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And in the long run all discrimination is gone?

The impact of competition and vacancy times on discrimination in rental housing markets

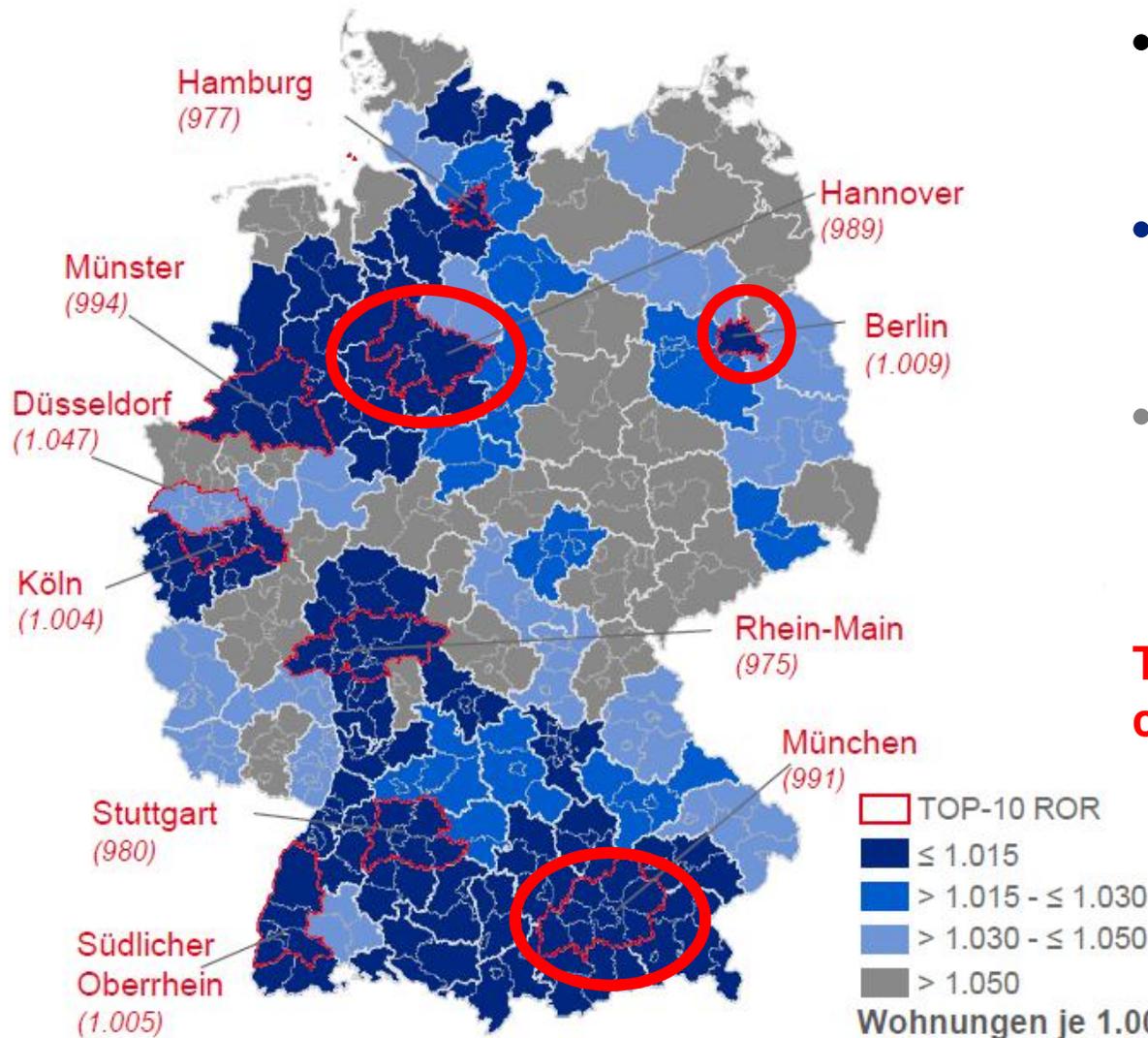
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Motivation: Large Variation in Housing Markets

Relation Angebot-Nachfrage: Wohnungen je 1.000 Haushalte* 2013



- Adequate markets: vacancy rates of ~ 3%
- Tight markets with demand surplus
- Relaxed markets with supply surplus

Tested in former e-mail correspondence tests

Source: prognos 2016, based on Statistisches Bundesamt 2015
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Motivation & Research Questions

- Dozens of field experiments document, but do not explain discrimination in housing markets (Bertrand/Duflo 2016)
 - Nearly all experiments focused on specific sites: (Few) cities with very tight housing markets
 - Knowledge on the effects of market conditions is scarce
 - Little is known on the external validity (Shadish et al. 2002)
-

RQs:

- Does the level of discrimination vary w/ market conditions?
 - Relation of supply & demand
 - Kind of supplier (private or corporate)
- Are field experiments w/ typical sampling strategies wrong on the level (or nature of) discrimination?

Mechanisms: Three Natures of Discrimination

1. Tasted-based discrimination (Becker 1971): Avoidance of contact with minorities even if this lowers economic profits

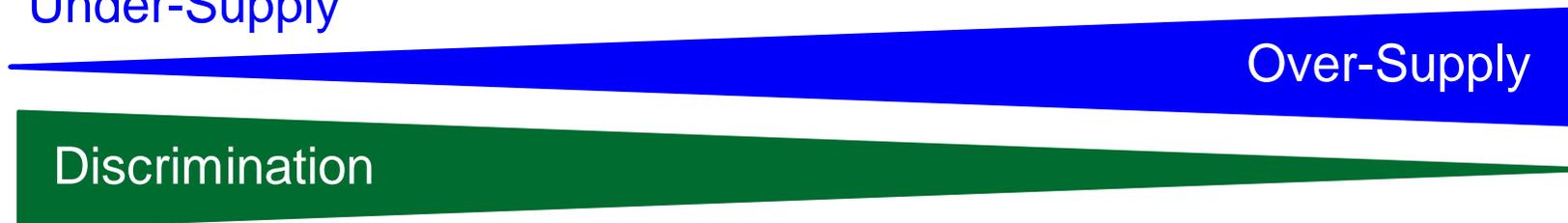
2. Economic Discrimination to increase profits
 - Statistical discrimination (Arrow 1971; Phelps 1972): Ethnicity serves as a proxy for e.g. ability to pay rents
 - Monopolistic/price discrimination: Actors, especially companies, try to get higher rents out of existing discrimination in the marketplace

3. Implicit Discrimination (e.g. Bertrand et al. 2005): Unintentional discrimination outside of actor's awareness
 - Probably impacts economic behaviour in case of subtle, complex & ambiguous tasks (e.g. when using quick heuristics; Bertrand/Mullainathan 2004)

Effects of Market Conditions

- Less discrimination in less housing markets w/ over-supply?
 - Over-supply intensifies competition for (suitable) renters
 - Costs of discrimination may be higher in case of over-supply
- Or similar levels of discrimination in all markets?
 - Actors might act unintentional
 - (Search) costs might be too low anyway to hamper discrimination

Under-Supply



Effects of Different Suppliers

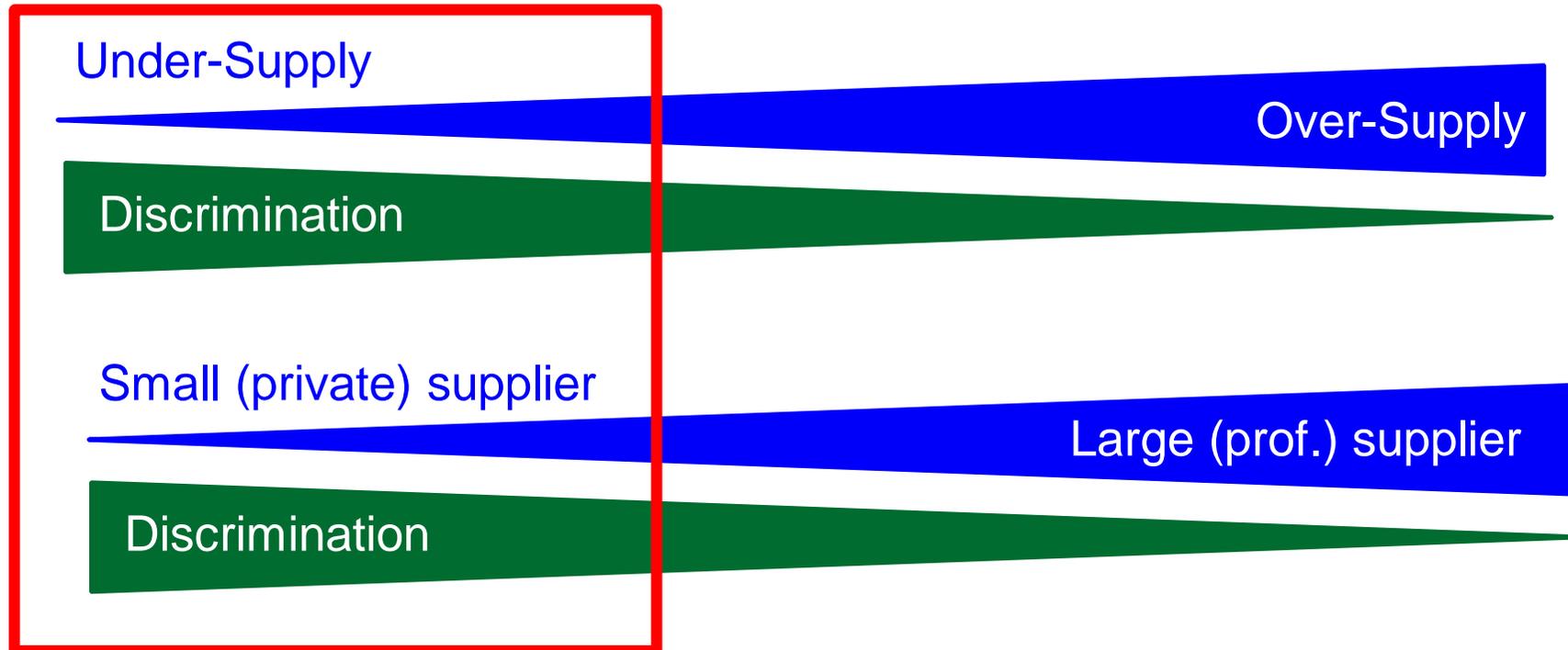
- Corporate agencies discriminate less?
 - Distastes utilize less (less contact with renters)
 - They are less affected by rental debts
 - They are more likely monitored and sanctioned for discrimination
- The larger the agency, the less discrimination?
 - Larger agencies have more market power to discriminate on tastes
 - But larger agencies probably also...
 - ... grew only large because of less taste-based discrimination
 - ... use more standardized procedures
 - ... have better possibilities to tailor minorities to owners w/o tastes

Small (private) supplier

Large (prof.) supplier

Discrimination

Effects of Typical Sampling Strategies



Design of Our Field Experiment

- Random sample of 5,000 rental apartments (2-4 rooms) advertised on a common online platform
 - Sampling of 500 advertisements per day
 - Sampling w/o replacement: each supplier is tested only once
 - Two 5-day sampling periods in May and December 2015
- Within-design: each supplier gets one inquiry by a Turkish (T) and one inquiry by a German (G) applicant
 - Time difference of about 1 hour, rotating order (G / T first)
 - Additionally variation of several applicant characteristics to test for the „nature“ of discrimination
- Experiments all over Germany
- Today only results on West-Germany ($N = 3,406$)

Sample Inquiry

Dear Ms./Mr.,

I am highly interested in the advertised apartment. My name is *Cem Güleryüz* and I am *permanently employed* as an *electrician*. I am looking for an apartment for *me and my family*. I would be very grateful if you could offer me a *showing and information on similar offers in the neighborhood*.

Kind regards,

Cem Güleryüz

(Translated version; the variable dimensions are in green & italics)

Surplus of Our Data

- Combination w/ market data (spell data)
 - Information on *all* advertisements (~1 Mio) on daily basis for nearly one year (March 2015 – Febr. 2016)
 - Information on size of supplier (number of advertisements online)
 - Further information: e.g. time interval advertisement is online

| ID | rooms | price | 3003 | 3103 | 3003 | 3103 | 0104 |
|----|-------|-------|------|------|------|------|------|
| 1 | 2 | 240 | 0 | 0 | 1 | 1 | 0 |
| 2 | 4 | 390 | 1 | 1 | 1 | 1 | 1 |

- Context information on different regional levels (“Landkreise” and RORs)
 - Geocoding of addresses via Google Maps API
 - Indicators for market situation (e.g. vacancy rates)
 - Controls: % foreigners, % unemployed, population density, migration balance, GNP, (vacancy rate), (supplier)

Results: Discrimination Rates

- Observed response patterns ($N = 3,406$ apartments)

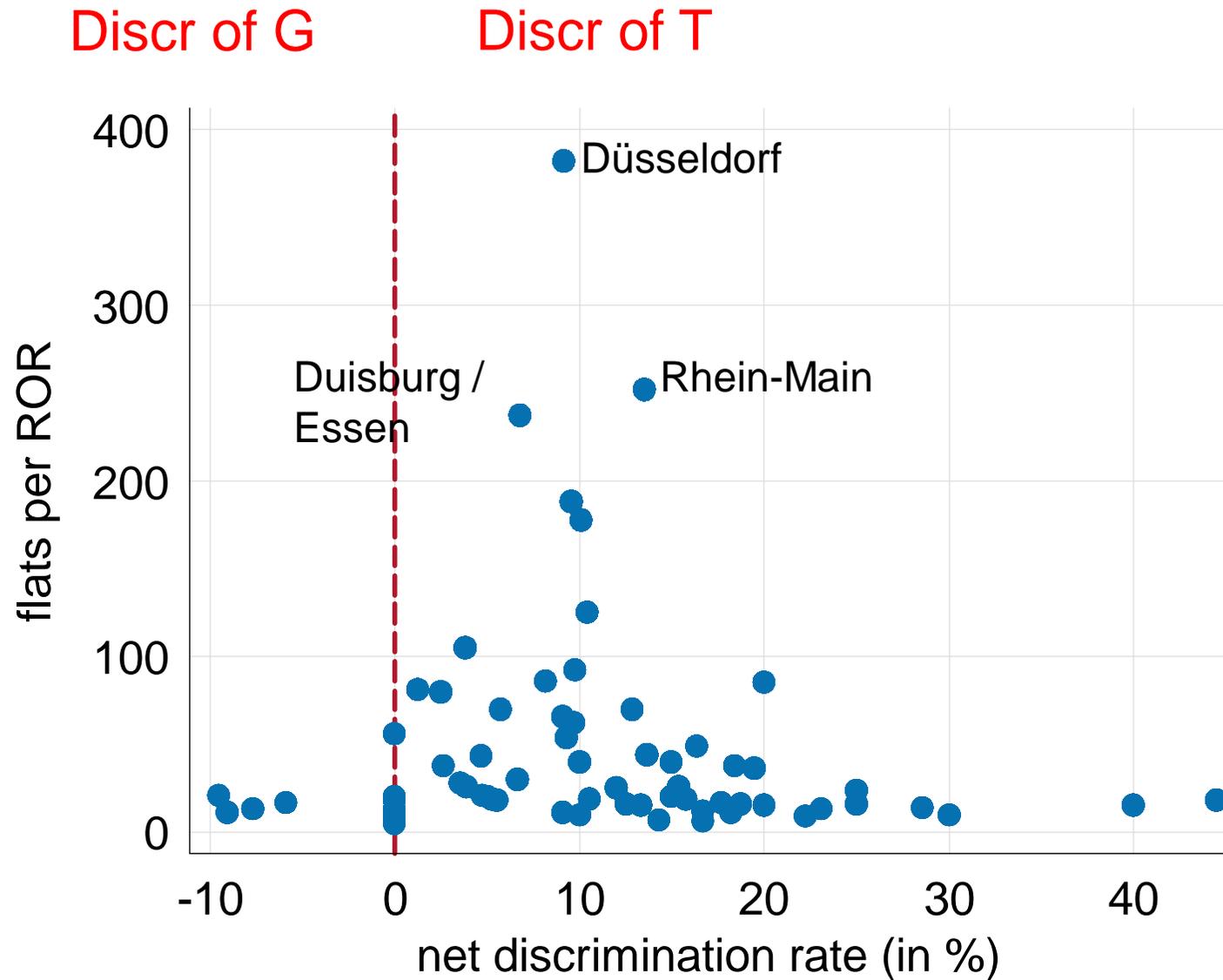
| | | German Applicant (G) | |
|-----------------------|-------------|----------------------|------------------|
| | | No response | Response |
| Turkish Applicant (T) | No response | 1,139 (33.4%) | 472 (13.9%) |
| | Response | 142 (4.2%) | 1,635 (48.6%) |

Discrimination against T

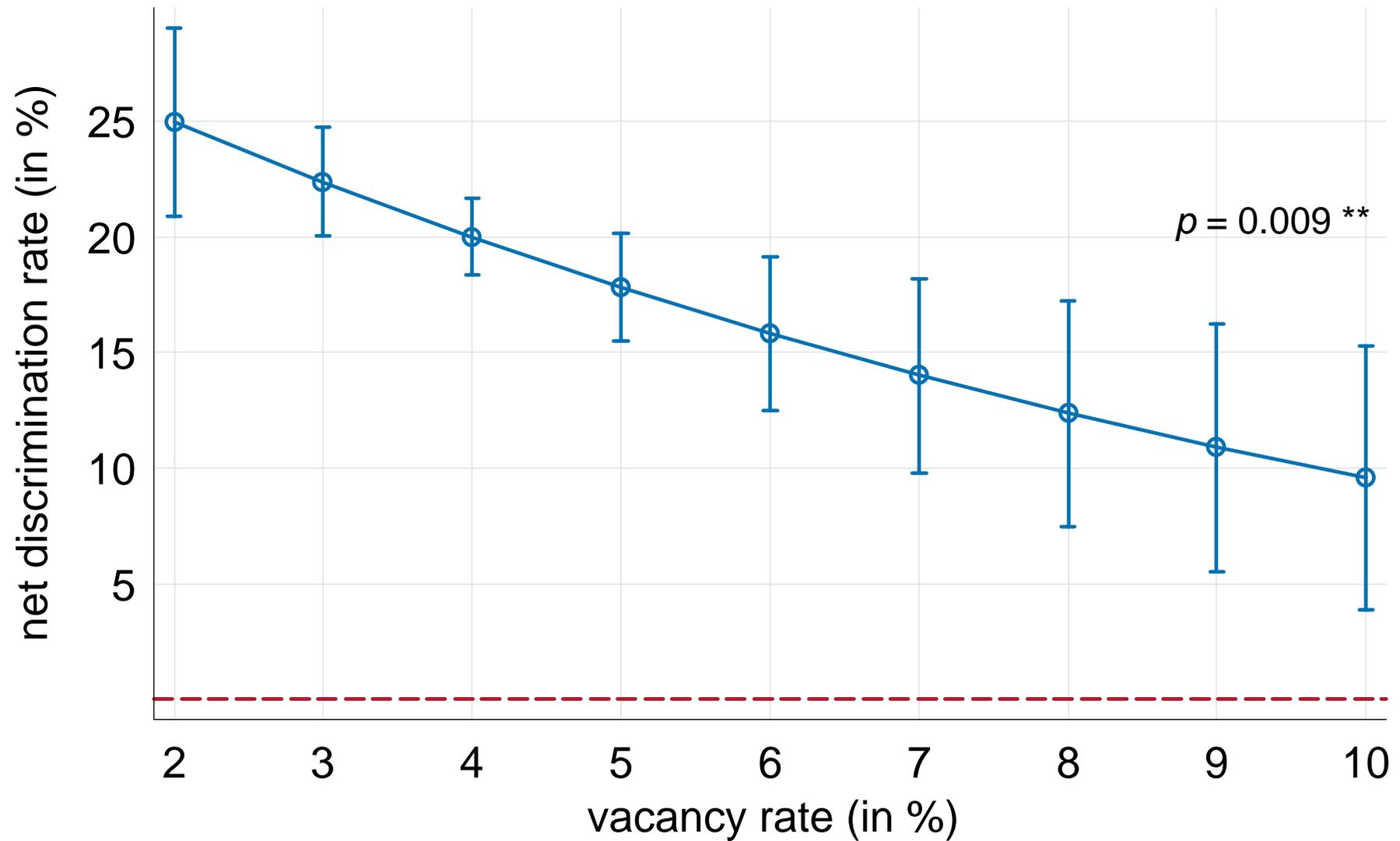
Discrimination against G

- Net discrimination rate: $(472 - 142) / \text{all cases} = 9.7\%$
- Without considering cases w/ both no response: 14.6%

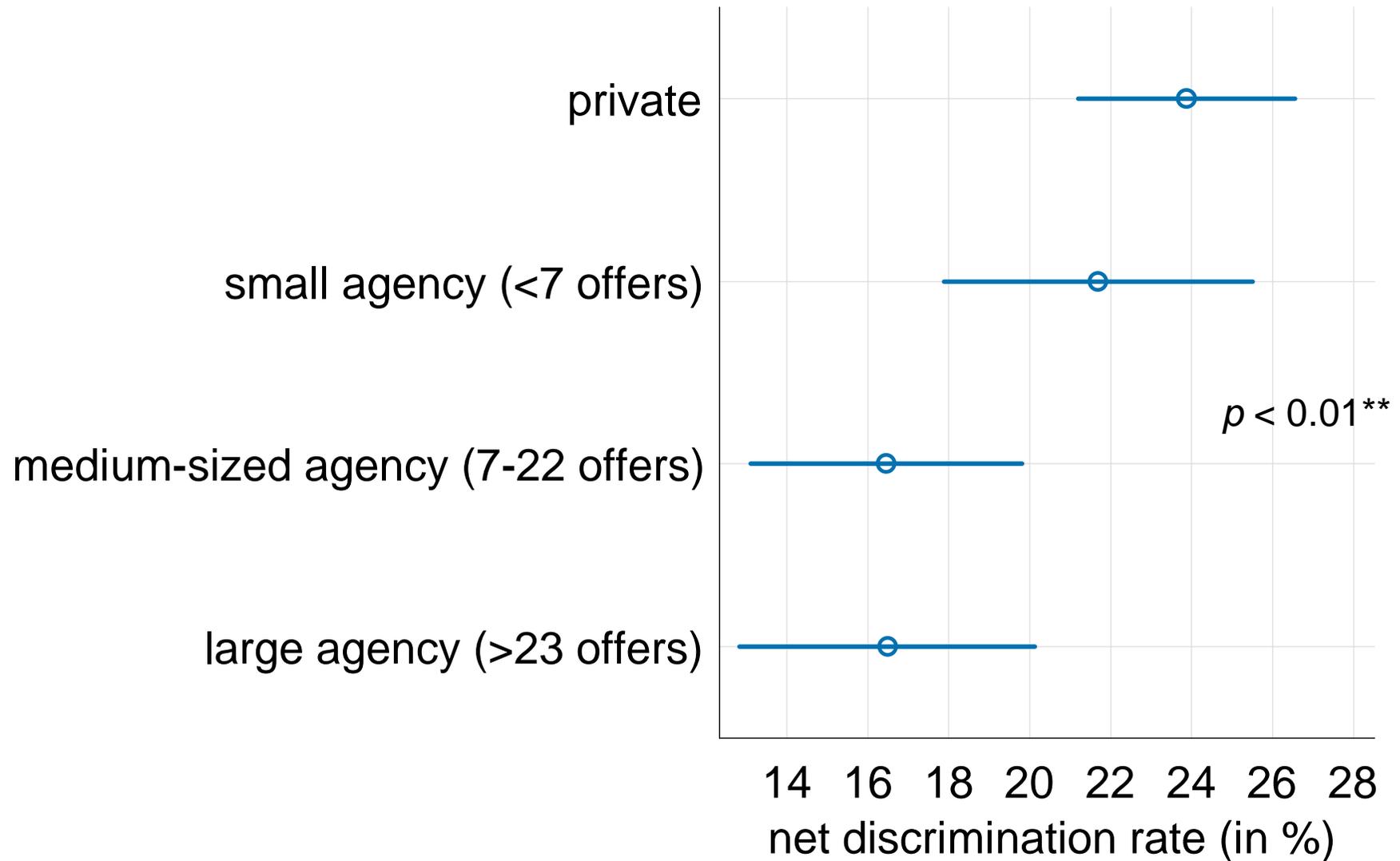
Huge Variation Across Regional Units (RORs)



More Supply → Less Discrimination?



Larger & Corporate Agencies → Less Discrimination?



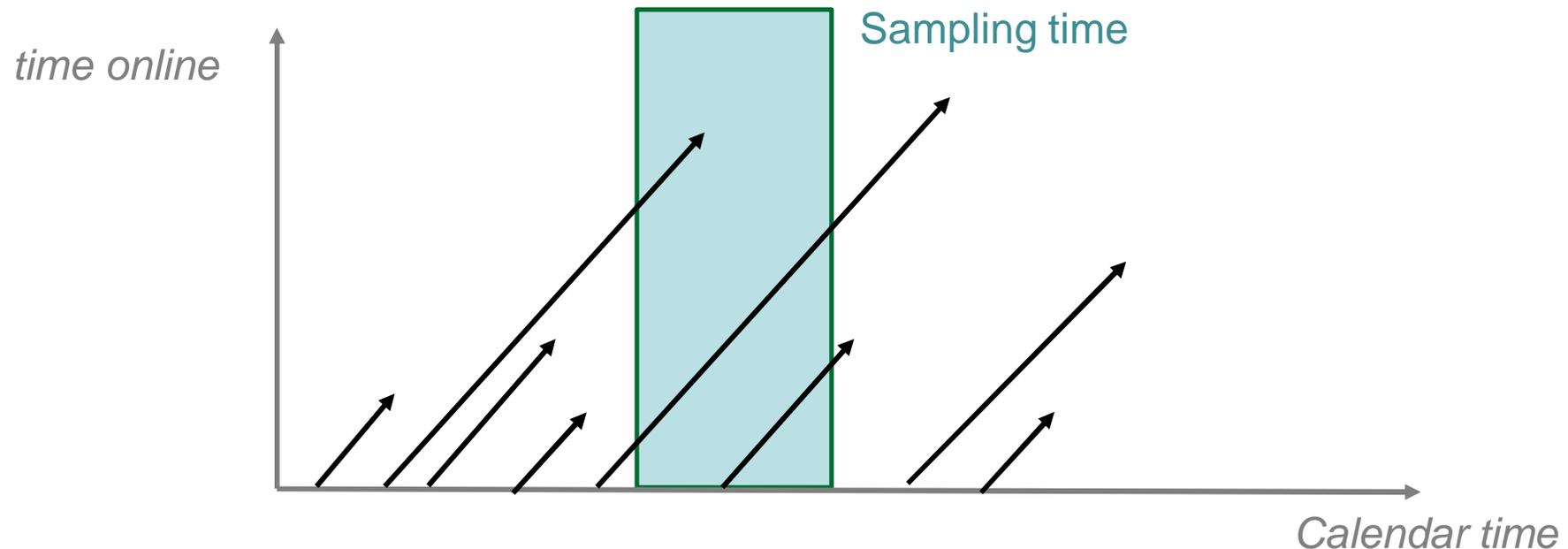
Add-On:

And in the long run all discrimination is gone?

Do Results Suffer from a “Length-Bias”?

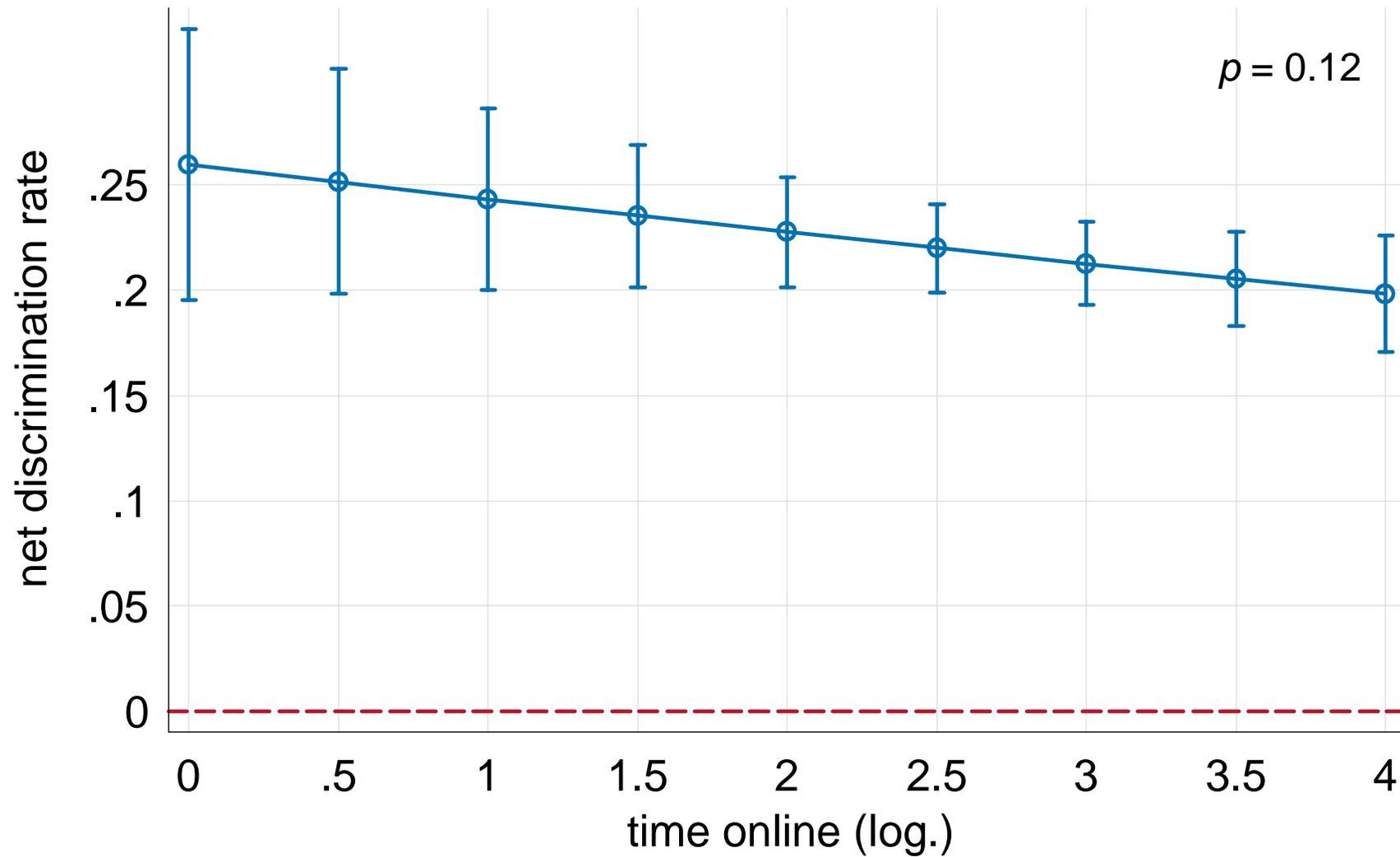
Possible Length Bias

- We use a typical „point sampling“: the sampling frame consist of all apartments advertised during a short time interval
 - Over-representing apartments w/ long search intervals



- Direction of bias:
 - Overestimation of discrim.? (More discrimination → longer search)
 - Underestimation of discrim.? (Longer search → less discrimination)

Length-Bias: First Results



Summary

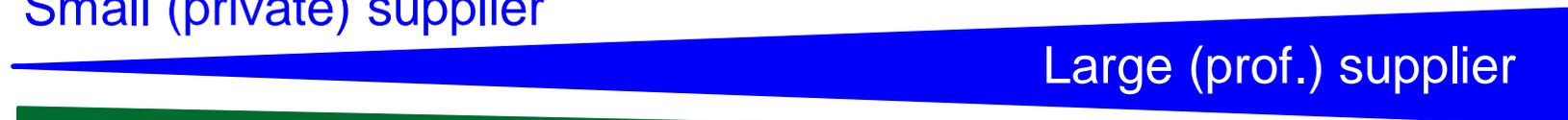
- Market conditions show small, but substantial effects

Under-Supply



Discrimination

Small (private) supplier



Discrimination

- There is hardly any evidence for a length-bias
 - Adds advertised for a longer time show similar discrimination rates than offers that just appeared on the market

Discussion & Outlook

- Market conditions might be confounded w/ tastes?
 - Stronger attitudes against foreigners in regions w/ over-supply
 - Effects of market conditions might therefore be biased
- Nonetheless, one has to expect a (slight) increase of discrimination in German housing markets
 - There are more and more tight markets
 - Law reform (“Bestellerprinzip”) leads to more private suppliers
- We work on additional analyses on the nature of discrimination: Does in particular taste-based discrimination decline in markets w/ too much supply?
 - First results suggest little impact of market conditions

References

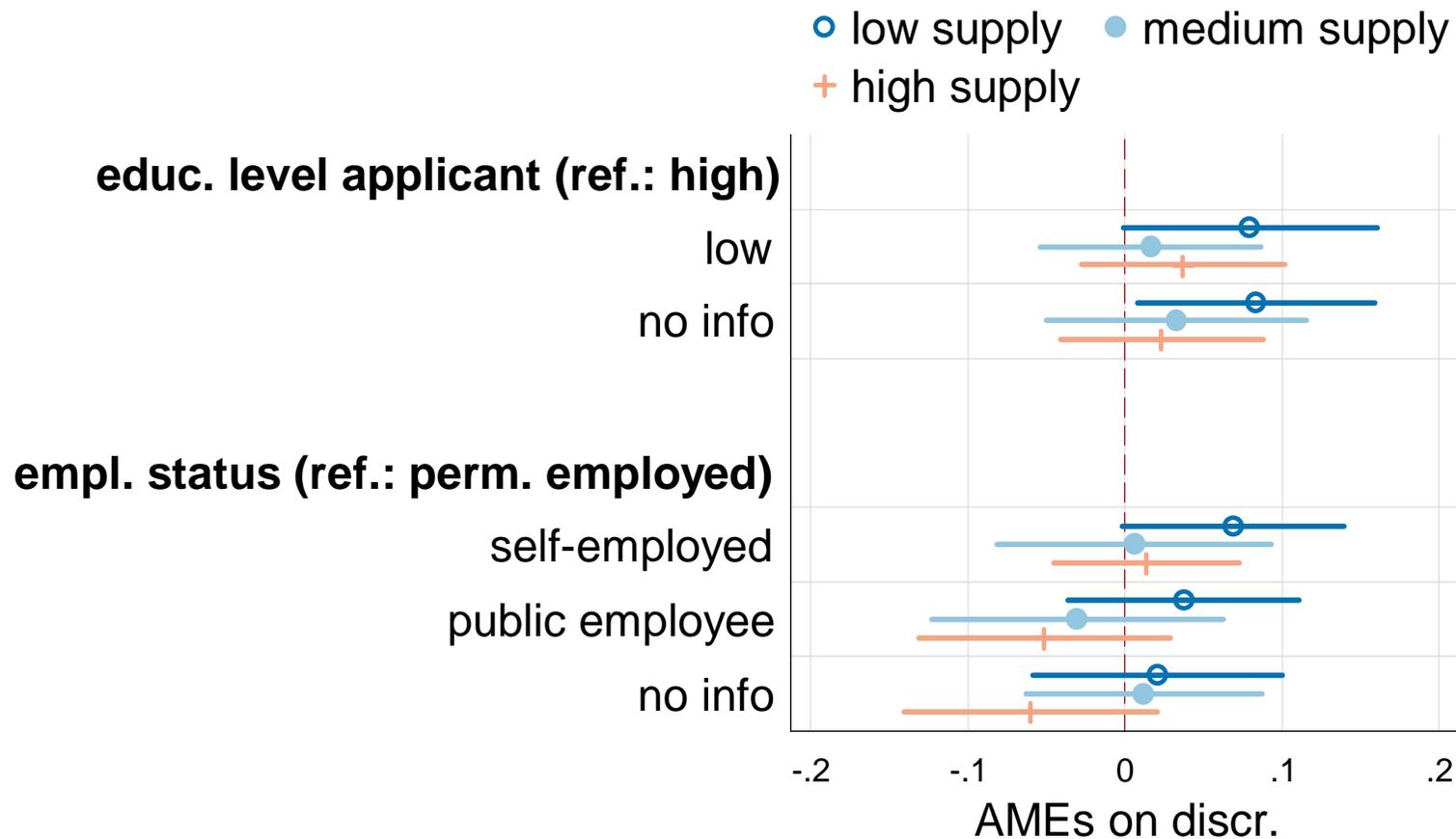
- Allport, Gordon W. 1954. *The Nature of Prejudice*. Reading: Addison Wesley.
- Arrow, K.J. , 1971. *The Theory of Discrimination*. Princeton University. Industrial Re- lations Section Working Paper No. 30A.
- Auspurg, Katrin, Thomas Hinz & Laura Schmid. 2017. Contexts and conditions of ethnic discrimination: Evidence from a field experiment in a German housing market. *Journal of Housing Economics* 35: 26-36.
- Becker, Gary S. 1971. *The Economics of Discrimination*. The University of Chicago Press, Chicago.
- Bertrand, Marianne, Dolly Chugh & Sendhil Mullainathan. 2005. *Implicit Discrimination*. *American Economic Review*, 95(2): 94-98.
- Bertrand, Marianne & Esther Duflo, 2016. *Field Experiments on Discrimination*. NBER Working Papers 2/2014, National Bureau of Economic Research, Inc.
- Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination. *American Economic Review*, 94(4), 991-1013.
- Bosch, Mariano, Angeles M. Carnero & Lída Farré. 2015. Rental Housing Discrimination and the Persistence of Ethnic Enclaves. *SERIEs: Journal of the Spanish Economic Association* 6: 129-152.
- Emily, A., & Lakisha, G. M. E. T. (2004). Jamal? A field experiment on labor market discrimination. *The American Economic Review*, 94(4), 991-1013.
- Hanson, Andrew & Zackary Hawley. 2014. Where does racial discrimination occur? An experimental analysis across neighborhood and housing unit characteristics. *Regional Science and Urban Economics* 44: 94-106.
- Hatton, Timothy J. 2014. 'The Economics of International Migration: A Short History of the Debate'. *Labour Economics* 30: 43–50.
- Jann, Ben & Simon Seiler 2013. *Ethnische Diskriminierung auf dem Schweizer Wohnungsmarkt*. Presentation at the Rational Choice Seminar. VIU, Venice.
- Phelps, E.S. , 1972. The statistical theory of racism and sexism. *Am. Econ. Rev.* 62: 659-661.
- Riach, Peter & Judith Rich. 2004. Fishing for Discrimination. *Review of Social Economy* 62(4): 465-486.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Cengage learning.
- Van der Brecht, Koen, Ad Coenen & Bart Van de Putte. 2015. The Not-in-My-Property Syndrome: The Occurrence of Ethnic Discrimination in the Rental Housing Market in Belgium. *Journal of Ethnic and Migration Studies* 41(1): 158-175.
- Wagner, Ulrich, Rolf van Dick, Thomas F. Pettigrew, and Oliver Christ. 2003. Ethnic Prejudice in East and West Germany: The Explanatory Power of Intergroup Contact. *Group Processes and Intergroup Relations* 6(1): 22–36.

State of Research

- Only very few experiments on housing markets studied several sites and find inconclusive research
 - Europe: Jann/Seiler (2013)
 - US: Hanson/Hawley (2014)
- There is only few research on external validity of field exp.
 - E.g., research on length bias is completely missing
- We add to this research by
 - Running experiments all over Germany at different time points
 - Combining the experiments w/ „big data“ on the market

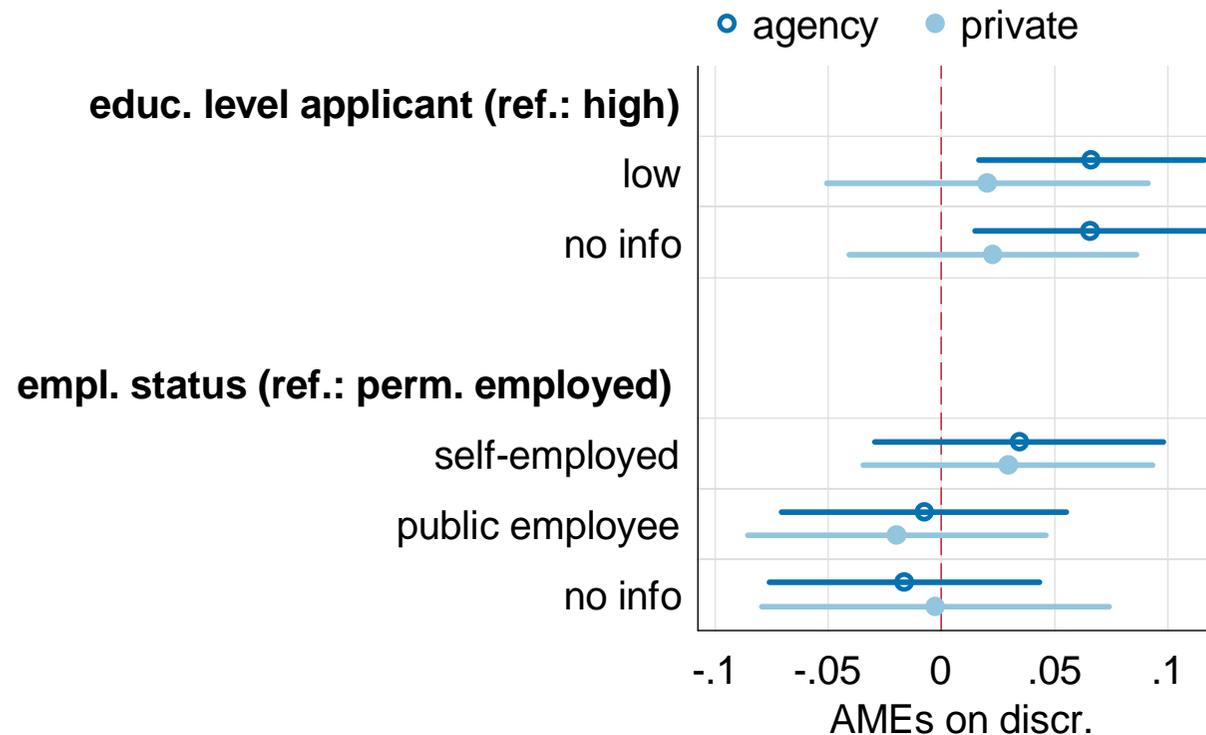
Appendix: More Supply, Less Statistical Discrimination?

- Effects of applicants' characteristics on net discr. (AMEs)



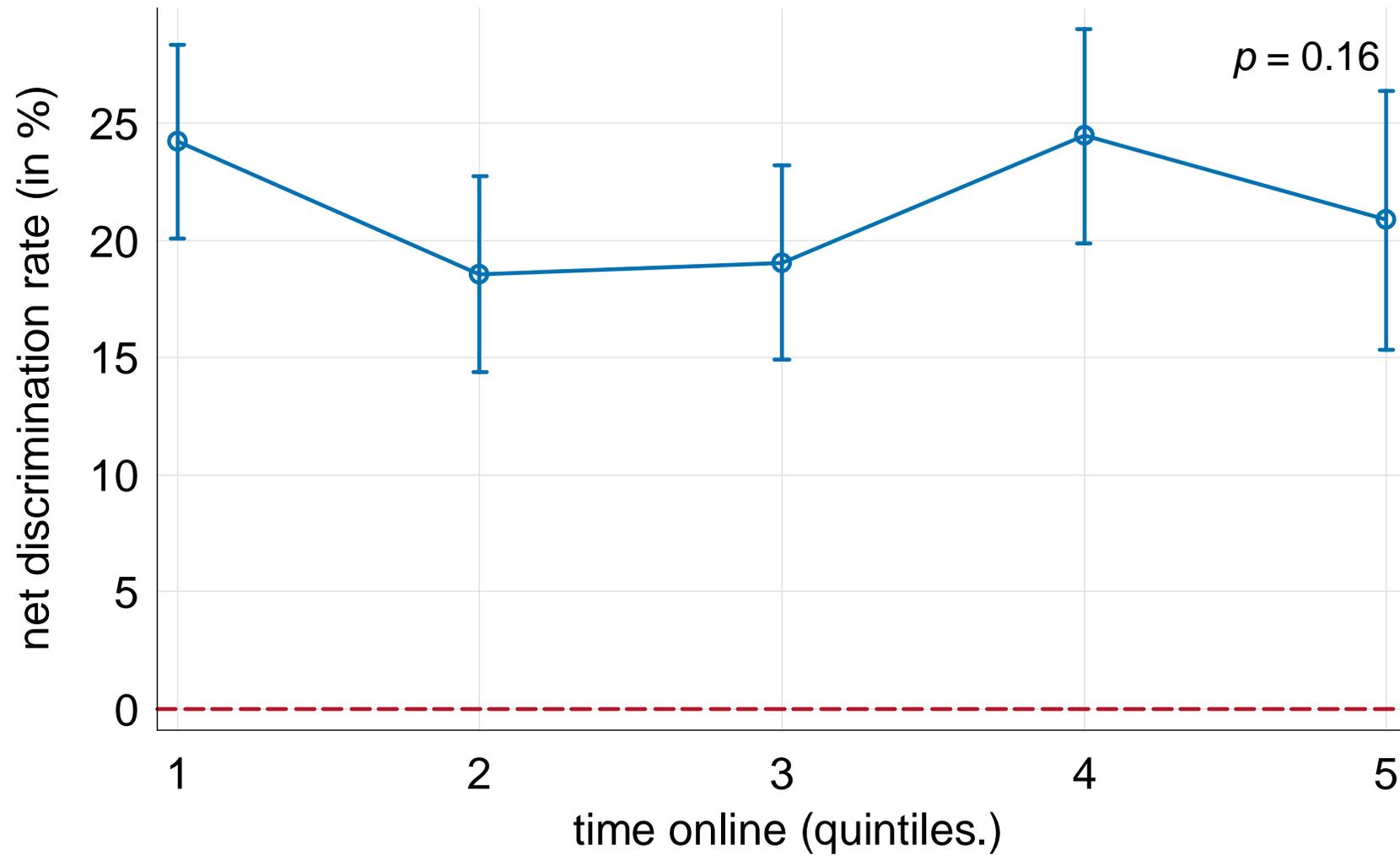
Agencies → Less Statistical Discr.?

- Effects of applicants' characteristics on net discr. (AMEs), private landlords and agencies



- Also no sign. differences by size of agency (only small tendency: larger agencies in general less picky)

Length-Bias: First Results



Length Bias: Descriptive Statistics

| | Market (all time) | Market (exp time) | Experiment |
|----------------------|-------------------|-------------------|------------|
| Duration | | | |
| Mean | 23.89 | 73.59 | 83.58 |
| SD | 31.53 | 69.38 | 75.57 |
| Median | 13.00 | 53.00 | 60.00 |
| Sqm | | | |
| Mean | 73.63 | 75.54 | 81.37 |
| SD | 21.62 | 22.62 | 24.24 |
| Median | 70.00 | 70.76 | 78.00 |
| Price per sqm | | | |
| Mean | 7.57 | 7.18 | 7.56 |
| SD | 2.69 | 2.65 | 2.68 |
| Median | 6.93 | 6.42 | 6.96 |
| Private | | | |
| Mean | 23.19 | 16.11 | 46.18 |
| Observations | 668,483 | 196,959 | 4,106 |

More Supply → Less Discrimination?

