

# Understanding Vacancy Yields: Evidence from German Data

Carrilo-Tudela, Gartner and Kaas

Discussion by: Ctirad Slavík (CERGE-EI)

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# Introduction

- Fact: firms' hiring behavior differs in the cross-section as well as over time (BC's).
- What the paper does/will do?
  - ① Relates the cross-sectional differences in hiring to recruiting intensity, hiring standards and wages.
  - ② Build a theoretical model which provides a particular causal interpretation and decomposition.
  - ③ Goal is to have a quantitative model to account for the contribution of the 3 channels to diffs in hiring. And more ...
- This discussion: go over 1-3, provide comments along the way.

Provides three sets of results:

- (1.) Vacancy yields (number of hires divided by the number of vacancies) vary a lot by employment growth.
  - Not consistent with standard search-and-matching.
  - True also for hiring and vacancy rates.
  - Firms appear less picky when they grow faster.

(2.) Higher hiring rates are positively correlated with:

- ① Higher recruitment intensity.
  - ② Lower hiring standards.
  - ③ Higher wages.
- All intuitive, but ... Cannot do this at establishment level for vacancy yields, as too many no vacancies reported. What about **measurement error** for the aggregate results then?
  - Causality? Paper runs non-parametric regressions as follows:

$$y_{i,t} = \alpha + \sum_n \beta_n D_n + \text{controls},$$

where  $y_{i,t}$  are the variables above and  $D_n$  are dummy variables for bins of the hiring rate.

# Questions

- ① Why non-parametric? Numbers somewhat hard to interpret.
- ② Why that 'order'. More natural perhaps:

$$\log hr_{i,t} = \alpha + \sum_k \beta^k \log y_{i,t}^k + \text{controls}.$$

- ③ Do we have causality now? No. Endogeneity issues ...
- ④ Is establishing causality the goal here? Should it be?

Empirical Results 3: Relationship between labor market tightness and the variables above.

Comment: be more explicit about your data and regressions.

# Model

- ① Continuous time,  $\infty$  horizon.
- ② Risk-neutral workers and firms.
- ③ Output  $p \cdot x$ . Distributions of  $p$  and  $x$  critical.
- ④ Firms post  $V$  vacancies with recruiting intensity  $R$ , threshold  $\bar{x}$  and wage schedule  $w(x)$ .
- ⑤ Search competitive.
- ⑥ Two-sided commitment upon meeting.

More productive (higher  $\rho$ ) firms hire more:

- ① have more vacancies,
- ② have lower hiring standards  $\bar{x}$  ( $C$ ),
- ③ choose higher recruiting intensity ( $A$ ),
- ④ set higher wages ( $B$ ).

$$dh/h = dp/p \cdot (A + B + C) \cdot term$$

Link to vacancy yields? Business cycles? Data in general?

- More productive firms hire less productive workers. Why?
  - ① Given  $p$  output linear  $p \cdot x$ .
  - ② No DRS in # of workers (skills).
  - ③ If 1 firm hires 1 worker, positive correlation between  $p$  and  $x$ .
  - ④ Like in models with complementarity between skills of workers and managers (Kapička, Slavík, 202?).
  - ⑤ Data?
- Double wage offer indeterminacy. Troublesome for comparison with data. Introduce risk aversion?



# Calibrated Model Questions

- ① What exactly is it that one can answer with a quantitative model but not with data only?
  - ① Decomposition? Really?
  - ② Counterfactual policy analysis.
  - ③ Policy analysis.
- ② Calibration of dist. of  $p$  and  $x$ .
  - ① If  $x$  were worker characteristics, get dist. of  $p$  as residuals from Mincerian type regression.
  - ② But it is not. What is  $x$ ?
  - ③ Perhaps, controlling for both worker and firm characteristics, one gets the dist. of  $x$ ?

# Conclusions

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- Nice paper, empirical part and model interesting.
- Link of model/data in the quant. model needs some work.
- Sharper punchline?