

Discussion of “Flexible Work Arrangements and Earnings Uncertainty: Evidence from Job Vacancy Data”

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Summary of the paper

Provide new evidence on prevalence and nature of **schedule flexibility**

- Timing of work not fixed ex ante and to be agreed between parties ex post
1. Develop **supervised machine learning algorithm** based on vacancy text to **classify** 46 million online job vacancies from Burning Glass Technologies in UK in 2014-2019
 - Job characteristics: schedule flexibility, salaried, permanent, full-time
 2. Document **prevalence**, **evolution** and **nature** of schedule flexibility
 - 30% of vacancies feature schedule flexibility, of which half non salaried (risky)
 - Share of flexible jobs doubled since 2014, due to more intensive use by flexible employers
 - Risky-flexible jobs concentrated in lower-skill occupations and lower-paying firms
 3. Derive novel **theoretical predictions** on relationship between **market structure** and **provision of costly/profitable amenities/disamenities**
 4. **Test** model predictions
 - Safe (Risky) flexible jobs more prevalent in less (more) concentrated markets
 - Safe (Risky) flexibility is costly amenity (profitable disamenity)
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A lot to praise in this paper

- Fruitful combination of different methodologies
 - Machine learning classification
 - Descriptive and regression analysis
 - Theory
 - Clever and creative use of vacancy data, in particular vacancy text
 - New descriptive evidence on prevalence of conceptually defined type of work arrangement
 - Insightful, yet simple theoretical model delivering novel and testable predictions
 - Simple framework to think about costly/profitable amenities/disamenities
 - Informative complementary data analysis
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Research question and contribution

- Research question
 - Who benefits from **schedule flexibility**?
 - Could be useful to spell it out more directly in the paper

 - Contribution
 1. **Methodological**: develop methodology to characterize job features based on vacancy text and apply it to schedule flexibility
 2. **Descriptive**: new evidence on prevalence, evolution and distribution of schedule flexibility
 3. **Theoretical**: conceptualization of amenity provision under monopsony
 4. **Empirical**: test predictions of model
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Machine learning algorithm

- Paper has potential to become useful reference for similar classifications of other job features
 - Could be useful to devote more time to explain technical terminology and various steps, possibly in appendix
 - Some clarifications
 - Are your annotations for flexible, permanent, full time and salaried only? Or do you annotate also complement feature, e.g. both 'flexible' and 'non flexible'?
 - Former likely noisier, assess extent of misclassification of complement job feature
 - How do you measure accuracy of annotations?
 - Incidence matrix has 5000 rows = terms of vocabulary. Examples of those?
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Descriptive analysis

- Decomposition of change in flexible vacancy share is great!
 - Could be interesting to report it by safe/risky flexibility
 - Wage regressions
 - How are wages measured? Hourly, daily, yearly? How do you deal with wage ranges?
 - Why not measuring wages in log?
 - Share of flexible vacancies along wage distribution
 - Interesting decomposition of wage gradient into part explained by firm and local labor market characteristics, and unexplained part
 - Not clear why baseline estimates can turn negative (see Panel C of Figure 2)
 - Comparison of safe and risky wage distribution made complicated by change in 'denominator' (total number of vacancies differs across graphs)
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Theoretical model

- Theoretical model makes implicit assumption of efficient bargaining
 - Parties decide to set $f^* > 0$ as long as its net impact on match value is positive, i.e. each side benefits from f even if direct impact on their utility is negative
 - How plausible is this assumption in context of schedule flexibility, especially when it is a costly amenity?
 - Not entirely clear to me what is the advantage of introducing within-job-feature relative productivity in Figure 4
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Empirical application of model predictions

- Nice and interesting exercise, but probably least convincing part of the paper
 - Some questions and suggestions
 - One central tenet of your model is that concentration limits workers' outside options. Can you show that this is the case in your data?
 - On the fixed-effect regressions: how much variation in concentration is there within a local labor market over time and where is it coming from? I would have assumed concentration to be a rather sticky characteristic of markets
 - On the Bartik-style instrument: how is this constructed and on which sample? Does national hiring in firm j exclude hiring in market ' c, o '?
 - If local labor markets are mismeasured and local shocks are geographically correlated, your national shock might be driven by the local shock in neighboring geographies. How about constructing 'doughnut' national shock?
 - Complement regression analysis with graphical one (e.g. binned scatters)
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