### Unconventional Fiscal Policy, Inflation Expectations, and Consumption Expenditure

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#### 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.