# PhD Labor IV: Imperfect Competition in the Labor Market

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## 1 Introduction

Hi and welcome to Labor IV! This is an entire course on imperfect competition in the labor market, an increasingly popular (and always important) topic. The course will blend empirical work, theory, macro, and labor. Half will be taught by Mitch Downey, half by Horng Chern Wong. There will be overlap (as well as some overlap with Labor II: Labor Demand), but the material will be distinct. Students will walk away from the course with the background necessary to conduct original empirical research on imperfect competition.

### 2 Lecture dates

Consistent with SU policy, all lectures will be in-person. They will not be recorded and will not be hybrid. Students are expected to come to lectures **on time** and participate in the discussion. This is an interactive course – Let's make it fun!

Date	Who	Room	Topic
Wed, 5 April, 9:15-12	Mitch	D263	Perfect competition
Wed, 12 April, 9:15-12	Mitch	D263	Monopsony
Wed, 19 April, 9:15-12	Mitch	D263	Rent sharing
Wed, 26 April, 9:15-12	Mitch	D263	TBD
Wed, 3 May, 9-12	Horng	D255	Firms & Wages: Data, Tools, Applications
Wed, 10 May, 9-12 $$	Horng	D307	Theories based on search frictions
Wed, 17 May, $9-12$	Horng	D255	Theories based on Job differentiation/firm size
Wed, 24 May, 9-12 $$	Horng	D263	A Labor, IO, and Macroeconomist walks into a bar

For lecture 4, students will choose between: Gig economy, non-wage amenities, race, production functions.

# 3 Assignments

Questions about these assignments come up. That's ok. We try to be specific and clear, but maybe something we write here is confusing. In that case, **please email us as soon as possible and we will be happy to explain what we meant**.

Your grade will be based on the following four "assignments":

- 1. (20%) Class participation. This includes asking questions and participating in discussion, writing the paper reports in weeks 1-4 (discussed below), and your in-class presentation in weeks 5-8 (discussed below).
- 2. (20%) A modern economics skill (due the day of Lecture 8). Being a successful economist is entirely about combining creativity and skills. The paper proposal (discussed below) is about practicing creativity. This is about practicing skills. You've been working on many important skills for a long time (running regressions, applied microeconometrics, etc.). But many "modern" skills are also extremely valuable, and you probably haven't practiced them as much. You will choose one of the following skills, actually implement it (others can help you, but ultimately, the program must be run from your computer), and write it up briefly. Your write-up should describe what you did and some examples of what you might use this skill for in your future research. You should talk to us in the first couple of weeks of the course to let us know what you have in mind and make sure it fits with the purpose of the assignment. If you have another skill in mind that you want to practice, talk to us and we can probably add it to the list. Skills to choose from: i) web-scraping data, ii) machine learning prediction, iii) text analysis, or iv) calibrate a simple model. If you want to practice one of these skills but can't find a good application for doing so, reach out to us.
- 3. (20%) Characterizing a labor market imperfection (due the day of Lecture 4). Labor economists' goal is to understand the real world. Rigorous analysis is vital for that, but often the best ideas are launched from the real world. The perfectly competitive model of the labor market is clear nonsense, and many violations of key assumptions have been documented and studied, but some haven't. You will talk to one of your non-academic friends or family members who holds a real grown-up job, and document one thing about their actual real world work experience which is inconsistent with the perfectly competitive model. If necessary, this can be something that is already well-understood,<sup>1</sup> but ideally it's a new idea. This can help you come up with interesting research questions, identification strategies, or important revisions to existing models. You'll write up a real world explanation of how this matters for your friend's actual work life, as well as framing it within the language and ideas of economics. You don't have to write a formal model (you can if you want), but you need to connect it very clearly to the ideas, issues, and literatures in formal economics models. We expect this to be roughly one page long.
- 4. (40%) **Paper proposal** (due exactly one week (7 days) after the 8<sup>th</sup> lecture). Write a paper proposal. Thus must include include motivation and framing, but doesn't need an exhaustive literature review. It is more important to be very specific and clear about the question and why it's important or interesting; what assumptions you'll need to rely on and how those could be tested; what data you'll need, where it is, and how you might get it; what you hope to find and what you expect to find (hopefully those are the same); and as exhaustive as possible a summary of criticisms (alternative interpretations of your finding, identification criticisms, and objections to your motivation and question) and how you'll respond to those. We want you to be thinking hard about what you're doing and how you'll justify it. Sometimes it will be possible for you to test some of your assumptions and even get some preliminary results, and if it is then we encourage you to do that for a proposal.

<sup>&</sup>lt;sup>1</sup>Examples: "I've spent all week interviewing candidates for our new opening and got no actual work done" = Hiring costs are non-negligible; or "We hired this person we thought would be really good, but it turns out that they can't work well in groups and so they don't end up performing well" = Unobservable skills; or "It's been a really productive week because we hired someone and they taught me a bunch of new processes to improve the way I've been doing things" = Human capital spillovers (Nix, 2020)\*.

## 4 Paper Reports and Presentations

#### 4.1 Reports: Weeks 1-4

For the four weeks where Mitch teaches:

- Choose one of the two required readings
  - Please do not do this for both
- Write a two paragraph summary (outlined below)
  - Please do not write more than two paragraphs
  - This should not be more than a page
- Write it directly into the body of the email and send it to Mitch
  - Please do not include it as an attachment
- Email it to Mitch at least 18 hours before the lecture
  - That is, by 15:00 the day before the lecture

I will actually read these and the lectures will draw upon what you write in your summaries, so please make sure to send them on time so I have time to digest all of them.

The <u>first paragraph</u> should summarize the paper and cover the research question, the motivation for why it's important, an overview of the methods used to answer the question and a bare-bones justification for any key assumptions, and the result.

The <u>second paragraph</u> should be your assessment of the paper. Is the question as important as the author claims? Is the research design reasonable and are necessary assumptions believable? Overall, what do you think of the paper? What objections do you have? Do you see any extensions? How (if at all) might this paper help you in your research?

These should obviously be very short. You should never spend more than a half hour on these paragraphs, so they don't need to be fancy or "professionally" written. They should be well thought out, clear, and insightful, but all of that work should be happening *every* time you read a paper (and you should still be reading and thinking about *both* papers each week, even the one you don't write about).

#### 4.2 Presentations: Weeks 5-8

During the weeks where Horng is teaching, two students will co-present one of the readings each lecture. Horng will provide more details about this as it gets closer.

#### 5 Class Schedule

Note: BOTH required readings must be read before class. The remainder (additional readings) is material that I will cover and discuss, to show other frontiers and help integrate the required reading into a broader literature. I do not expect you to read that material. It's listed here so you can look it up later if you like.

\*Denotes this was a job market paper.

<u>Week 1</u>. What's wrong with the perfectly competitive model? The perfectly competitive model is useful, I totally acknowledge that. But it's all that most people ever learn, and that seems silly. We'll talk about some specific predictions it makes and/or requires, and how they are wildly at odds with the data. All models are wrong, but does it matter, and can we do anything about it? We'll talk about some important policy issues where the perfectly competitive model has clear and specific implications, and we'll talk about why those are important. The rest of the course will be devoted to three major alternatives.

Required reading 1: Manning  $(2011)^2$ 

Required reading 2: Jäger and Heining (2019)\*

Additional readings:

*i*) Policy implications and reduced form evidence: Autor, Dorn, Hanson, and Song (2014), Beaudry, Green, and Sand (2012), Cederlöf (2021), Downey, Lind, and Shrader (2021), Dube, Manning, and Naidu (2019), Fuest, Peichl, and Siegloch (2018), Ginja, Karimi, and Xiao (2020), Isen (2013)\*, Suárez Serrato and Zidar (2016)

*ii*) Policy as a friction: Autor, Donohue, and Schwab (2006), Bertrand and Crépon (2020), Garicanoy, Lelargez, and Van Reenen (2016)

*iii*) Non-policy sources of frictions: Bassanini, Brunello, and Caroli (2017), Burks, Cowgill, Hoffman, and Housman (2015), Dube, Freeman, and Reich (2010), Kahn and Lange (2014)

<u>Week 2</u>. *Monopsony*. A really popular strand of research that everyone is talking about these days is monopsony. Just as a monopoly occurs when there is one seller of a product, a monopsony occurs when there is one buyer of labor. And just like monopolistic competition generalizes monopoly to when a finite set of sellers has power, monopsonistic competition generalizes monopsony to when a finite set of buyers has labor market power. We'll talk about how to think about it, how to estimate it, and where it comes from.

Required reading 1:

Required reading 2:

Additional readings:

i) Theoretical background: Boal and Ransom (1997), Manning (2006)

*ii*) Creating monopsony:

a) Government: Balasubramanian, Chang, Sakakibara, Sivadasan, and Starr (2020), Gary, Jensen, Olsson, Radu, Severgnini, and Sharp (2022), Johnson and Lipsitz (2020), Lipsitz and Starr (2020), Kim and Pei (2022), Naidu (2010)\*, Naidu, Nyarko, and Wang (2016), Naidu and Yuchtman (2013)

b) Firms: Krueger and Ashenfelter (2018), Gibson (2022)

c) Naturally occurring: Datta (2022)\*, Lamadon, Mogstad, and Setzler (2020), Naidu and Posner (2022), Jäger, Roth, Roussille, and Schoefer (2022)

*iii*) Monopsony estimates:

a) Wage changes: Azar, Berry, and Marinescu (2019), Berger, Herkenhoff, and Mongey (2019), Dube, Jacobs, Naidu, and Suri (2020), Manning (2006)

<sup>&</sup>lt;sup>2</sup>This is a Handbook chapter, and so it's part literature review, and part synthesis of many different strands of research and types of models. It is not an actual research paper, and so it won't help you learn how to write a research paper (which is our whole job). I'm sorry about that. Please read it anyway. This is the *only* time I will ever ask you to read a paper/chapter like this. I wish I wasn't asking it of you, but the chapter really is the perfect overview of the course. The rest of the course will be digging in deeper than Manning does and looking at high-quality rigorous research (mostly written since his review) that explores and expands on these ideas. So you'll get much more out of the deep-dives into the other papers on the syllabus, but this Manning chapter is still an indispensable overview of all the ideas and the connections between them. Be advised: It's a bit painful to read sometimes because he loves assertions and doesn't particularly like definitions or derivations; I'm sorry about that, but I still need you to struggle with it and read it.

b) Departures: Autor, Dube, and McGrew (2023), Bassier, Dube, and Naidu (2020), Dube, Giuliano, and Leonard (2019), Dube, Naidu, and Reich (2022), Langella and Manning (2021), Sokolova and Sorensen (2021)

c) Concentration: Araki, Bassanini, Green, and Marcolin (2022), Azar, Marinescu, and Steinbaum (2020), Nimczik (2020), Marinescu, Ouss, and Pape (2021)

d) Other approaches: Dube, Manning, and Naidu (2019), Kroft, Luo, Mogstad, and Setzler (2020), Yeh, Macaluso, and Hershbein (2022)

<u>Week 3</u>. *Rent sharing*. When firms earn economic profits, they can sometimes share those profits with workers. This is called rent sharing. We'll talk about estimates, and why it matters.

Required reading 1: Kline, Petkova, Williams, and Zidar (2019)

Required reading 2: Carlsson, Messina, and Skans (2016)

Additional readings:

i) Rent-sharing estimates: Abowd and Lemieux (1993), Card, Devicienti, and Maida (2014), Card, Cardoso, Heining, and Kline (2018), Carlsson, Messina, and Skans (2021), Lamadon, Mogstad, and Setzler (2020), Saez, Schoefer, and Seim (2019)

*ii*) Interpretation: Black and Strahan (2001), Card, Cardoso, and Kline (2016), Jäger, Schoefer, Young, and Zweimüller (2020), Juhn, McCue, Monti, and Pierce (2018), Naidu and Yuchtman (2018)

# References

- Abowd, J. A. and T. Lemieux (1993). The effects of product market competition on collective bargaining agreements: The case of foreign competition in canada. *The Quarterly Journal of Economics* 108(4), 983–1014.
- Araki, S., A. Bassanini, A. Green, and L. Marcolin (2022). Monopsony and concentration in the labour market.
- Autor, D., A. Dube, and A. McGrew (2023). The unexpected compression: Competition at work in the low wage labor market. Technical report, National Bureau of Economic Research.
- Autor, D. H., J. J. Donohue, and S. J. Schwab (2006). The costs of wrongful-discharge laws. The Review of Economics and Statistics 88(2), 211–231.
- Autor, D. H., D. Dorn, G. H. Hanson, and J. Song (2014). Trade adjustment: Worker-level evidence<sup>\*</sup>. Quarterly Journal of Economics 129(4).
- Azar, J., S. Berry, and I. E. Marinescu (2019). Estimating labor market power. Available at SSRN 3456277.
- Azar, J., I. Marinescu, and M. Steinbaum (2020). Labor market concentration. Journal of Human Resources, 1218–9914R1.
- Balasubramanian, N., J. W. Chang, M. Sakakibara, J. Sivadasan, and E. Starr (2020). Locked in? the enforceability of covenants not to compete and the careers of high-tech workers. *Journal of Human Resources*, 1218–9931R1.
- Bassanini, A., G. Brunello, and E. Caroli (2017). Not in my community: social pressure and the geography of dismissals. *Journal of Labor Economics* 35(2), 429–483.
- Bassier, I., A. Dube, and S. Naidu (2020). Monopsony in movers: The elasticity of labor supply to firm wage policies. NBER Working Paper 27755.
- Beaudry, P., D. A. Green, and B. Sand (2012). Does industrial composition matter for wages? a test of search and bargaining theory. *Econometrica* 80(3), 1063–1104.
- Berger, D. W., K. F. Herkenhoff, and S. Mongey (2019). Labor market power. NBER Working Paper 25719.
- Bertrand, M. and B. Crépon (2020). Teaching labor laws: Evidence from a randomized control trial in south africa. *Working Paper*.
- Black, S. E. and P. E. Strahan (2001). The division of spoils: rent-sharing and discrimination in a regulated industry. *American Economic Review* 91(4), 814–831.
- Boal, W. M. and M. R. Ransom (1997). Monopsony in the labor market. *Journal of economic literature* 35(1), 86–112.
- Burks, S. V., B. Cowgill, M. Hoffman, and M. Housman (2015). The value of hiring through employee referrals. *The Quarterly Journal of Economics*, qjv010.
- Card, D., A. R. Cardoso, J. Heining, and P. Kline (2018). Firms and labor market inequality: Evidence and some theory. *Journal of Labor Economics* 36(S1), S13–S70.

- Card, D., A. R. Cardoso, and P. Kline (2016). Bargaining, sorting, and the gender wage gap: Quantifying the impact of firms on the relative pay of women. *The Quarterly Journal of Economics* 131(2), 633–686.
- Card, D., F. Devicienti, and A. Maida (2014). Rent-sharing, holdup, and wages: Evidence from matched panel data. *Review of Economic Studies* 81(1), 84–111.
- Carlsson, M., J. Messina, and O. N. Skans (2016). Wage adjustment and productivity shocks. The Economic Journal 126(595), 1739–1773.
- Carlsson, M., J. Messina, and O. N. Skans (2021). Firm-level shocks and labour flows. The Economic Journal 131(634), 598–623.
- Cederlöf, J. (2021). Reconsidering the cost of job loss: Evidence from redundancies and mass layoffs. Available at SSRN 3905994.
- Datta, N. (2022). Local monopsony power. Job Market Paper.
- Downey, M., N. Lind, and J. Shrader (2021). Adjusting to rain before it falls. Working Paper.
- Dube, A., E. Freeman, and M. Reich (2010). Employee replacement costs. Working Paper.
- Dube, A., L. Giuliano, and J. Leonard (2019). Fairness and frictions: The impact of unequal raises on quit behavior. American Economic Review 109(2), 620–63.
- Dube, A., J. Jacobs, S. Naidu, and S. Suri (2020). Monopsony in online labor markets. American Economic Review: Insights 2(1), 33–46.
- Dube, A., A. Manning, and S. Naidu (2019). Monopsony and employer mis-optimization account for round number bunching in the wage distribution.
- Dube, A., S. Naidu, and A. D. Reich (2022). Power and dignity in the low-wage labor market: Theory and evidence from wal-mart workers. Technical report, National Bureau of Economic Research.
- Fuest, C., A. Peichl, and S. Siegloch (2018). Do higher corporate taxes reduce wages? micro evidence from germany. American Economic Review 108(2), 393–418.
- Garicanoy, L., C. Lelargez, and J. Van Reenen (2016). Firm size distortions and the productivity distribution: evidence from france. *American Economic Review*.
- Gary, K., P. S. Jensen, M. Olsson, C. V. Radu, B. Severgnini, and P. Sharp (2022). Monopsony power and wages: Evidence from the introduction of serfdom in denmark. *The Economic Journal* 132(648), 2835–2872.
- Gibson, M. (2022). Employer market power in silicon valley. Working Paper (http://matthewgibson.org/).
- Ginja, R., A. Karimi, and P. Xiao (2020). Employer responses to family leave programs. *IZA Discussion Papers*.
- Isen, A. (2013). Dying to know: Are workers paid their marginal product? Unpublished manuscript.
- Jäger, S. and J. Heining (2019). How substitutable are workers? evidence from worker deaths. Working Paper.
- Jäger, S., C. Roth, N. Roussille, and B. Schoefer (2022). Worker beliefs about outside options. Technical report, National Bureau of Economic Research.

- Jäger, S., B. Schoefer, S. Young, and J. Zweimüller (2020). Wages and the value of nonemployment. The Quarterly Journal of Economics 135(4), 1905–1963.
- Johnson, M. S. and M. Lipsitz (2020). Why are low-wage workers signing noncompete agreements? Journal of Human Resources, 0619–10274R2.
- Juhn, C., K. McCue, H. Monti, and B. Pierce (2018). Firm performance and the volatility of worker earnings. Journal of Labor Economics 36 (S1), S99–S131.
- Kahn, L. B. and F. Lange (2014). Employer learning, productivity, and the earnings distribution: Evidence from performance measures. *The Review of Economic Studies* 81(4), 1575–1613.
- Kim, S. and A. Pei (2022). Monopsony in the high-skilled migrant labor market-evidence from h-1b petition data. Available at SSRN 4010152.
- Kline, P., N. Petkova, H. Williams, and O. Zidar (2019). Who profits from patents? rent-sharing at innovative firms. The Quarterly Journal of Economics 134(3), 1343–1404.
- Kroft, K., Y. Luo, M. Mogstad, and B. Setzler (2020). Imperfect competition and rents in labor and product markets: The case of the construction industry. Technical report, National Bureau of Economic Research.
- Krueger, A. B. and O. Ashenfelter (2018). Theory and evidence on employer collusion in the franchise sector. NBER Working Paper 24831.
- Lamadon, T., M. Mogstad, and B. Setzler (2020). Imperfect competition, compensating differentials and rent sharing in the us labor market. NBER Working Paper 25954.
- Langella, M. and A. Manning (2021). Marshall lecture 2020: The measure of monopsony. Journal of the European Economic Association 19(6), 2929–2957.
- Lipsitz, M. and E. P. Starr (2020). Low-wage workers and the enforceability of non-compete agreements. Management Science forthcoming.
- Manning, A. (2006). A generalised model of monopsony. The Economic Journal 116(508), 84-100.
- Manning, A. (2011). Imperfect competition in the labor market. In *Handbook of labor economics*, Volume 4, pp. 973–1041. Elsevier.
- Marinescu, I. E., I. Ouss, and L.-D. Pape (2021). Wages, hires, and labor market concentration. *Journal of Economic Behavior and Organizations*.
- Naidu, S. (2010). Recruitment restrictions and labor markets: Evidence from the postbellum us south. *Journal* of Labor Economics 28(2), 413–445.
- Naidu, S., Y. Nyarko, and S.-Y. Wang (2016). Monopsony power in migrant labor markets: evidence from the united arab emirates. *Journal of Political Economy* 124(6), 1735–1792.
- Naidu, S. and E. A. Posner (2022). Labor monopsony and the limits of the law. Journal of Human Resources 57(S), S284–S323.
- Naidu, S. and N. Yuchtman (2013). Coercive contract enforcement: law and the labor market in nineteenth century industrial britain. *American Economic Review* 103(1), 107–44.

- Naidu, S. and N. Yuchtman (2018). Labor market institutions in the gilded age of american economic history. The Oxford Handbook of American Economic History, vol. 1, 329.
- Nimczik, J. S. (2020). Job mobility networks and data-driven labor markets. Working Paper.
- Saez, E., B. Schoefer, and D. Seim (2019). Payroll taxes, firm behavior, and rent sharing: Evidence from a young workers' tax cut in sweden. American Economic Review 109(5), 1717–63.
- Sokolova, A. and T. Sorensen (2021). Monopsony in labor markets: A meta-analysis. ILR Review 74(1), 27–55.
- Suárez Serrato, J. C. and O. Zidar (2016). Who benefits from state corporate tax cuts? a local labor markets approach with heterogeneous firms. *American Economic Review* 106(9), 2582–2624.
- Yeh, C., C. Macaluso, and B. Hershbein (2022). Monopsony in the us labor market. American Economic Review 112(7), 2099–2138.