

The effects of housing transaction taxes on purchases, mobility and prices

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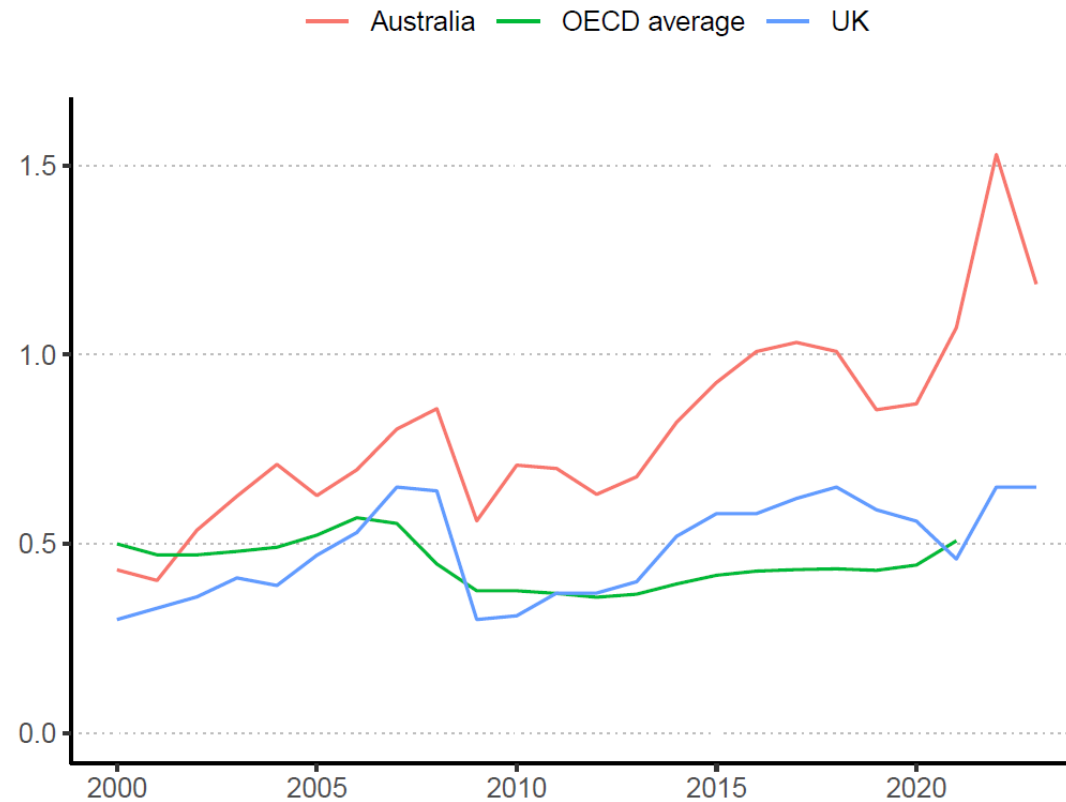
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For homeowners, stamp duty is a tax on mobility. Its burden is growing.

Stamp duty revenue as % of GDP



Sources: ABS; OECD; UK Office for Budget Responsibility.

Our contributions

Past studies from around the world disagree about the effects of stamp duty.

We revisit the effects with:

- A cleaner natural experiment, thanks to Australia's federation
- More comprehensive data, covering most outcome variables previously studied

Our results show:

- Stamp duty has large, permanent effects on purchase volumes and moves
- Stamp duty has little-to-no effect on prices
 - But changes in composition of transactions can look like price effects
- Results are consistent with model in Cho, Li and Uren (2024)

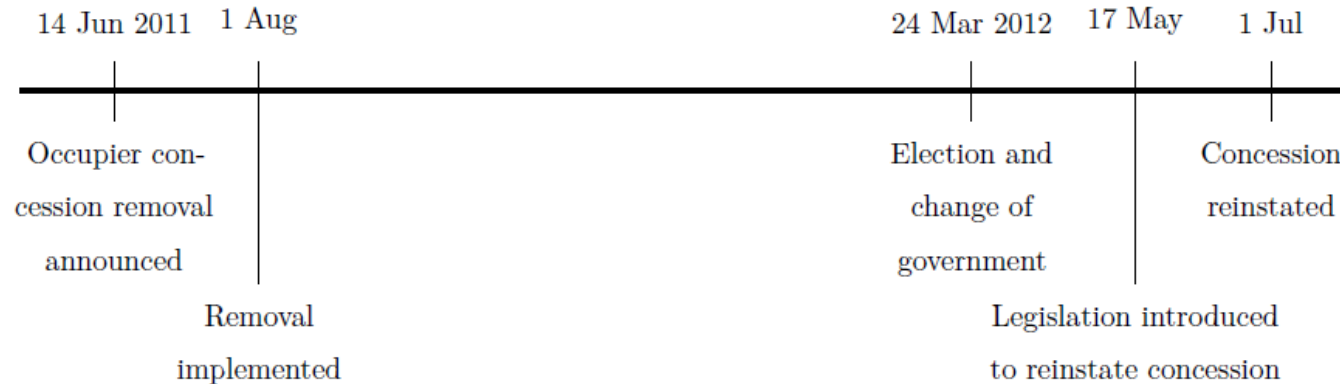
Presentation structure

1. The natural experiment and the data
2. Purchases and moves
3. Prices
4. Brief conclusion

The natural experiment and the data

Stamp duty changed suddenly in Queensland in FY 2012

- **14 June 2011:** Qld government announced removal of large concession for **owner occupier purchases**
- **1 August 2011:** Removal implemented
- **1 July 2012:** Concession reinstated after change of government



- Investor buyers' stamp duty remained barely changed
- First-home buyers (FHB) remained exempt from stamp duty
- Non-FHB occupiers (50% of buyers) had tax rise of **1% of sale price** on average.
- **Four control states** did not change stamp duty in FYs 2008-13
 - NSW, Victoria, SA, WA

Data

Two source datasets (not linked)

- Purchase and price effects: commercial microdata on housing transactions
- Move effects: administrative microdata on people's locations and moves (at SA1 level)

Purchase and moves volumes

- Remove all purchases <\$350k, to exclude most first-home buyer (occupier) purchases
- Count purchase volumes within each:
 - SA3 (82 in Queensland, 218 in control states),
 - Financial year (FY) (July to June), and
 - Type (occupier or investor)
- Purchases outcome is occupier minus investor purchases per SA3-FY
- Also count moves by destination SA3 and FY
- Will use cross-state diff-in-diff with SA3-FY level observations

Selecting control areas from the four control states

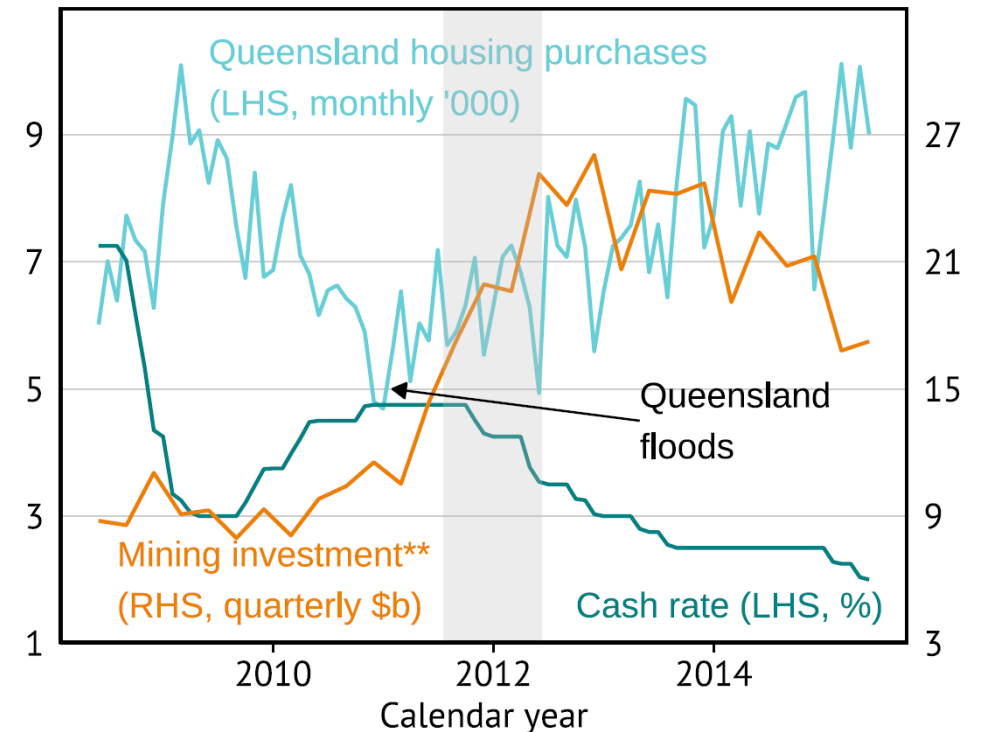
Challenge

- Coinciding strong influences on housing market (monetary policy, mining boom)
- Effects difficult to control for (e.g. role of mortgage debt)

Solution

- Match each Queensland SA3 to an SA3 from a control state
- Match on pre-treatment outcome trends
- Suited to unobserved confounders (e.g. synthetic controls)

Macroeconomic influences on Queensland housing purchases



Purchases and moves

Regression method

Standard differences in differences across SA3s and years

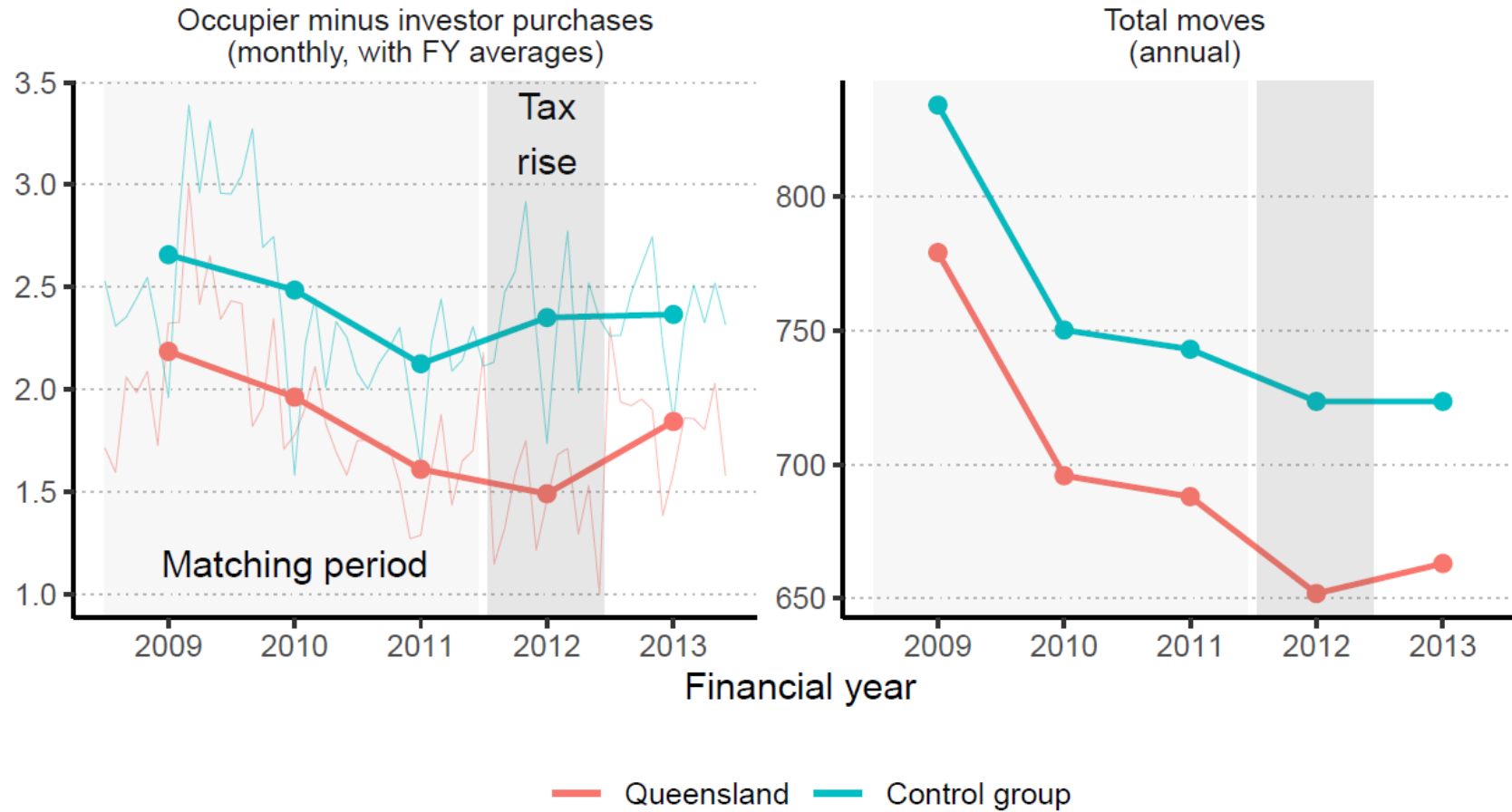
- 164 cross-section units (SA3s): 82 in Queensland, 82 in control
- 4 time periods: FYs 2009-2011 (pre-treatment) and 2012 (treatment)
- SA3 and FY fixed effects
- Purchases regression is essentially triple difference

Robustness checks

- Time-shifted placebo tests
- SA3-level synthetic controls (Robbins, Saunders and Kilmer, 2017)
- Space-shifted placebo tests (Abadie, Diamond and Hainmueller, 2010)

State-level outcomes for Queensland and matched control group

Thousands

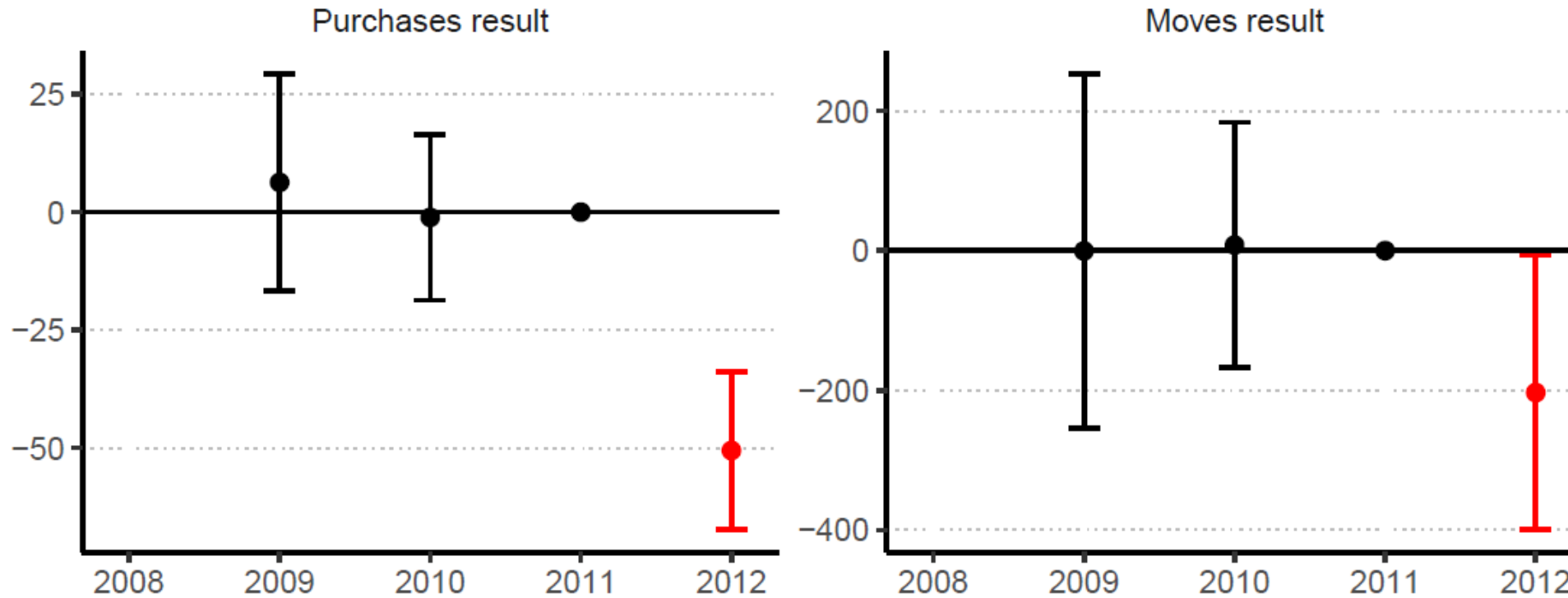


Notes: July 2011 is included in the FY 2012 points but excluded from the tax-rise shading, because the tax rise occurred on 1 August 2011. Trend differences between purchases and moves can reflect moves by renters.

Results

Headline regression results with 95% confidence intervals

Estimated treatment effect in red; matched periods in black



Purchase and moves takeaways and further results

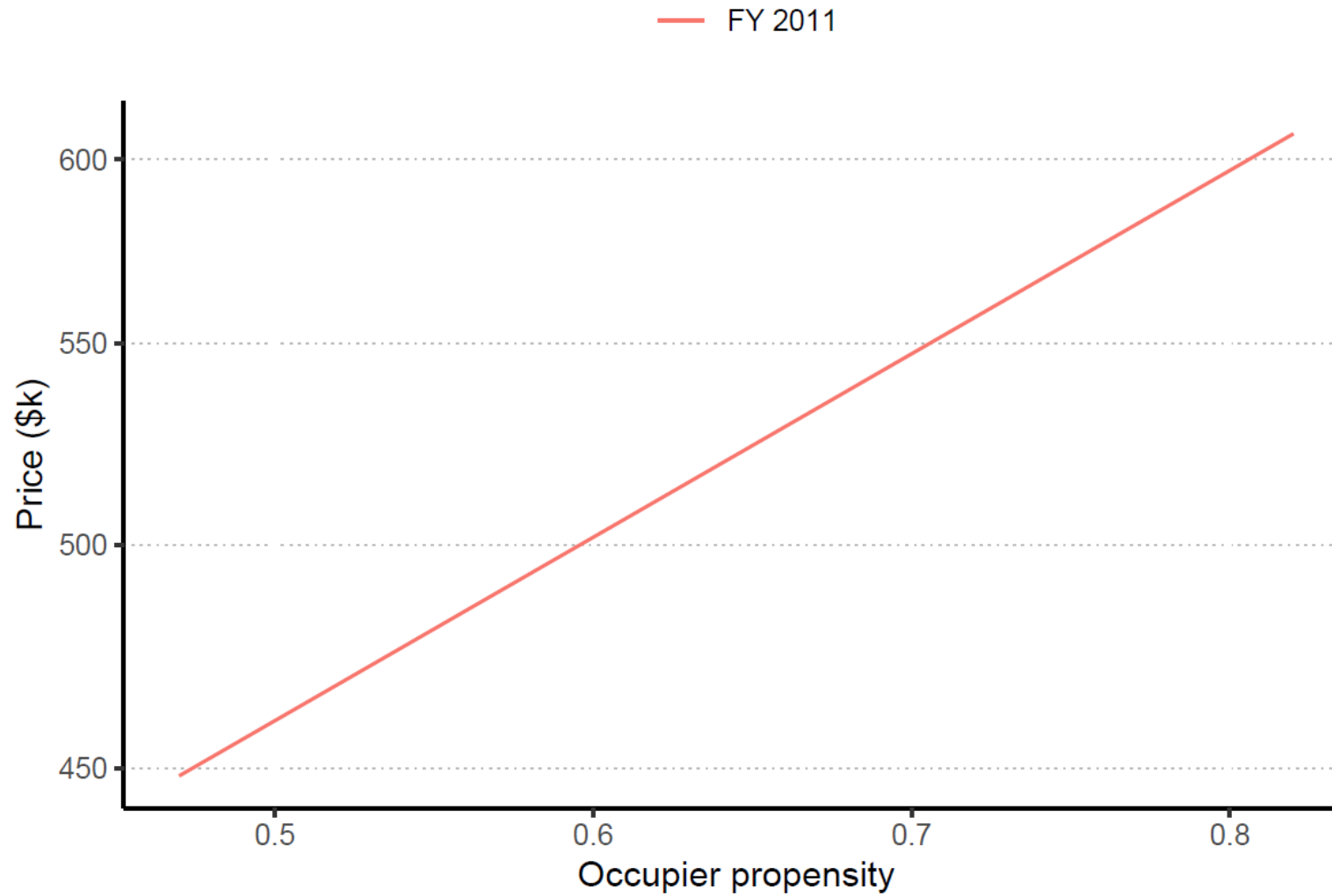
- Treatment effects as % of FY 2011 levels, from a ~1ppt stamp duty rise:
 - Purchases: -13%
 - Moves: -10%.
- Permanent effect is most of this – about -11% effect on purchases. Not far off some previous permanent effect estimates.
- Small temporary component in line with previous findings on buyer sophistication
- Heterogeneity analysis shows that:
 - Purchases of all types affected, across wealth, household size, urban/rural.
 - Short and long distance moves affected.

Prices

How to analyse price effects

- Can use a similar triple difference approach, but could have low power because
 - Prices are noisy
 - Average transacted prices are affected by changing composition of transactions
- **Instead, ask:** Where would treatment effects on prices be strongest?
- **Answer:** In dwellings that (untreated) investors are least willing to buy.
- **Approach** (similar to Prasad and Gillitzer, 2022):
 - Retain transaction-level sample
 - Stage 1: Give dwellings time-invariant rating of propensity to be purchased by an occupier
 - 'Occupier propensity'
 - Stage 2: Assess how prices of high occupier-propensity dwellings changed relative to others
 - Look for changes in relationship between log price and occupier propensity

Estimated relationships between price and occupier propensity Queensland, FY 2011-12

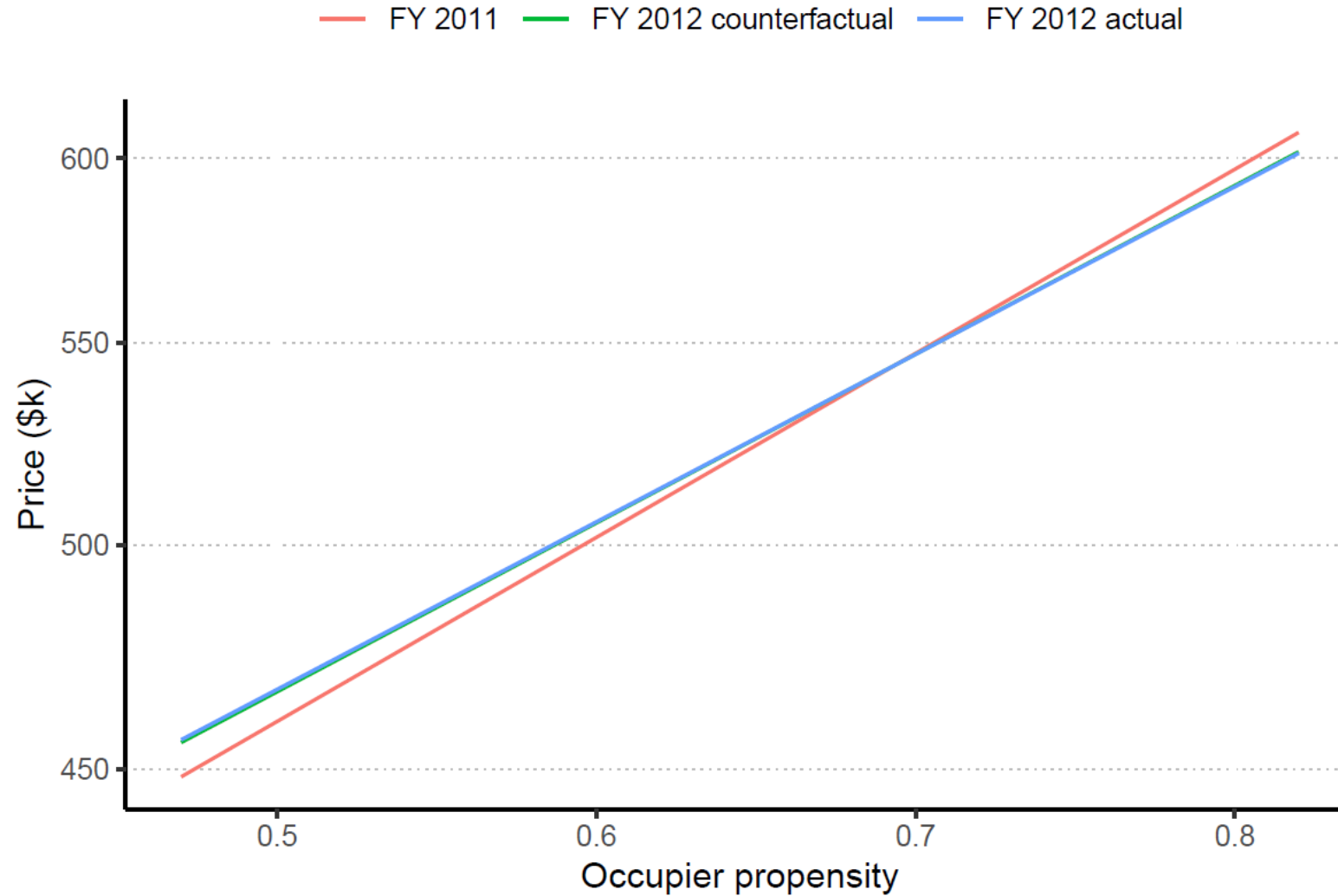


Estimated relationships between price and occupier propensity Queensland, FY 2011-12



Estimated relationships between price and occupier propensity

Queensland, FY 2011–12



Price takeaways and other results

- No evidence of a negative price effect
 - Noting that demand effects through FHB are switched off by the policy design
 - But results are similar to Cho et al. (2024) modelling that has FHB channel
- The composition of transacted housing did change.
 - Unsurprisingly, housing more exposed to the treatment was transacted less
- The raw data show a price decline that is driven by this compositional change
- Compositional changes may reconcile past literature differences
 - Besley, Meads and Surico (2014) control for composition and find no price effect
 - Best and Kleven (2018) do not, and find a strong price effect

Conclusions

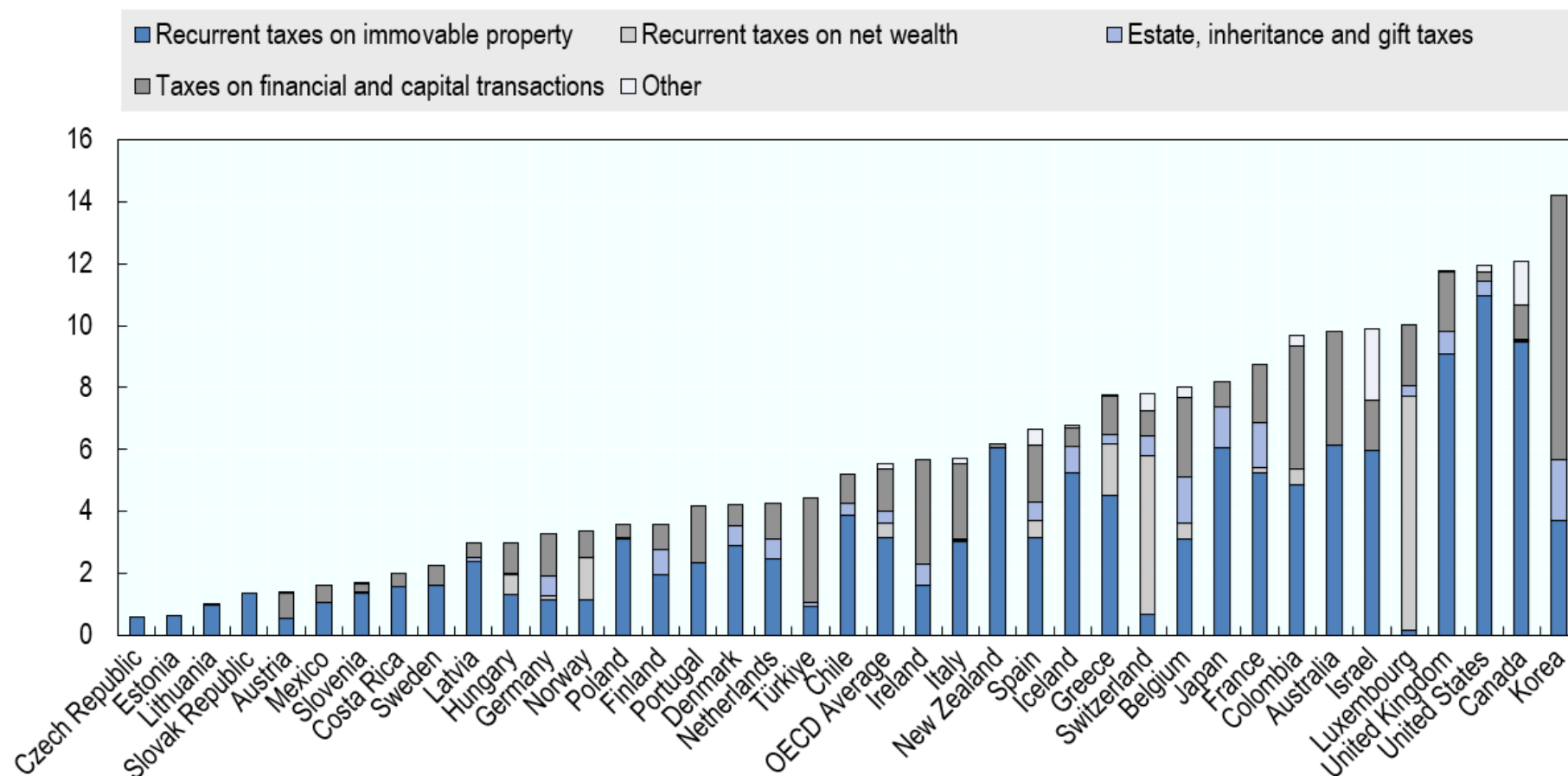
Conclusions

- Stamp duty has strong negative permanent effect on purchases and moves
- Stamp duty has little effect on prices (at least when FHB channel switched off)
- Our natural experiment is cleaner and larger-scale than past studies
- We clear up some of the past differences in findings

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Stamp duty across OECD countries

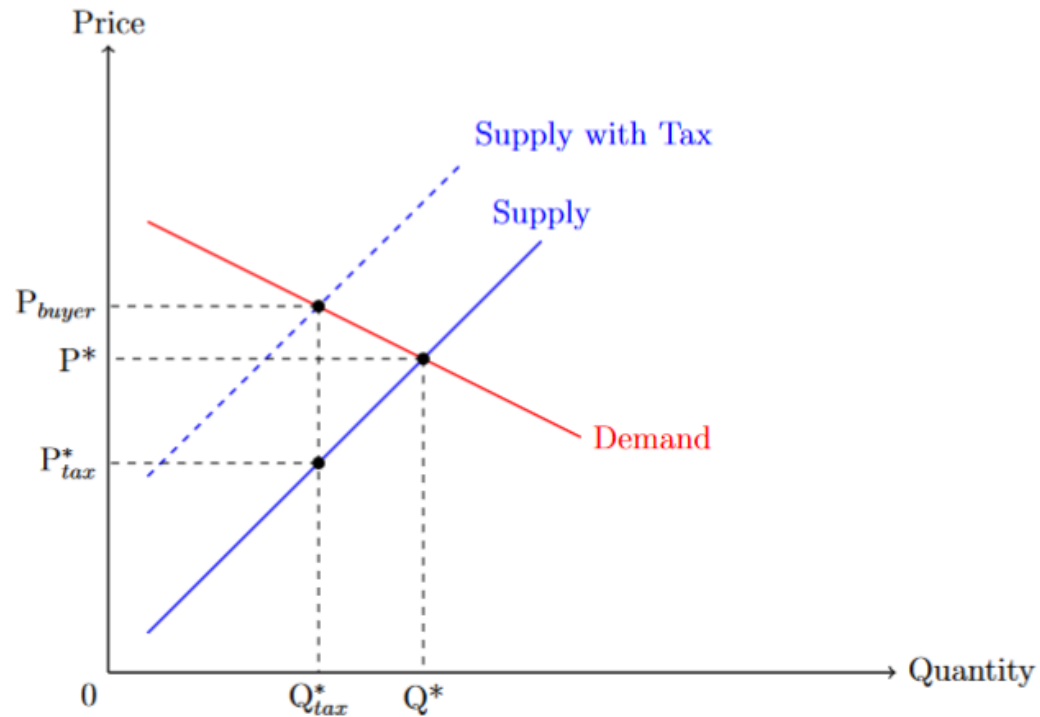
Property tax revenue as a share of total tax revenues in 2020



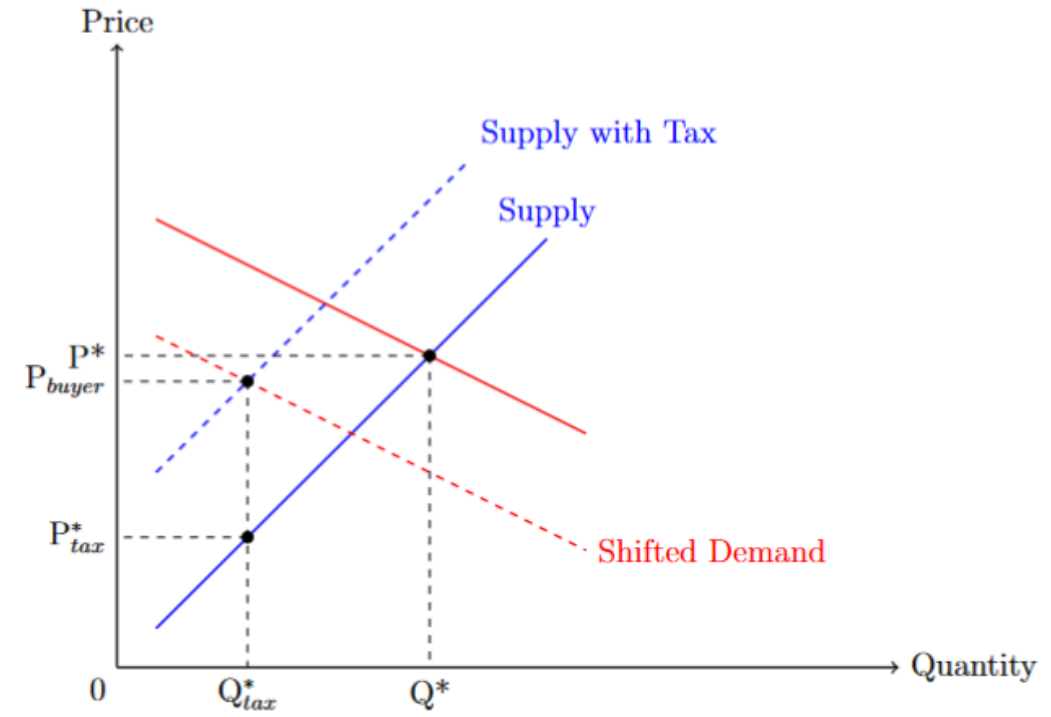
Note: 2019 data for Australia, Greece, Japan, New Zealand and the OECD average. Data include taxes paid by households and non-households and include household and non-household real estate.

Source: OECD Revenue Statistics

Does stamp duty affect net demand



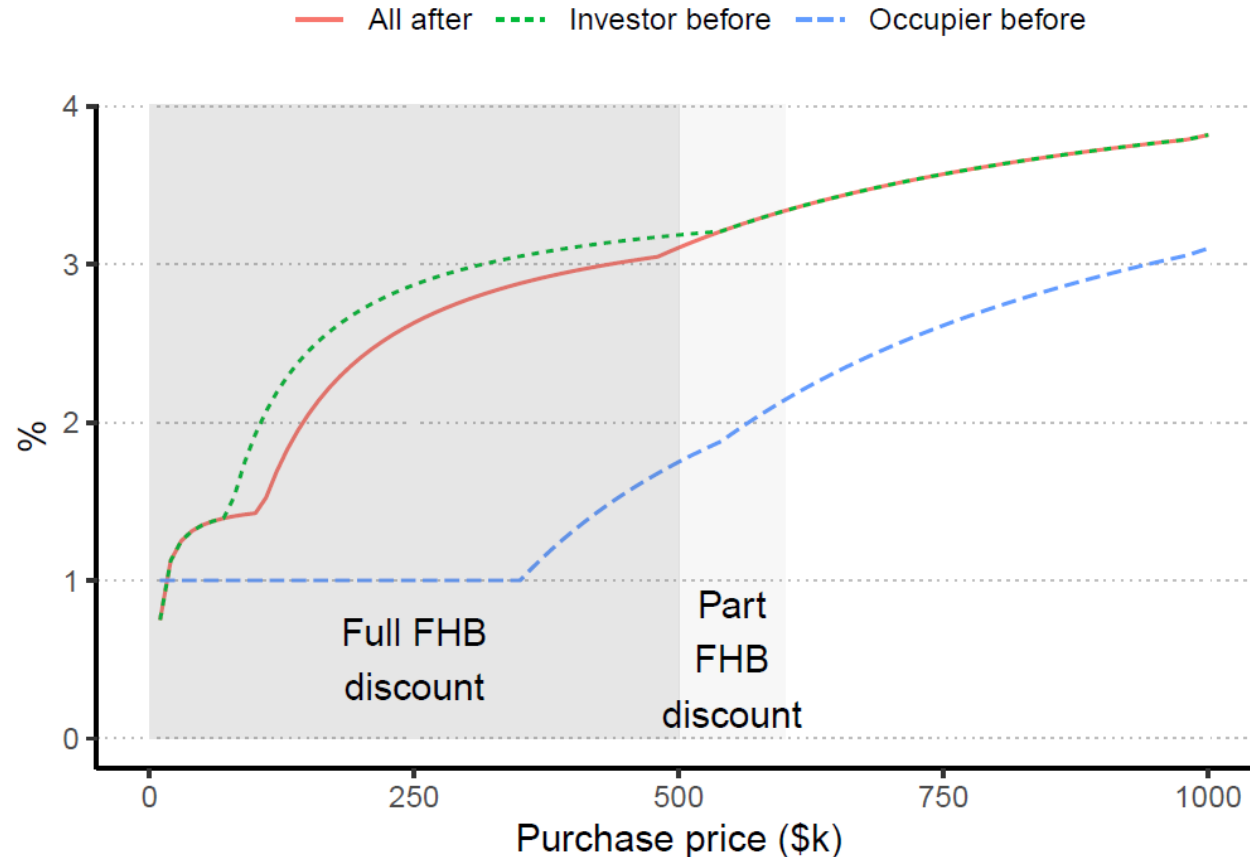
- No shift in demand curve
- Price effect \leq tax



- Downward shift in demand curve
- Price effect $>$ tax

Stamp duty rates before and after

Housing transaction tax rates in Queensland
Before and after 1 August 2011



Notes: First-home buyer (FHB) discounts meant that the FHB tax for purchases under \$500k remained zero before and after the tax change.

How much of the effect was temporary, due to anticipation of reversal?

