little bit overstated. I would be absolutely confident that doctors will be giving their patients the best clinical advice. It's obviously not sensible for people to make decisions based on financial arrangements rather than what's in the best interests of the child. But I really think that this is around the margins, probably a matter of a day or two, rather than there being some serious issues of doctors advising women to wait an extra month. This is just - nature doesn't allow it, and it would of course be a risky thing to do for the purposes of an adjustment just in the baby bonus.

What did people spend it on?



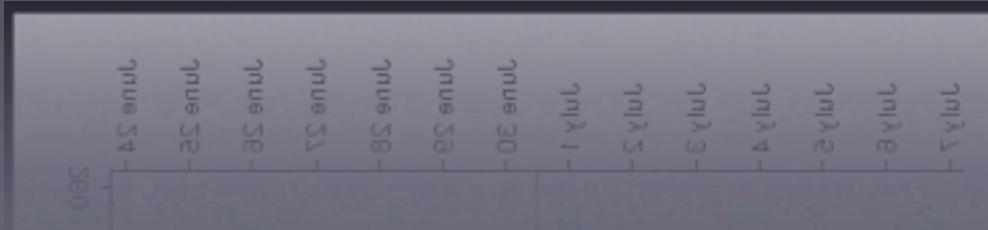
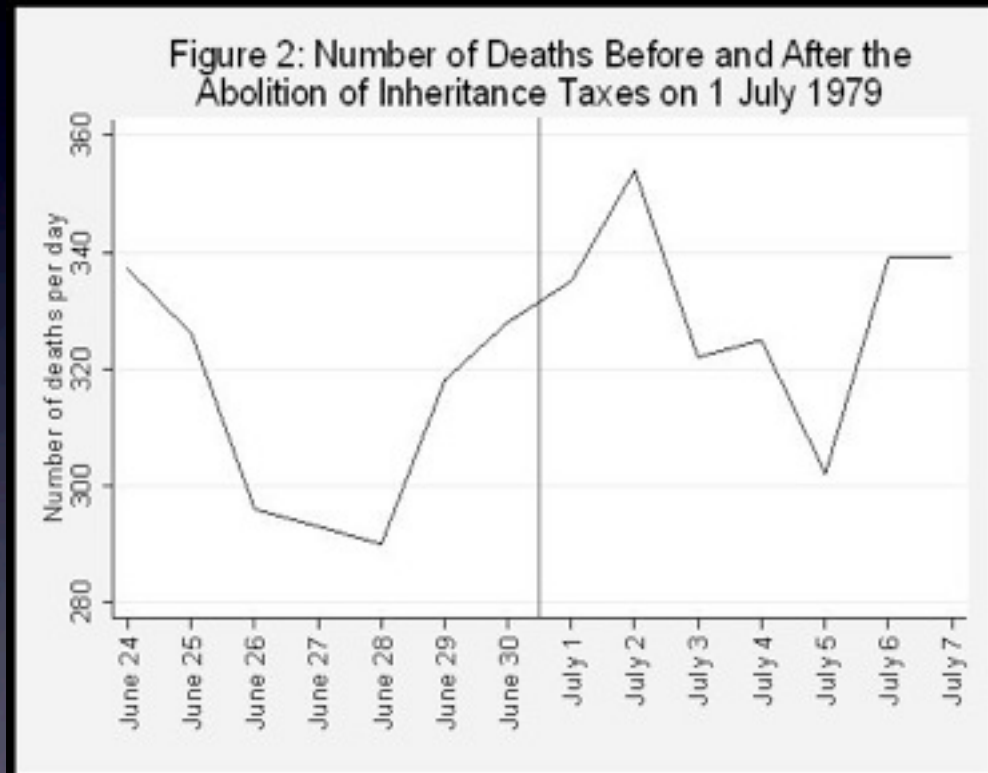
At the same time as Australians were Googling “baby bonus”, they were also Googling “plasma TV”. Coincidence?

And finally

1st July 1979

Abolition of Inheritance Taxes

- About 5% of deaths shifted from last week in June to first week in July
- But ... only about 9% of population eligible for inheritance taxes
- What will happen in the US?



Parentonomics



In bookstores, August 2008