The research question

- Does an expected increase in inflation cause an increase in consumption of durables?

- Unconventional fiscal policy:
  - Announce an increase in VAT to be implemented in the future
  - This creates expectation of higher future prices (inflation) than otherwise
  - This encourages households to increase durable purchases (presumably planned for later)
  - Could work even when monetary policy is constrained by the (effective) ZLB

- Two extra elements come out in the existing study: the increase in durable C occurred
  - without this representing a mere reallocation between durable and non-durable purchases
  - and without this increase being reversed in the foreseeable future
What’s there to love about the paper?

- Quasi-field experiment
- Careful diff-in-diff exercise even under less-than-ideal conditions
- Focus on subjective expectations and on perceptions (see Manski)
- Important policy issue:
  - ZLB
  - VAT increases have been offered as unusual policy instrument before (e.g., as part of a package generating a fiscal devaluation)
- Well written, single message to convey
The research strategy:
Difference in Difference Estimation

- Exploit a policy announcement in Germany in end 2005 that the VAT would go up by 3pp in early 2007: “treatment”
- Consider households, matched by characteristics, in three other countries (one in Eurozone-FR, two outside-SE,UK) as the control group
- Show that consumption of durables rose in Germany but not among similar households in the “untreated” countries

Limitations relative to standard diff in diff:
- Treated and untreated are not in the same country (environment)
- No panel data but time series of cross sections: Matching needs to occur also for people in the same country, before and after the policy announcement

As part of the diff-in-diff analysis, the authors:
- establish “common trends” in willingness to buy durables and in inflation expectations prior to the “treatment” (announcement of VAT increase)
- show similar association between inflation expectations and willingness to buy durables in both treatment and control countries
Comment 1: Relationship between inflation expectations and willingness to purchase durables?

- An association is established for German and for “control” households, with similar slopes
  - Sometimes discussion slips into causal statements

- Causality is much more difficult to establish but helpful for the exercise:
  - Unobserved heterogeneity: unobserved factors make me more pessimistic about future inflation and more willing to buy durables now
    - Placebo test could work
  - Reverse causality: I want to purchase durables now and I claim that prices will go up to rationalize my decision
    - IV: one would need to find an instrument driving inflation expectations and affecting consumption only through those: the VAT increase happened only once and in one of the four countries
Comment 2: The Treatment: An unanticipated, clean price announcement?

• VAT announcement should be unanticipated and “clean” of implications for future incomes or other macro variables

- **Unanticipated**: uncertainties of the electoral process in Germany
  - Yes, but **the set of alternatives** was specified and should be known to people

- **Clean price announcement**:
  - Arguments:
    - It was not done to take care of output objectives but of Maastricht Treaty criteria
    - It does not seem to have affected expectations of future incomes
  - BUT maybe the invariance result is a bit “too good”:
    - VAT announcement provided a signal that Maastricht would be met through VAT rather than through other types of fiscal contraction
  - What could account for non-adjustment of income expectations?
    - Could it be that the announcement affected only their price expectations and not their income expectations because consumers had not yet internalized the need to solve the Maastricht criterion problem?
Comment 3: Is the control group “untreated”?

- The control group (F, SE, GB) are trading partners

  - VAT changes have implications for international trade
    - So powerful that, combined with payroll tax cuts, they have been argued to constitute a ‘fiscal devaluation’.
    - Are the partner consumers completely “untreated” by the German VAT increase announcement?

  - Or is the argument that foreign consumers don’t realize they are being treated because the German VAT increase is not salient for them?
Comment 4: How far can we push the policy implications?

- A powerful tool for boosting consumption in a crisis close to ZLB?
  - This was not a "sales tax vacation" (Hall) but a tax collection measure to reduce the deficit
  - What is remarkable in the German example is that a permanent, sizeable, general increase in VAT
    - left future income expectations unchanged
    - had positive effects on durables consumption that were not later reversed
  - Is this likely to be more generally observed in a ZLB crisis, or a curiosum?

- Is a VAT increase in times of deep fiscal crisis simply causing price increases?
  - Here is a recent example from a deep crisis:
    - Price effects could be partly offset by changes in tax compliance (Artavanis, 2015):
      - The increase of the VAT rate in the Greek restaurant industry in September 2011 increased evasion by at least 9%, while the reduction in August 2013 reduced sales under-reporting by at least 9.6%. Taking into account the effect of the additional reported sales on direct taxes, the final fiscal outcome of the VAT rate reduction becomes minimal.