**Paper summary and comments**

**Goal is to understand the wage and employment effects of a wage subsidy**

* This subsidy is of the nature of an EITC or in-work tax credit – so a *permanent* reduction in the tax rate over some range of income for eligible individuals.
* Eligibility itself is a function of household characteristics including earnings.
* In this way the wage subsidy discussed here mirrors discussion about adjusting the tax scale (including potentially negative taxes) to represent household – rather than individual – needs.
* The 2015 program replaced two other tax credits – one with near universal take-up where the payment was a year late but automatic and one with low take-up. The take-up of the new credit was moderately high (73%).
  + The reform was unanticipated.
* Page 9: Description of the policy.
  + Generally increases METR across most of the earnings distribution – but lowers the participation tax rate across that length.
  + Labour force participation in France already relatively high.

**Model**

* Perfectly competitive labour market – this assumption implies that we would expect a wage subsidy to shift us down the labour demand curve.
  + CES production function, labour only input but labour inputs aggregated across local labour markets – with the elasticity of substitution reflecting that.
  + Also discuss the idea of heterogeneous treatment effects and say it doesn’t matter if the instrument assignment is exogenous.
  + Also state that this is invariant to discrete occupation choice models of labour markets.
* No discussion of imperfect competition in labour markets. However, such imperfect competition would automatically change the incidence.
* Also ignored income effects, which is fair enough.

**Identification**

* Three conditions:
  + **Substitutability** (i.e. there is an interaction between the wage rates paid for eligible and ineligible individuals that makes the labour types substitutable):
  + **Local labour markets are distinct** (i.e. limited mobility between labour markets):
  + **Quasi-random assignment of exposure to changes in tax rates**:
* Here it is a national level policy, with differences in exposure due to local labour market characteristics – so leverage variation in exposure to estimate the causal effect of the policy.
* Due to incomplete take-up this is an ITT (due to take-up below 1 this is a lower bound for the LATE).

**Data**

* French PLIDA equivalent (full tax records and household information, but no firm identifier) – 4% random sample (is this a randomly sampled panel, or randomly sampled in the cross section – as the later would generate substantial attrition).
* Appears to be an unbalanced panel (individuals aged 25-55 between 2011 and 2018) – good to get clarity on this.
* Higher income earners are excluded – one concern is spillovers on these groups.
* Equivalisation – appears to be full household income when single, and half when in a couple. Why are we equivalizing, and given we are why not use a standard scale?
* Imputation of wage rates for those out of work to discuss PTRs (discussed in Section D.4)

**Shock and exposure**

* Shock: Calculate how the policy changes marginal and average tax rates if their behaviour and characteristics were fixed at their period t level.
  + A sensitivity here is to estimate the shock as the application of the old tax system under the new parameters also.
* Exposure: Shocks are aggregated up to the socio-demographic level (based on the individuals share of total hours in that group), and then aggregated up to a local labour market level based on the share of hours worked by each socio-demographic group in that labour market.
  + So the instrument is an hour weighted change in ETRs – I understand how this is exogenous, but I am not sure I understand the logic of the measure in terms of the intensity of the shock.
* We are told that our exposure measure has 470 observations (it will be 90 something regions over 5 periods).

**Regression approach and controls**

* All seems reasonable. Some tests to show the degree exogeneity would need to fail would be useful in theory – but the simulated instrument is clearly exogenous so it is unnecessary. Instead alternative weights for the instrument would be valuable.
* The controls try to deal with alternative growth trends between regions, however is the time series long enough for these controls to make sense? Check the robustness on this in appendix.

**Identification**

* Local labour markets are distinct – they show that there is limited mobility over three years. However, the key mobility of interest is among those that are treated.
* Socio-economic groups are substitutable in the labour market rather than complementary – highlights literature saying new hires and existing workers tend to be imperfect substitutes rather than complements in a firm. (largely an argument that there is significant variation between occupations in socio-economic groups).
* Conditional quasi-random assignment – wage subsidy choices were not set on the basis of a change in labour market trends. They say this is not plausible, but if the policy change was driven by political pressure from jurisdictions I am not sure.
  + They also show that past outcome trends don’t explain treatment, which is compelling.
* Many uncorrelated shock clusters – have to read up on this one.
* Relevance – first stage is relevant.
  + The relevance looks stronger for the net of PTR, rather than the MTR measures – this is intuitive given the hours weighting, which makes me think differential weighting may make sense for the MTR stuff.

**Results**

* Only PTR is significant – a 10% increase in 1-PTR leads to a 2.7% increase in hours worked, and a 3.1% decrease in wages. Implied pass-through to wages of 31% (gross wage declines by 3.1%, but the change in net wage at the initial wage was 10%).
* At this stage I have no idea why the small model is at the top, as it doesn’t define anything here.