Private Preferences for Jobs and Labor Market Dynamics

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Abstract

We build a new dynamic search model in which workers have heterogeneous preferences for jobs that are not observed by their employers. As a result, employers make wage offers given beliefs about preferences. These beliefs evolve over time endogenously in response to workers' mobility decisions. We estimate the model using matched employer-employee data from France and quantify the implications for wages and sorting. Private information generates information rents for workers, which increases wages. However, it also reduces competition between firms during counteroffers, which dampens wage growth for job stayers and switchers. Information frictions also lead to inefficient EE transitions: workers switch too often to firms with similar productivity and not enough to more productive firms.

Keywords: Search Frictions, Amenities, Monopsony, Wage Dynamics, Sorting

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1 Introduction

There is growing evidence from survey data that workers have large and heterogeneous preferences for jobs (Mas and Pallais, 2017; Maestas et al., 2023; Caldwell, Haegele, and Heining, 2025). How do these preferences influence wages, worker mobility and sorting efficiency? These issues are closely connected: workers' mobility decisions depend on the wage offers they receive from firms, and the wages that firms offer depend on the labor supply they face and thus on workers' mobility decisions. Thus, answering these questions requires a model that captures well both how preferences influence worker mobility and how firms take preferences into account when they set wages.

The existing models used to answer these questions have important limitations. The models used in the literature on monopsony to study wages (Berger, Herkenhoff, and Mongey, 2022; Lamadon, Mogstad, and Setzler, 2022) are static and thus cannot be used to study worker mobility or study how wages change over time. The models used in the search literature are dynamic but assume that worker preferences are either transitory (Albrecht, Carrillo-Tudela, and Vroman, 2018) or observable by employers (Berger et al., 2023; Lamadon et al., 2024) . These assumptions are at odds with evidence from survey data that worker preferences are persistent and heterogeneous, and they have critical implications for wages and worker mobility.

In this paper, we revisit these issues using a new dynamic search model in which workers have persistent preferences for jobs which are unobserved by employers. Firms make wage offers given beliefs about worker preferences, and these beliefs evolve over time endogenously in response to worker mobility decisions. We show that this model is consistent with evidence from matched employer-employee data from France on changes in wage, productivity and the value of amenities (i.e., preferences) during job-to-job transitions. Private information generates information rents for workers, which increases wages. However, it also reduces competition between firms during counteroffers, which dampens wage growth for job stayers and switchers. Thus, the model dampens the role of EE mobility as an important source of wage growth for workers. The lower competition between firms also reduces wage inequality as workers are less likely to benefit from large wage increases. We also find that information frictions lead to inefficient job-to-job transitions: workers switch too often to firms with similar productivity and not enough to more productive firms.

We first provide new evidence that worker preferences for jobs are a key determinant of worker mobility decisions and wages. Using French matched employer-employee data, we document that 38% of workers switching jobs receive wage cuts. We also show that wage cuts cannot be fully accounted for by the poor economic performance of their current employer, or by expectation of higher future wage growth at the next job. Instead, we show that these workers experiencing wage cuts reduce their commute distance, suggesting that worker preferences are an important determinant of worker mobility decisions.

To account for this data, we develop a new dynamic search model of the labor market in which workers have persistent preferences for jobs and firms have heterogeneous productivity. The model has random search, on-the-job search and counteroffers in the spirit of Cahuc, Postel-Vinay, and Robin (2006). Search frictions imply imperfect sorting of workers into jobs, and the allocation of workers reflects a horse race between sorting workers into productive jobs and sorting them into jobs they value as in Lindenlaub and Postel-Vinay (2023). Sorting is determined by workers' mobility decisions, which depend on the wage offers they receive from firms.

The key innovation in our model is that worker preferences for jobs are not observed by employers. This idea dates back at least to Robinson (1933) and is the workhorse assumption in the static models used in the monopsony literature. As in static models, firms make wage offers based on beliefs about workers' preferences, but in our dynamic model these beliefs are endogenously updated over time as firms observe workers' mobility decisions. This learning process introduces a new state variable, beliefs about worker preferences, and gives rise to a fixed point problem in which wage offers depend on beliefs, beliefs depend on mobility decisions, and mobility decisions depend on wage offers.

To fix ideas, consider a worker who recently joined a new firm. She may place a high value on specific attributes of the job, such as her colleagues, the location, or the nature of the work, but her employer does not observe these preferences. Over time, however, the employer may infer the worker's preference for the job by observing her mobility decisions. If the worker receives outside offers from other firms and repeatedly chooses to stay, the employer will rationally conclude that she values the job highly. This worker is then less likely to receive a wage increase the next time she meets with a potential new employer. This simple observation suggests that information about worker preferences for jobs interacts in a fundamental way with job-to-job mobility and wages.

The wages that workers receive during conteroffers depend on beliefs but also on the wages that the other firm is offering. At low tenure, incumbent firms are more likely to offer higher wages to retain workers because they are worried that they have low preference for their jobs. By contrast, these firms are more likely to offer lower wages at high tenure because they know that workers enjoy their job. However, incumbent firms also respond to poaching firms that offer workers with long tenure higher wages to induce them to leave a job that they enjoy. The tension between these two forces, responding to changing beliefs and to the other firm's wage offers, determines how wages change over time and whether workers decide to switch jobs.

We estimate the model to quantify the implications of private preferences for jobs for wages and worker mobility. Estimating the model, we find that dispersion in worker preferences is large and comparable to the size of the dispersion in firm productivity. The model matches observed patterns of job-to-job mobility, including the share of transitions associated with negative wage changes. We find that workers value their preferences at 11% of their wages on average.

Our analysis shows that private information about worker preferences reshapes wage dynamics by affecting both information rents and monopsony power. Early in the employment relationship, wages tend to be higher because firms are uncertain about worker preferences and must offer higher pay to retain workers. Over time, however, employers learn that workers who stay with the same firm are strongly attached to their jobs and the perceived labor supply becomes less elastic, allowing firms to exercise greater monopsony power and reduce wages. Quantitatively, compared to a model in which preferences are observable, wages are 4% higher on average and up to 14% higher for workers with one year of tenure. These effects also reduce cross-sectional wage dispersion: wage inequality is lower in the model with private information because information rents reduce compensating differentials at low tenure and learning compresses wages among high-tenure workers. This result is consistent with the findings of Albrecht, Carrillo-Tudela, and Vroman (2018) and challenges the view that preferences are an important driver of wage dispersion (Lamadon et al., 2024).

The model also delivers sharp implications for job-to-job mobility and sorting. We show that equilibrium mobility is inefficient. There are two distinct sources of inefficiency. First, workers switch jobs too frequently among firms with similar productivity. Intuitively, workers have an incentive to move in order to avoid revealing strong attachment to their current job. Staying following an outside offer signals a high preference for the job, which leads firms to lower future wage offers. As a result, even workers who value their current job highly may choose to switch to similar firms to maintain bargaining power. Second, workers switch jobs too infrequently toward more productive firms. High-productivity firms face steeper labor supply curves and exercise greater monopsony power, which limits their ability to attract workers despite higher productivity. As a consequence, workers fail to climb the productivity ladder as often as is socially efficient.

We find that depressed wages and inefficient job-to-job mobility have aggregate implications: productivity is lower by 0.2% relative to the planner allocation due to misallocation. Finally, monopsony power arising from unobserved worker preferences leads to a substantially higher unemployment rate relative to the full-information benchmark.

Related Literature This paper contributes to several strands of the literature.

First, it contributes to a literature studying the role of worker preferences for jobs in frictional labor markets (Brügemann and Moscarini, 2010; Albrecht, Carrillo-Tudela, and Vroman, 2018; Lindenlaub and Postel-Vinay, 2023; Berger et al., 2023; Bagga et al., 2025; Lamadon et al., 2024). One strand of this literature focuses on allocative efficiency and the implied horse-race between allocating workers to more productive jobs and allocating workers to jobs they like. Our paper extends these models by studying labor market dynamics when worker preferences for jobs are private information. By doing so, it shows worker preferences for jobs lead to inefficient sorting between workers and jobs. A second strand of this literature uses frictional labor market models to infer the size of worker preferences for jobs. Our results show that this inference exercise is sensitive to assumptions relative to information about preferences.

Second, this paper relates to a large literature on monopsony power in labor markets (Manning, 2003; Card et al., 2018; Berger, Herkenhoff, and Mongey, 2022; Jarosch, Nimczik, and Sorkin, 2024; Lamadon, Mogstad, and Setzler, 2022; Yeh, Macaluso, and Hershbein, 2022; Volpe, 2024). Since at least Robinson (1933), economists thought that employers have market power in the labor market because they do not know how much each worker likes her job (i.e., worker have preferences for jobs and these preferences are private information). This idea has been studied extensively in the context of monopsonistic labor markets. More recently, Berger, Herkenhoff, and Mongey (2022) took this idea in the context of oligopsonistic labor market. However, as pointed out in Berger et al. (2023), the literature lacks a model to seriously study labor market power in dynamic frictional labor market. Existing models where worker preference for jobs are private information are somewhat stylized because they are static and therefore are silent on wage dynamics and worker mobility. Our paper fills this gap.

Third, it complements empirical work on compensating differentials and worker willingness to pay for job attributes (Eriksson and Kristensen, 2014; Wiswall and Zafar, 2018; Hall and Mueller, 2018; Maestas et al., 2023; Lavetti, 2023; Mas, 2025) by studying the equilibrium implications of these preferences within a dynamic model of the labor market

The remainder of the paper is organized as follows. Section 3 presents the model. Section 4 analyzes the mechanism and characterizes the sources of inefficiency. Section 5 presents the quantitative results and discusses their aggregate implications.

2 Motivating Evidence

Recent evidence from rich survey data (Maestas et al., 2023) shows that workers' willingness to pay for non-wage amenities is quantitatively large and highly heterogeneous across workers. We complement this survey evidence by documenting stylized facts indicating that preferences are a key determinant of EE mobility. Specifically, we use administrative labor market data to investigate why so many workers switch jobs despite receiving lower wages at the next job. We first show that these EE transitions cannot be entirely accounted for by the poor performance of their previous employer or by higher expected earnings growth at the next job. We then show instead that workers often cut their commute during these transitions, suggesting that worker preferences for jobs are critical for worker mobility decisions.

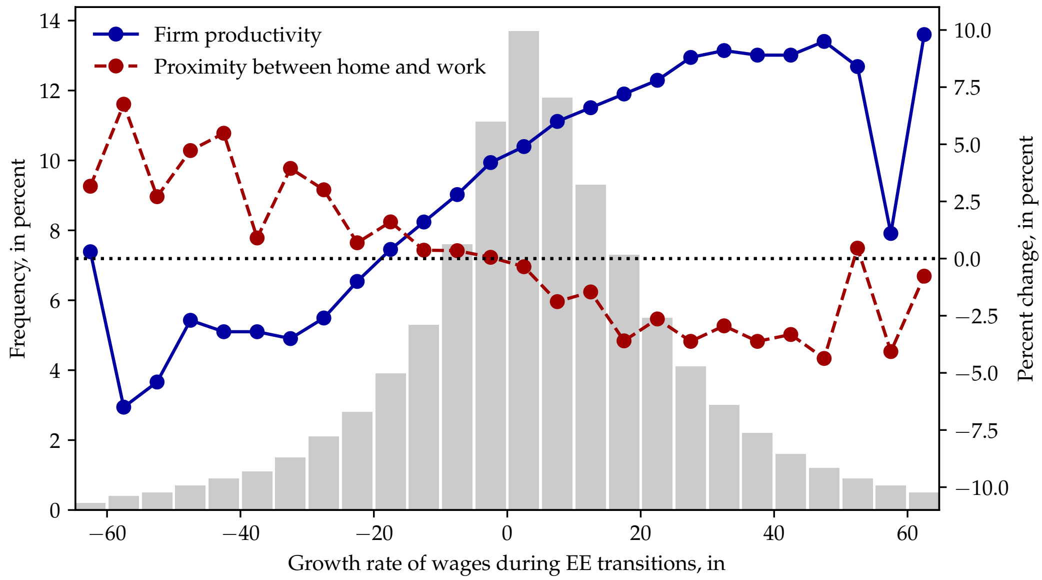
Matched employer-employee data We combine data on the universe of worker employment history from social security data (DADS) to annual information on firm balance sheet (FIBEN) in France between 1995 and 2019. We focus on full-time workers between the age of 25 and 55 working at private-sector for-profit firms. We define wages as total labor earnings divided by the number of hours, and firm productivity as value added per worker. The data includes 700,000 workers and 100,000 firms.

EE movers often receive wage cuts We first document that workers often receive wage cuts when they switch jobs. Figure 1 shows the distribution of wage changes during EE transitions together with the average change in firm productivity for each quintile of the wage change distribution. 38% of workers receive wage cuts when switching jobs. Furthermore, the solid blue line shows that these workers move to less productive firms on average. For instance, workers in the bottom decile of wage changes during EE transitions experience a 20% wage cut and move to firms that are on average 1% less productive. By contrast, workers in the top decile experience a 30% increase in wages and move to firms that are on average 8% more productive.

Accounting for wage cuts without preferences We now show that standard explanations that do not rely on worker preferences to explain these wage cuts cannot fully account for the data.

The first explanation is that workers switch jobs when their employer is doing poorly because they expect their wage to fall in the future if they keep their existing job. In fact, we find evidence consistent with that explanation. For example, workers are 8 percentage points more likely to receive a wage cut during an EE transition if their co-workers from the

Figure 1: Changes in wages, productivity and commuting distance during EE transitions



previous employer who did not switch jobs experience negative wage growth. We also find that workers are slightly more likely to experience wage cuts during EE transitions if their previous employer experiences negative productivity or employment growth (respectively 2pp and 4pp) or if co-workers who are also switching jobs during the same year receive wage cuts on average (40pp). However, Table 1 shows that these explanations do not account for all wage cuts during EE transitions. Column 2 reports that the share of EE transitions with wage cuts for workers leaving firms where co-workers receive positive wage growth is 37%. This number is almost identical to the estimate of 38% from the full sample, reported in column 1. This shows that even when the poor performance of current employer is not a reasonable explanations, many workers decide to switch jobs despite receiving lower wages. Columns 3 shows that the share is very similar when we focus on transitions from firms with positive productivity and employment growth. Finally, column 4 shows that even if we only look at firms where job switchers receive positive wage growth on average, about 25% of switchers still get wage cuts.

The second explanation for wage cuts during EE transitions is that workers expect to receive higher wage growth in the future, which will eventually deliver higher wages in present value. This is a standard prediction of search models with firm heterogeneity where firms that are more productive offer more backloaded compensation (Burdett and Coles, 2009). Here again, we find evidence consistent with this explanation. In particular, workers receiving wage cuts during transitions are 8 percentage points more likely to experience higher wage growth at the next job than at their previous employer. However, column 5 in Table 1 shows

	Full sample	$\Delta w_{jt} \geq 0$ for co-workers	$\Delta lp_{jt} \geq 0$, $\Delta n_{jt} \geq 0$	$\Delta w_{jt} \geq 0$ for co-workers during EE	Δw_{it} lower post EE
Share of wage cuts in EE transitions	0.38	0.37	0.36	0.25	0.35

Table 1: Accounting for wage cuts during EE transitions without preferences

that even if we focus on workers who do not experience higher wage growth at the next job, 35% of workers still receive wage cuts. Thus, the idea that workers accept lower wages today because they expect the present value of wages to increase cannot entirely account for EE transitions with wage cuts. Another challenge to that explanation is that half of workers receiving wage cuts during EE transitions move to less productive firms.

Taken together, this evidence shows that standard explanations that do not rely on preferences cannot entirely account for EE transitions with wage cuts.

Suggestive evidence on preferences We now show evidence that preferences could account for these EE transitions in which workers receive wage cuts.

The challenge is that worker preferences for jobs are multidimensional and for the most part unobserved, and thus difficult to document. However, we rely on a unique feature of the French data to make progress. The data contains information on the work and residence location of workers each year at the zipcode level, which allows us to approximate their commuting distance in kilometers. We then compute how this distance to work changes after EE transitions for each decile of the wage change distribution. The results are shown in Figure 1, where the red dotted line shows the change in commuting distance during EE transitions. The line is increasing in wage change during EE transitions, which means that workers who receive wage cuts when they switch jobs are also more likely to reduce their commuting distance. On average, workers reduce their commute by 0.4% when they switch jobs relative to the average commuting distance, which is fairly modest. However, this number varies significantly for workers across the wage change distribution. For example, workers in the lowest decile for the wage change distribution experience a reduction of their commuting distance of 2.5% while workers in the top decile increase their commute by 3%.

Commuting distance only explains a small fraction of EE transitions with wage cuts. In fact, 50% of workers experiencing wage cuts during EE transitions also experience an increase in their commute. This is not surprising given existing evidence from surveys (Maestas et al., 2023) that shows that worker preferences for jobs are multidimensional. They encompass not just commuting time but also how much workers enjoy their tasks, their relationship with their colleagues or their boss, the flexibility that a job offers or on the contrary the security that it provides. For this reason, in our quantitative work we will not focus on distance to work but rather think about worker preferences more broadly as a match-specific component of the surplus that workers incur.

3 Model

To account for this data, we build a new dynamic search model in which firms have heterogeneous productivity and workers have preferences for jobs that are not observed by their employers. We begin by describing the environment, agents, and information structure. We then characterize workers' and firms' problems, describe wage-setting under unemployment and employment, formalize belief updating, and conclude with the equilibrium definition.

3.1 Environment

Time is discrete and indexed by $t = 0, 1, 2, \ldots$. The economy is populated by a unit mass of risk-neutral workers and a large mass of risk-neutral firms. Workers discount future utility at rate $\beta \in (0, 1)$. Firms operate a constant-returns-to-scale technology and differ in productivity.

Workers can be either unemployed or employed. Unemployed workers search for jobs and may receive job offers. Employed workers also search on the job and may receive outside offers, allowing for direct employment-to-employment (EE) transitions. Matches are destroyed exogenously at rate $\delta \in (0, 1)$.

Firms are heterogeneous in productivity $z \in \mathcal{Z}$, which is publicly observed by all agents. Productivity is fixed over time for a given firm. Output is linear in labor: a firm with productivity z employing one worker produces z units of output per period.

The labor market is frictional. Workers and firms meet through a random search process governed by a matching function. Firms post vacancies at flow cost $k > 0$, and workers search for jobs, but matches are not formed instantaneously. Instead, the number of new matches in a period is determined by a matching function that depends on the number of vacancies and the effective number of searching workers.

Both unemployed and employed workers search for jobs, but with different efficiencies. Unemployed workers search with unit efficiency, while employed workers search on the job with efficiency $s \in (0, 1)$. Let u denote the measure of unemployed workers. The total effective measure of searching workers is therefore $u+(1-u)s$. Matches are formed according to a constant-returns-to-scale matching function $M(v, u + (1 - u)s)$, where v denotes the measure of vacancies posted by firms. Matching is random: workers do not direct their search toward specific firms, and firms cannot target specific workers. As a result, conditional on meeting, the identity of the worker–firm pair is random.

This search technology implies that unemployed and employed workers face different job-finding rates, and firms face a vacancy-filling rate that depends on an aggregate measure of labor market tightness. Let λ denote the rate at which unemployed workers receive job offers, and let λ_f denote the rate at which firms fill vacancies. Thus, the rate at which employed workers receive job offer is $s\lambda$.

3.2 Worker Preferences and Information

Our framework substantially extends Postel-Vinay and Robin (2002) to accommodate worker idiosyncratic preferences for jobs that are unobserved by employers.

A central feature of the model is that workers have idiosyncratic preferences for jobs. When a worker accepts a job at a firm, she draws a preference shock ξ associated with that job. This preference captures non-wage amenities and other job-specific attributes valued by the worker but not directly reflected in wages.

We interpret ξ broadly as encompassing features such as the quality of interactions with coworkers and supervisors, the pace and intensity of work, scheduling flexibility, and the overall work environment. It also includes location-related amenities, commuting considerations, and firm-specific cultures or organizational practices. These attributes are difficult to contract on, vary widely across firms. Crucially, there is substantial dispersion in how much workers value these attributes, as documented in Maestas et al. (2023). This is the dispersion we aim to capture with ξ.

Finally, preferences are persistent for the duration of the employment relationship, reflecting the stability of many job characteristics and ensuring that workers' mobility decisions are informative about their underlying attachment to the job. This assumption differs from a substantial share of the literature that assume preferences are iid over time, mostly for tractability.

Preferences are drawn from a common distribution $B_0(\xi)$.[1] Workers observe their own preference ξ, but firms never observe it directly. Moreover, we assume that workers draw the job-specific preference ξ once they accept a job offer, consistent with the idea that jobs are experience goods (Menzio and Shi, 2011). For example, this means that a worker needs to

[1] In the quantitative analysis, we assume a parametric form for B_0, but this is not required for the theoretical characterization.

work a minimum amount of time (i.e. one period in our model) before learning how much she likes the pace of the job.

The key informational friction in the model is that firms do not know how much a worker values her current job. In practice, employers cannot observe preferences of each worker. Moreover, as we will discuss in more details workers would have no incentives to truthfully reveal their preferences. Firms instead hold beliefs about ξ, summarized by a distribution $B(\xi)$. These beliefs are updated over time as firms observe workers' job mobility decisions.

Wages. We extend the bargaining protocol of Postel-Vinay and Robin (2002) to a setting with incomplete information. When an employed worker meets a poaching firm, the incumbent and the poaching firm compete à la Bertrand for the worker given their beliefs about worker preferences. Firms make wage offers in terms of the per-period wage, which firms are assumed to honor. We assume that wages adjust only in response to outside offers and that wages of incumbent workers cannot fall in response to an outside offer. This assumption is standard (Cahuc, Postel-Vinay, and Robin, 2006; Lise and Robin, 2017; Jarosch, 2023) and generates wage dynamics consistent with data. We present the problem of firms making wage offers in Section 3.5.

3.3 Timing

Each period unfolds as follows:

1. Unemployed and employed workers search for jobs. Firms post vacancies.
2. Matches occur. Firms make wage offers to workers.
3. Workers decide whether to accept offers or remain in their current job.
4. Production takes place, wages are paid, and exogenous separations occur.

If an employed worker receives an outside offer, both the incumbent firm and the poaching firm simultaneously make wage offers. The worker chooses the firm that maximizes her expected utility.

3.4 Workers

We begin by characterizing the problem of workers by characterizing their value functions. In the model workers can be either employed or unemployed. The main decision problem each worker faces is whether to accept or not a job offer, in case she receives one.

3.4.1 Unemployed Workers

Let U denote the value of being unemployed. An unemployed worker receives a flow payoff $\bar{y}$, interpreted as home production or unemployment benefits. With probability λ, the worker meets a firm and receives a job offer; otherwise, she remains unemployed.

The value of unemployment satisfies the Bellman equation

$$U = \bar{y} + \beta(1-\lambda)U + \beta\lambda\mathbb{E}_{z,\xi}\left[\max\left\{V(w_U(z), z, \xi, B_0),\ U\right\}\right]. \tag{1}$$

This equation has a straightforward interpretation. The unemployed worker enjoys flow utility $\bar{y}$ today. With probability $1-\lambda$, she does not receive an offer and remains unemployed next period, yielding continuation value U. With probability λ, she meets a firm with productivity z and draws a preference ξ for that job. She then chooses whether to accept the offer and obtain value $V(\cdot)$ or to reject it and remain unemployed. Since there is random matching, the value of meeting a firm ex-ante does not depend on the productivity of the firm z, while of course the ex-post value depends on z, as we discuss next.

3.4.2 Employed Workers

Consider a worker employed at a firm with productivity z and earning wage w. Let $V(w, z, \xi, B)$ denote the value of employment when the worker's preference is ξ and the firm holds belief B about ξ.

The value of employment satisfies

$$\begin{aligned} V(w, z, \xi, B) = {} & w + \xi + \beta\delta U \\ & + \beta(1-\delta)(1-s\lambda)V(w, z, \xi, B) \\ & + \beta(1-\delta)s\lambda\mathbb{E}_{z'}\left[\max\left\{V(w_I, z, \xi, B'),\ \mathbb{E}_{\xi'}V(w_P, z', \xi', B_0)\right\}\right]. \end{aligned} \tag{2}$$

Each term has a clear economic interpretation. The worker receives current-period utility equal to the wage w plus the non-wage utility ξ. With probability δ, the match is destroyed and the worker becomes unemployed next period, obtaining value U.

With probability $(1-\delta)$, the match survives. Conditional on survival, the worker does not receive an outside offer with probability $1-s\lambda$ and remains in the current job, preserving value $V(w, z, \xi, B)$. With probability $s\lambda$, the worker meets a potential employer with productivity z'. In that case, the incumbent and poaching firms make wage offers w_I and w_P, respectively, and the worker chooses the option that maximizes her value. If she stays, the firm updates its belief to B'. If she switches, she draws a new preference ξ' from B_0. Thus, the belief about workers preferences in case she switches will be summarized by the distribution B_0.

3.5 Firms

We now turn to describing firms' problems. We described the firms' problem by characterizing the value of a job. Indeed, since the production technology is linear in labor and firms can offer different wages to different workers, practicing some form of price discrimination, a firm is just a collection of jobs.

3.5.1 Value of a Job

Let $\Pi(w, z, B)$ denote the value of a filled job for a firm with productivity z, paying wage w, and holding belief B about the worker's preference.

The firm's value satisfies

$$\Pi(w, z, B) = z - w + \beta(1-\delta)\left[(1-s\lambda)\Pi(w, z, B) + s\lambda\Pi^m(w, z, B')\right]. \tag{3}$$

The firm earns flow profit $z-w$ from employing the worker. With probability δ, the match is destroyed, and the continuation value is equal to zero.[1] Otherwise, with probability $1-s\lambda$, the worker does not receive an outside offer and the firm continues with value $\Pi(w, z, B)$. With probability $s\lambda$, the worker receives an outside offer. Then, the incumbent and the poaching firms enter a wage competition where they compete à la Bertrand in order to successfully attract the worker.

Firms compete by simultaneously submitting wage offers to the worker subject to the worker's participation constraint. While worker's preferences are private information, all actions are observed by everyone. Since firms form beliefs about worker's preferences given the observed actions of workers, it must follow that both firms make wage offers based on the same belief $B(\xi)$ about the worker's preference for the current job.

Let $P(\text{stay} \mid w_I, w_P, z_I, z_P, B)$ denote the probability that the worker stays with the incumbent given the wage offers, productivity of the two firms, and beliefs. The incumbent firm chooses w_I to solve maximize its profits:

$$\Pi^m(w, z, B) = \mathbb{E}_{z'}\left[\max_{w_I \geq w_P} P(\text{stay} \mid w_I, w_P, z, z', B) \cdot \Pi(w_I, z, B')\right]. \tag{4}$$

The profits of the incumbent firm depends on two terms, common to all settings with some form of market power in the labor market. The first term is the probability of retaining the worker, where the incumbent understands that a lower wage reduces the probability of attracting the worker. The second term is the flow of profit from paying the worker w^I,

[1] This result is implied by the free-entry condition (7).

conditionally on successfully retaining the worker. Crucially, the amount of labor market power that firms can exert depends on the endogenous belief B about workers' preferences.

Similarly to the incumbent, the poaching firm chooses w_P to solve

$$\Pi_0^{EE}(z_I, z_P, B) = \max_{w_P} \left[1 - P(\text{stay} \mid w_I, w_P, z_I, z_P, B)\right] \cdot \Pi(w_P, z_P, B_0). \tag{5}$$

The profits of the incumbent firm depends on two terms: the probability of attracting the worker and the flow profits conditional on hiring the worker.

The problems of the incumbent and the poaching firms highlight the source of monopsony power in the model. Because retention probabilities depend on beliefs about ξ, firms face increasing labor supply curves. Higher beliefs about worker attachment to the current job make the labor supply curve faced by the incumbent firm more inelastic and allow the firm to reduce wages without inducing separation. A similar logic applies to the poaching firms. We illustrate the mechanism of the wage setting protocol in more details in Section 4.

3.6 Belief Updating

Beliefs evolve according to Bayes' rule. Observing a worker's decision to stay or leave conveys information about ξ. For example, if the worker stays despite an attractive outside offer, the firm infers that ξ must be relatively high.

Formally, a belief B is a distribution over values of preferences ξ, and this distribution is updated according to Bayes rule, as

$$B'(\xi) = \frac{\mathbb{1}\{\text{stay} \mid \xi, w_I, w_P, z_I, z_P\} B(\xi)}{\int \mathbb{1}\{\text{stay} \mid \tilde{\xi}, w_I, w_P, z_I, z_P\} B(\tilde{\xi}) d\tilde{\xi}}. \tag{6}$$

The informativeness of the worker's decision depends on wage offers and productivities. When w_I is much larger than w_P, staying reveals little about preferences; when offers are close, staying is highly informative. Similarly, a worker might keep her current job with $w_I < w_P$, but that might reveal little information about ξ if $z_I > z_P$, as the worker might have kept the current job because it offers better carrier prospect, and not because she has a strong preference for it ξ. Finally, observing a worker keeping her job with $w_I < w_P$ might reveal no additional information about ξ if the belief B before the wage negotiation is already very skewed towards high values of ξ.

3.7 Free Entry

Free entry in the labor market implies that firms post vacancies until the expected value of entry equals the vacancy posting cost. Thus, thee free-entry condition is

$$-k + \lambda_f \left[\frac{u}{u + s(1-u)} \mathbb{E}_z[\Pi_0(z)] + \frac{s(1-u)}{u + s(1-u)} \mathbb{E}_{z,z'}[\Pi_0^{EE}(z', z, B)] \right] = 0, \tag{7}$$

where u denotes the unemployment rate. This condition equates the expected gains from hiring unemployed and employed workers to the vacancy posting cost. Since matching is random there is only one aggregate free entry condition.

3.8 Equilibrium

Definition 1. *An equilibrium consists of value functions* (U, V, Π), *wage schedules* (w_U, w_I, w_P), *beliefs* $B(\xi)$, *labor market tightness, and transition rates* (λ, λ_f) *such that:*

1. *Workers' value functions satisfy equations* (1) *and* (2).
2. *Firms' value functions satisfy equations* (3)–(5).
3. *Wage offers maximize firms' profits given beliefs.*
4. *Workers' mobility decisions are optimal.*
5. *Beliefs evolve according to Bayes' rule* (6).
6. *The free-entry condition* (7) *holds.*

3.9 Discussion: Structure of Worker Preferences

In the baseline model, worker preferences for jobs are assumed to be independent and identically distributed across employment relationships. The interpretation is that a substantial component of job amenities is match-specific and cannot be fully anticipated ex ante. These include factors such as the quality of interactions with colleagues, the relationship with supervisors, the actual pace and organization of work, or how much a worker enjoys living in the area surrounding the workplace. While workers may form expectations about these dimensions before accepting a job, their realized valuation is revealed only after the match is formed.

This assumption delivers tractability and isolates a learning mechanism that operates at the firm–worker level. Because preferences are private and persistent within a match but independent across jobs, firms learn about a worker's attachment only through observed mobility decisions. This learning process generates dynamic monopsony power even in the absence of ex ante heterogeneity across workers or firms.

Our framework can be extended to nest alternative preference structures. In particular, it can accommodate a setting in which preferences are perfectly correlated across jobs, as in Volpe (2024). In that environment, jobs are heterogeneous in the amenities they offer and these amenities are publicly observable. Workers differ in how much they value amenities relative to wages, but this preference parameter is initially private information. When workers enter the labor market, employers do not know whether a worker places a high or low weight on amenities. Over time, however, workers reveal this information through their job-to-job mobility and wage acceptance decisions.

Such an extension would imply age-dependent labor market power and endogenous worker types. Young workers would be relatively mobile as firms learn about their willingness to trade wages for amenities, while older workers would sort into distinct career paths. Some workers would repeatedly switch jobs in pursuit of higher wages, whereas others would settle into long-term employment relationships once they find a workplace that matches their preferences. While we abstract from this additional dimension of heterogeneity, our mechanism highlights how learning about worker preferences—whether match-specific or worker-specific—can generate persistent labor market power and shape wage dynamics.

4 Model Mechanism

This section characterizes how worker preferences influence worker mobility, wage dynamics and sorting. We proceed in four steps. First, we show that workers' mobility decisions follow a cutoff rule in the preference ξ, given wage offers. Second, we derive firms' optimal wage offers and study how beliefs about worker preferences affect wage offers and equilibrium wages. Third, we discuss labor market dynamics, emphasizing how beliefs evolve over tenure and how this feeds back into wages. Fourth, we establish that job-to-job mobility is inefficient in the equilibrium allocation. In this section, we focus on dynamics for an employed worker who already accepted a job from unemployment.

4.1 Worker mobility decisions

Consider a worker currently employed at the incumbent firm with productivity z_I, who receives an outside offer from the poaching firm with productivity z_P and wage w_P. Let $W(\xi, a, w, B)$ denote the worker's value of employment when her match-specific preference is

ξ, the firm's productivity is a, the wage is w, and the firm holds belief B about the worker's preference.

The worker stays at the incumbent if the value of remaining exceeds the value of switching. Since the preference for the incumbent job is the worker's private information, the stay/switch decision is monotone in ξ under a mild condition. In particular, define the reservation threshold ξ^* as the solution to

$$W(\xi^*, z_I, w_I, \xi^*) = \mathbb{E}_{\xi_2}\left[W(\xi_2, z_P, w_P, B_0)\right]. \tag{8}$$

The left-hand side is the worker's value of staying at the incumbent when her preference equals the threshold ξ^*. The right-hand side is the expected value of switching to the poaching firm, where the worker draws a new preference ξ_2 from the prior distribution B_0 and is evaluated under the prior belief B_0 at the new firm.

If the mapping $x \mapsto W(x, z_I, w_I, x)$ is strictly increasing in x, then (8) pins down a *unique* cutoff $\xi^* = \xi^*(w_I, w_P, z_I, z_P)$ and the worker's decision follows a cutoff rule:

$$\text{Stay at the incumbent} \quad \Longleftrightarrow \quad \xi \geq \xi^*(w_I, w_P, z_I, z_P).$$

This monotonicity condition is natural: higher match-specific utility makes staying more attractive, with a proportional shift in the belief. Most of the results that follow rely on this condition, that we formalize as an assumption.

Assumption 1. The mapping $x \mapsto W(x, z_I, w_I, x)$ is strictly increasing in x.

The wage setting problem of firms is in principle hard to solve, as beliefs B on workers' preferences enter the problem as an infinite dimensional state variable. To make the belief updating problem tractable, we impose the following assumption on the distribution of preferences in the population B_0.

Assumption 2. The unconditional distribution of preferences $B(\xi)$ is uniform with support $[-\sqrt{3}\sigma_\xi, \sqrt{3}\sigma_\xi]$.

This assumption delivers a key simplification. Under the cutoff rule above, observing whether the worker stays or switches truncates the support of the posterior distribution but preserves the Uniform functional form. Therefore, beliefs can be summarized by a single scalar $\underline{B}$, the lower support of the posterior, rather than an entire distribution. Intuitively, as the worker stays following more competitive outside offers, the incumbent learns that ξ must be larger, shifting the support upward.

We now establish a monotone comparative statics property of the reservation threshold. Intuitively, we find that, all else equal, workers are more likely to stay with the incumbent if w_I is higher or if w_P is lower.

Lemma 1. *The reservation threshold $\xi^*(w_I, w_P, z_I, z_P)$ is decreasing in the wage offered by the incumbent w_I and increasing in the wage offered by the poacher w_P.*

Proof: see Appendix A.

4.2 Wage offers

We now characterize optimal wage offers. In the counteroffer stage, wages depend on the state variables $(z_I, z_P, \underline{B})$, where $\underline{B}$ summarizes the incumbent's belief about the worker's preference . Let $\Pi(w, \xi^*, a)$ denote the incumbent's continuation value from employing the worker at wage w when the switching cutoff is ξ^* and productivity is a. The retention probability depends on the cutoff through the belief distribution:

$$\Pr(\text{stay} \mid w_I, w_P, z_I, z_P, \underline{B}) = 1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B}).$$

4.2.1 Incumbent firm

The incumbent chooses w_I to maximize expected value:

$$G_I(w_I; w_P, z_I, z_P, \underline{B}) = [1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B})]\ \Pi(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I)\,.$$

Differentiating yields the first-order condition

$$\begin{aligned} 0 = &\underbrace{\frac{\partial[1 - F(\xi^* \mid B)]}{\partial \xi^*}\frac{\partial \xi^*(w_I, w_P, z_I, z_P)}{\partial w_I}\Pi\Big(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I\Big)}_{\text{retention}} \\ &+ \underbrace{[1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid B)]\,\frac{\partial \Pi\Big(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I\Big)}{\partial w_I}}_{\text{profits}} \\ &+ \underbrace{[1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid B)]\,\frac{\partial \Pi\Big(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I\Big)}{\partial \xi}\,\frac{\partial \xi^*(w_I, w_P, z_I, z_P)}{\partial w_I}}_{\text{information}}. \end{aligned} \quad (9)$$

Each term has an intuitive interpretation. The *retention* term captures that changing w_I shifts the cutoff ξ^* (Lemma 1), which changes the probability the worker stays. Since $\frac{\partial \xi^*}{\partial w_I} < 0$ and $\frac{\partial(1-F)}{\partial \xi^*} < 0$, a higher wage raises retention. The *profits* term is the standard marginal effect of increasing the wage holding retention fixed: higher w_I reduces the incumbent's continuation value through $\partial\Pi/\partial w_I < 0$. Finally, the *information* term captures that wages affect which types stay (through ξ^*), and hence affect the incumbent's continuation value through future beliefs. In particular, if raising w_I lowers the cutoff, the incumbent retains a broader set of types; this may reduce the informational content of observing staying and thereby affect future rents through $\partial \Pi / \partial \xi$.

We now characterize how beliefs affect the incumbent's best response. We find that, all else equal, the wage offered by the incumbent firm is decreasing in the belief $\underline{B}$. In other words, the incumbent firm will offer a relatively low wage to a worker if she is particularly attached to the job. Indeed, the incumbent would not have incentives to increase the wage if the worker will stay with a very high probability. In practice, this means the labor supply elasticity faced by the firm (i.e., the retention elasticity) is decreasing in $\underline{B}$.

Proposition 1. *The incumbent best response $w_I^*(w_P)$ is weakly decreasing in $\underline{B}$, holding (w_P, z_I, z_P) fixed.*

Proof: see Appendix A.

4.2.2 Poaching firm

The poaching firm earns positive value only if the worker switches, which occurs with probability $F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B})$. Since the poaching firm hires the worker into a new match, its continuation value depends on the prior belief B_0. Let $\Pi(w_P, \underline{B}_0)$ denote the poacher's value from employing the worker at wage w_P under the prior.

The poacher chooses w_P to maximize

$$G_P(w_P; w_I, z_I, z_P, \underline{B}) = F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B}) \, \Pi(w_P, \underline{B}_0),$$

implying the first-order condition

$$\begin{aligned} 0 = & \underbrace{\frac{\partial F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B})}{\partial \xi^*} \frac{\partial \xi^*(w_I, w_P, z_I, z_P)}{\partial w_P} \Pi(w_P, \underline{B}_0)}_{\text{poaching}} \\ & + \underbrace{F(\xi^*(w_I, w_P, z_I, z_P) \mid \underline{B}) \, \frac{\partial \Pi(w_P, \underline{B}_0)}{\partial w_P}}_{\text{profits}} . \end{aligned} \tag{10}$$

The *poaching* term captures that raising w_P increases the switching cutoff (Lemma 1), increasing the probability of successfully poaching the worker. The *profits* term reflects the standard marginal effect of increasing the wage on the poacher's continuation value.

We find that, all else equal, the wage offered by the poaching firm is increasing in the belief $\underline{B}$. In other words, the poaching firm will offer a relatively high wage to a worker if she is particularly attached to the current job.

Proposition 2. *The poaching best response $w_P^*(w_I)$ is weakly increasing in $\underline{B}$, holding (w_I, z_I, z_P) fixed.*

Proof: see Appendix A.

4.2.3 Equilibrium wages and strategic interaction

Equilibrium wages are determined by the intersection of best responses as in Figure 2:

$$w_I = w_I^*(w_P; z_I, z_P, \underline{B}), \qquad w_P = w_P^*(w_I; z_I, z_P, \underline{B}).$$

This is crucial in order to understand how equilibrium wages depend on the state variables $(z_I, z_P, \underline{B})$. We focus on how wages depend on beliefs $\underline{B}$, which are a central state variable in our model. To see this, consider two otherwise identical cases that differ only in beliefs that firms have about the worker's preference. In one case the two firms have a low belief $\underline{B}$ and in the other a high belief $\underline{B}$.

An increase in $\underline{B}$ affects equilibrium wages through three distinct channels. First, there is a *direct effect* on the incumbent's wage-setting problem. As shown in Proposition 1, a higher belief $\underline{B}$ makes the incumbent more confident that the worker values the job, reducing the elasticity of labor supply it faces and leading the incumbent to optimally lower its wage offer.

Second, there is an *indirect effect* operating through the poaching firm's behavior. Proposition 2 shows that a higher belief $\underline{B}$ reduces the probability that the worker switches for any given poaching wage, inducing the poaching firm to raise its wage offer.

Third, these two effects interact through *strategic complementarity* in wage-setting. Because the incumbent's optimal wage w_I^* depends on the poaching wage w_P, the upward shift in the poaching firm's best response feeds back into the incumbent's wage choice, partially offsetting, or amplifying, the direct effect of beliefs on w_I, depending on the slope of best responses.

Figure 2 illustrates this logic. The figure shows how an increase in beliefs $\underline{B}$ shifts both best-response functions and how equilibrium wages adjust as the intersection of these shifted schedules. As a result, the equilibrium effect of beliefs on wages reflects the combined influence of direct monopsony power, competitive pressure from poaching firms, and strategic interaction between wage-setting firms.

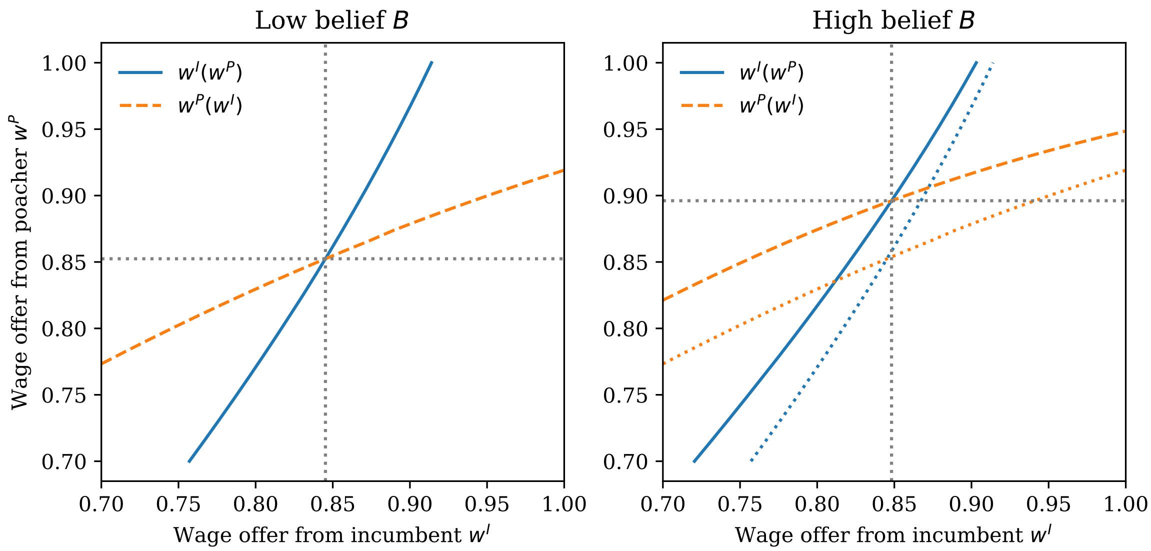


Figure 2: Equilibrium wages as the intersection of best responses.

4.3 Labor Market Dynamics

We now characterize how beliefs and wage offers evolve endogenously over the employment relationship. When a worker stays after an outside offer, the incumbent infers that ξ exceeds the cutoff ξ^*, which shifts $\underline{B}$ upward. Note that this implies $\underline{B}' \geq \underline{B}$ as long as the worker stays. In other words, if firms belief a worker is particularly attached a job, time can only reinforce this belief as long as the worker does not switch job. When the worker leaves, the match ends and beliefs are reset for the next hire, as the worker will draw a new preference ξ specific to the new job.

Figure 3 illustrates these belief dynamics and their wage implications. The figure traces the response of beliefs and wages following counteroffers that are rejected by workers. This event is informative for firms because it allows them to update their beliefs $\underline{B}$ upward. As a result, beliefs increase as the worker continues to stay. Such a change in belief induces poachers to offer workers higher wages to attract them, and it induces incumbents to offer lower wages. However, in equilibrium incumbents also respond to the higher wages offered by poachers and therefore choose to increase the wage of workers after each counteroffers. Thus, wages increase with tenure despite firms knowing more about the worker preference over time.

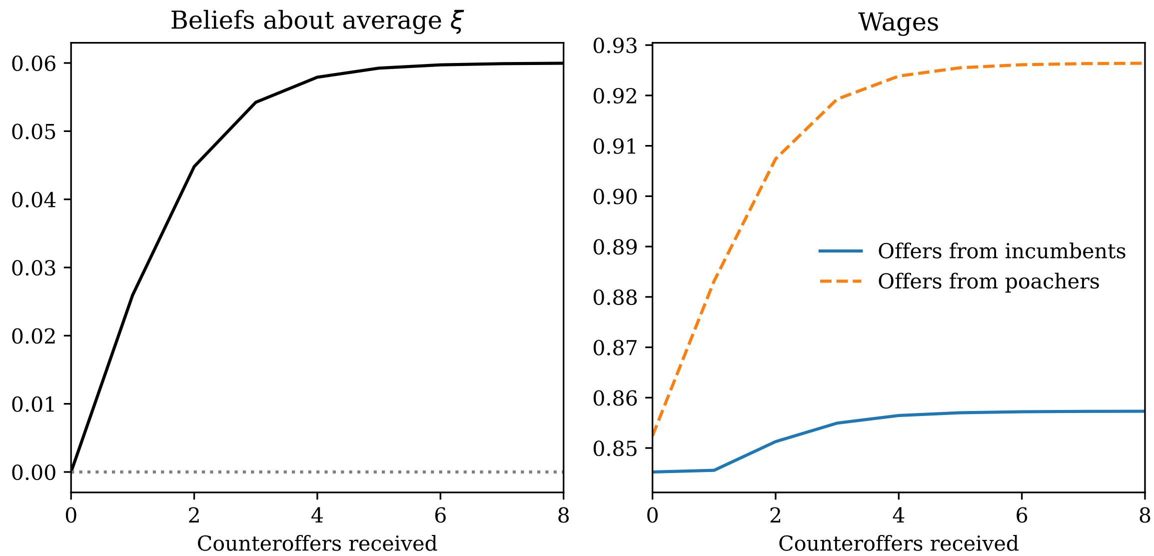


Figure 3: Belief and wage dynamics following counteroffers.

4.4 Inefficient Job-to-Job Mobility

This subsection shows that job-to-job (EE) mobility is inefficient in the equilibrium allocation. For simplicity, we focus exclusively on inefficiencies in EE mobility. As is well known, job ladder models may feature additional inefficiencies related to vacancy posting, market tightness, and congestion externalities (see Fukui and Mukoyama (2025)). We abstract from these forces, which are orthogonal to our mechanism, and isolate inefficiencies in job-to-job mobility that, as we will show, are generated by incomplete information about workers' preferences.

We proceed in two steps. First, we characterize optimal EE mobility in a relaxed social planner's problem in which workers' preferences are observable. Second, we show that this allocation can be implemented as a constrained efficient allocation in the incomplete-information economy using state-contingent wage taxes and subsidies. Since the objective of the social planner is the same in the relaxed problem and in the constrained case, these results establish that the constrained efficient allocation coincides with the full-information benchmark.

EE Mobility in the Relaxed Planner's Problem. Consider a utilitarian social planner who observes workers' preferences and decides whether a worker should remain with the incumbent firm or move to a poaching firm. Let $S(\xi, a)$ denote the match surplus associated with a worker–firm match with preference ξ and firm productivity a. The surplus satisfies

$$S(\xi, a) = (a + \xi) + \beta\Big[\delta + s(1-\lambda)(1-\delta)\Big]S(\xi, a) + \beta(1-\delta)s\lambda \max\left\{S(\xi, a), \mathbb{E}_{\xi'}\big[S(\xi', a')\big]\right\}.$$

The planner assigns the worker to the match that maximizes joint surplus. In particular, the planner prefers job-to-job mobility whenever

$$S(\xi, a) \leq \mathbb{E}_{\xi'}\big[S(\xi', a')\big],$$

and keeps the worker with the incumbent otherwise.

The planner cares about the utilities of the worker, the incumbent, and the poacher, so that the match surplus $S(\xi, a)$ fully captures the planner's objective at the time of the EE decision.

Note that EE mobility in the relaxed planner's problem follows a cutoff rule: there exists $\xi^{PL}(a, a')$ such that the worker switches if and only if

$$\xi \leq \xi^{PL}(a, a') \quad \text{where} \quad S(\xi^{PL}, a) = \mathbb{E}_{\xi'}\big[S(\xi', a')\big].$$

Importantly, beliefs about workers' preferences are of course irrelevant for the planner's decision and can be added as a redundant state variable without affecting the allocation.

Inefficiency and Implementation of Efficient Allocation. In the competitive equilibrium, EE mobility solves the decision problem of workers', given wages w_I, w_P offerred by the incumbent and the poaching firms. A worker switches jobs if

$$W(\xi, w_I, \underline{B}') \leq \mathbb{E}_{\xi_2}\big[W(\xi_2, w_P, \underline{B}_0)\big],$$

which implies the familiar cutoff rule $\xi \leq \xi^*(w_I, w_P, z_I, z_P)$. Note that the cutoff rule does not depend explicitly on $\underline{B}$, as $\underline{B}$ affect the cutoff rule only through the wage offers w_I, w_P, as ξ^* solves

$$W\left(\xi^*, w_I\left(w, z, \underline{B}, z'\right), \xi^*\right) = \mathbb{E}_{\xi_2}\left[W\left(\xi_2, w_P\left(w, z, \underline{B}, z'\right), \underline{B}_0\right)\right].$$

Since equilibrium wages depend on beliefs $\underline{B}$, the equilibrium cutoff depends on $\underline{B}$. Crucially, this means that the equilibrium cutoff must not equal to the planner's cutoff. Thus, the competitive equilibrium is inefficient.

Consider the problem of a constrained social planner –where the planner is subject to the same information frictions as the agents. It is straightforward to note that, if such constrained planner could implement the relaxed planner's problem discussed above, then the constrained efficient allocation is indeed the solution to the relaxed planner's problem.

We show that the efficient allocation is the solution to the relaxed planner's problem. To this end, consider the constrained problem of a social planner who maximizes social welfare using state-contingent wage taxes and subsidies, taking as given the informational structure of the economy. Whenever an employed worker meets a poaching firm, the planner can impose taxes or subsidies on incumbent and poaching firms, denoted $\tau^I(w, z, \underline{B}, z')$ and $\tau^P(w, z, \underline{B}, z')$, respectively. These taxes are paid by firms and rebated lump-sum.

Lemma 2. *The planner can implement the allocation from the relaxed planner's problem by choosing state-contingent wage taxes $\tau^I(w, z, \underline{B}, z')$ and $\tau^P(w, z, \underline{B}, z')$ such that*

$$W(\xi^{PL}, w_I(w, z, \underline{B}, z', \tau^I), \xi^{PL}) = \mathbb{E}_{\xi_2}\left[W(\xi_2, w_P(w, z, \underline{B}, z', \tau^P), \underline{B}_0)\right].$$

Proof: see Appendix A.

Intuitively, wage taxes and subsidies affect firms' first-order conditions without altering match surplus, since tax revenues are rebated lump-sum. By appropriately shifting firms' incentives, the planner can implement any desired cutoff ξ^{PL} consistent with the relaxed planner allocation. Two instruments are generally sufficient to accommodate additional constraints, such as downward wage rigidity.

5 Quantitative Results

This section quantifies the role of private worker preferences in shaping wage dynamics, worker mobility and sorting. First, we estimate the model using moments from administrative data on the labor market in France, and show that our model is consistent with the evidence documented in section 2. We then quantify the implications of information frictions for EE transitions and wages by comparing our economy to a full-information benchmark, which turns out to coincide with the constrained-efficient allocation.

5.1 Estimation

We proceed in two steps. First, we set a subset of parameters to standard values. We interpret one period in the model as one quarter and set the discount factor as $\beta = 0.99$, which is consistent with an annual real interest rate of 4%. The matching technology is Cobb–Douglas, where we normalize the matching efficiency equal to 0.5 and set the matching elasticity equal to 0.5 as in Petrongolo and Pissarides (2001). Second, we estimate the remaining parameters $(b, k, s, \delta, \sigma_z, \sigma_\xi)$ by method of moments. The vacancy posting cost k, on-the-job search efficiency s, and exogenous separation rate δ are disciplined by standard labor market transition rates (UE, EE, EU). The value of home production $\bar{y}$, and the dispersions of firm productivity and worker preferences, σ_z and σ_ξ are disciplined by moments about wage and productivity changes during EE transitions.

Table 2: Moments and Parameters

	Data	Model	Parameter	Value
Quarterly UE rate	24%	24%	Cost of posting vacancy k	0.69
Quarterly EE rate	2.4%	2.2%	On-the-job search efficiency s	0.40
Quarterly EU rate	1.7%	1.7%	Separation rate δ	0.017
$E[\Delta w \mid EE]$	4.7%	6.2%	Home production $\bar{y}$	0.75
$E[\Delta z \mid EE]$	2.0%	2.8%	S.d. of productivity σ_z	0.07
$\Pr(\Delta w < 0 \mid EE)$	38%	36%	S.d. of preferences σ_ξ	0.12

Estimation results Table 2 reports the moments used in the estimation and the estimated parameters. Estimates of parameters imply that the dispersion in worker preferences is quantitatively large: $\sigma_\xi = 0.12$ is about 1.5 times the dispersion in firms' productivity $\sigma_z = 0.07$. Moreover, workers tend to sort into jobs they like: on average a worker would require a 9% wage increase to give up their current job for an average job at an equally productive firms.

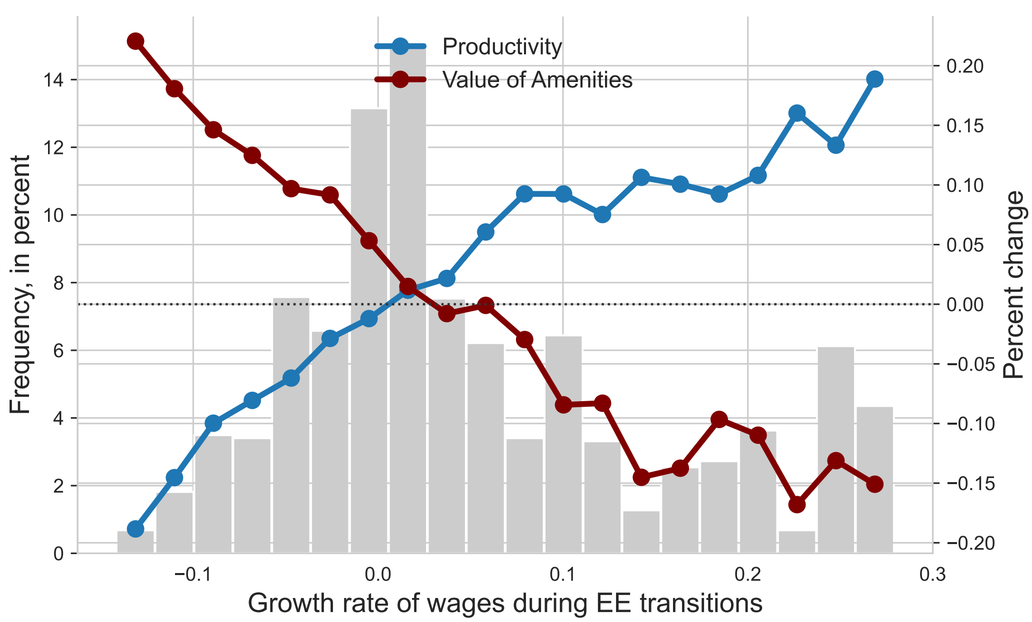


Figure 4: Changes in wages, productivities and the value of amenities for job switchers.

Figure 4 reproduces in the model the average change in productivity and worker preferences across the wage change distribution from Figure 1. As in the data, workers experiencing positive wage change during EE transitions move to more productive firms on average whereas workers experiencing wage cuts move to firms with higher amenities.

We now characterize the joint variation in productivity and preferences associated with job-to-job transitions. Figure 5 plots the joint distribution of changes in productivity Δz and changes in preferences $\Delta\xi$ following EE transitions in the model[1]. The figure shows that a non-trivial fraction of EE moves are "downhill" along at least one dimension. For instance, there are many transitions with $\Delta\xi < 0$ even when $\Delta z > 0$. Somewhat surprisingly, the are some EE transitions with $\Delta z < 0$ and $\Delta\xi < 0$, that is some workers move to a new job even if the productivity of the poacher is lower than the incumbent and the worker liked more the job she had with the incumbent firm. Intuitively, the only reason that can account for these mobility decisions are wages: EE transitions associated with $\Delta z < 0$ and $\Delta\xi < 0$ must give workers a higher wage. It is straightforward that these EE transitions are inefficient: as we illustrated in Section 4.4 wages do not implement the efficient allocation.

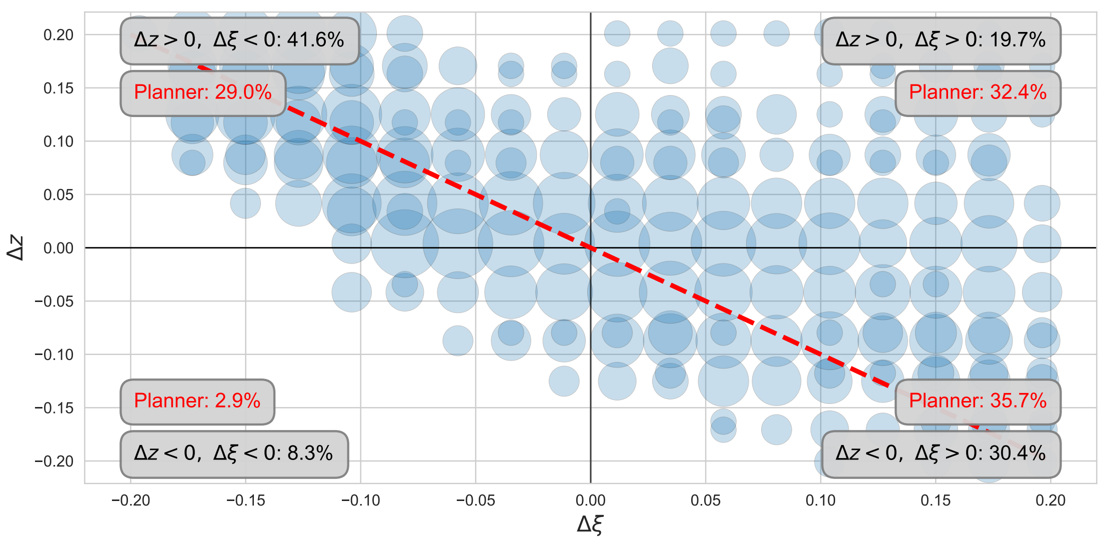


Figure 5: EE mobility: changes in preferences $\Delta\xi$ and productivity Δz.

5.2 Inefficient Job-to-Job Mobility

Although job-to-job transitions are often interpreted as beneficial, we document that some of these transitions are inefficient. To evaluate inefficiency, we compare the decentralized

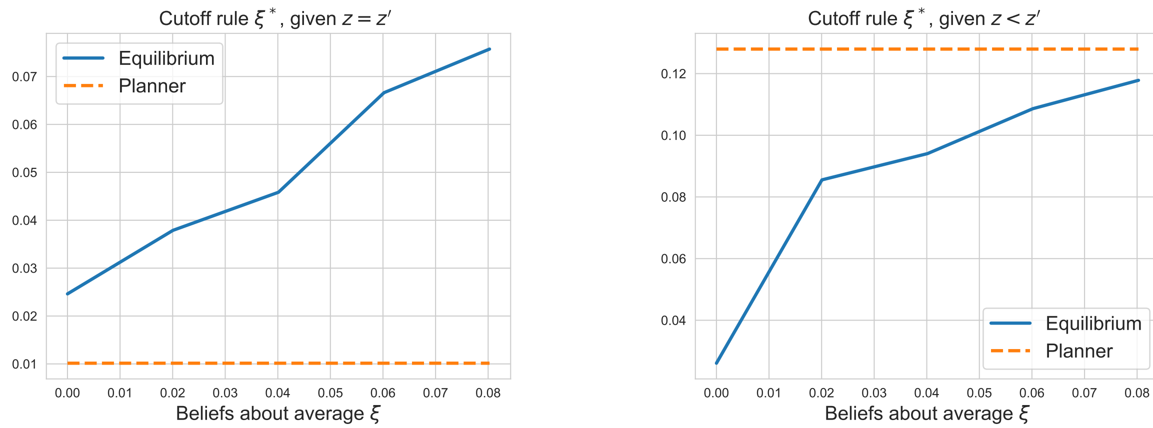
[1]Since the preference for the new job is observed only after accepting the job, we report the expected change in worker preferences.

equilibrium to the constrained efficient allocation. As we shown in Section 4.4, the constrained efficient allocation coincides with the full-information benchmark. An advantage of this result is that, by comparing the baseline model to an economy with full-information, we can shed light on how inefficiencies due to information frictions affect wages. Under full information, preferences are observed and mobility decisions maximize joint surplus, holding fixed the matching technology.

Intuitively, inefficiencies arise because incomplete information gives firms monopsony power, and the degree of monopsony power is heterogeneous across firms. Indeed, note that scaling up or a down wages by a constant would not affect job-to-job mobility, since workers care only about the wage offered by one firm relative to the wage offer received by the other firm. Thus, inefficiencies arise when two firms competing for the same worker face two different labor supply elasticities.

There are two sources of heterogeneity in labor supply elasticities across firms: preferences and productivity. Thus, we focus on two types of inefficiencies. The first case considers two firms with the same productivity z competing for a given worker, but this worker has different preferences over the jobs offered by the two firms. The second case considers two firms that differ in their productivities.

First, we illustrate why job-to-job mobility can be inefficient when two firms have the same productivity z. Figure 5 plots the relevant cutoff rule ξ^* in the competitive equilibrium (solid line) and according to the planner problem (dashed line) as a function of beliefs about the average preference of the worker ξ. When the two thresholds are the same, the equilibrium is efficient. We find that the threshold ξ^* is greater in the competitive equilibrium relative to the efficient allocation. Since workers switch jobs whenever $\xi < \xi^*$, we find that workers switch jobs more often in the competitive equilibrium. To understand the mechanism, note that the equilibrium cutoff ξ^* is increasing in beliefs about worker preferences: in equilibrium workers tend to leave more often jobs that they like. The reason behind this result is that the labor supply elasticity is decreasing in the belief about worker preferences, meaning that the more a worker likes the job the higher will be the markdown on the wage, all else equal. Intuitively, workers switch jobs too often because they do not want to signal that they like their current job, as that would limit their future labor market opportunities.



(a) Same productivity: $z = z'$ (b) Different productivities: $z < z'$

Figure 6: Inefficient EE: cutoff rule ξ^* as a function of beliefs.

Second, we illustrate why job-to-job mobility can be inefficient when a worker faces wage offers by two firms that differ in their productivities. The right panel of Figure 5 plots the cutoff rule ξ^* when the poacher is more productive than the incumbent in the competitive equilibrium (solid line) and according to the planner problem (dashed line). To show how the mechanism described above extend to this case, we plot these thresholds as a function of beliefs about the average preference of the worker ξ. We find that the threshold ξ^* is lower in the competitive equilibrium relative to the efficient allocation. Since workers switch jobs whenever $\xi < \xi^*$, we find that workers switch jobs too little toward more productive firms. As a result, reallocation toward high z firms is muted relative to the constrained-efficient benchmark. The reason for this result is that firms with high productivity face a steeper labor supply curve. Indeed, they expect workers to join them with a high probability, and the elasticity of this probability to an increase in the wage is low. Conceptually, it is similar to the inefficiency described above: the firm that is more likely to win the worker is the one with a rigid labor supply curve.[1] In the first case, we had that not enough workers keep jobs that they like. In this case, we have that not enough workers flow from low productivity firms to high productivity firms.

We now quantify the aggregate implications of inefficient EE mobility. Figure 5 reports the share of EE transitions with positive productivity changes and positive preference changes in the efficient allocation. The planner would allocate fewer transitions with negative productivity and preference changes relative to the competitive economy and much more transitions with positive changes in both productivity and preferences. Table 3 reports aggregate moments from the competitive equilibrium and the planner allocation that

[1]This mechanism is consistent with evidence from Berger, Herkenhoff, and Mongey (2022) that larger firms face a steeper labor supply curve.

is equivalent to the full-information benchmark as discussed in Section 4.4.

Table 3: Aggregate Effects of Inefficient Job-to-Job Mobility

	Equilibrium (Incomplete Info.)	Planner (Full Info.)	Difference
EE transition rate	2.2%	2.1%	+0.1pp
Average productivity z	1.036	1.038	−0.2%
Average preference ξ	0.10	0.07	+30%
Match surplus $z + \xi$	1.34	1.32	+2%
Unemployment rate	13%	7%	+6pp

Two patterns emerge. First, the equilibrium exhibits excess EE transitions relative to the full-information benchmark. As we discussed in the previous section, some workers switch jobs too often in the competitive equilibrium, while some workers switch jobs too little. This excess churn is primarily driven by workers switching jobs too often to similar firms, motivated by the desire to avoid revealing a high ξ. Second, equilibrium sorting toward high-productivity firms is weaker, lowering average productivity by about one percent. This result is driven by workers switching jobs too little toward more productive firms. Overall, the lower productivity and higher EE transition rate reduces firm surplus, which increases the unemployment rate.

5.3 Implication for wages

Finally, we study how incomplete information about worker preferences affect wages. We compare the equilibrium allocation to the full information benchmark. Intuitively, incomplete information affects wages in two opposite ways.

First, incomplete information may lead to higher wages as workers benefit from an information rent. Indeed, standard compensating differentials fail with incomplete information and some workers who really like their job can also have a high wage. On the contrary, standard models of price discrimination with full information would imply that wages are lower in the full information benchmark as firms can extract the rent (Postel-Vinay and Robin, 2002). Second, incomplete information may lead to lower wages as it decreases competition between firms in the labor market. Indeed, because of incomplete information firms face an upward sloping labor supply curve, which lead them to lower wages offered to workers. With perfect information, firms compete for workers according to Bertrand competition and thus offer higher wages on average.

Quantitatively, we find that the information rent effect of information friction dominates. Table 4 compares wages in the decentralized equilibrium to the full-information benchmark.

Wages are higher under incomplete information. Wages are particularly lower for workers with longer tenure because the competitive effect, which is weaker with imperfect information, is stronger at high tenure. We also find that wage dispersion is lower with private information because workers are less likely to receive large wage increases when they receive counteroffers, whether they decide to stay or leave.

Table 4: Aggregate Effects on Wages

	Equilibrium (Incomplete Info.)	Full Info. (Benchmark)	Difference
Average wage	0.94	0.90	+4%
1 year of tenure	0.92	0.81	+14.3%
5 years of tenure	0.94	0.88	+6.3%
10 years of tenure	0.95	0.93	+2.3%
Wage dispersion	7.4%	12.9%	$-5.5pp$

6 Conclusion

This paper studies how worker preferences for jobs shape wages, job-to-job mobility, and sorting in frictional labor markets. We develop a dynamic search model in which workers have persistent preferences for jobs that are privately observed, while firms learn about these preferences over time from workers' mobility decisions. This learning process endogenously links wages, beliefs, and mobility, and generates dynamic monopsony power.

Our first contribution is to develop a new tractable dynamic framework in which worker preferences are private information but gradually revealed through job-to-job transitions. We show how firms optimally condition wage offers on their beliefs about worker attachment, and these beliefs evolve endogenously over time. This framework allows us to study wage dynamics and job-to-job mobility, bridging static monopsony models and dynamic search models.

Our second contribution is to study whether job-to-job mobility is efficient. While job-to-job mobility is often viewed as a mechanism that improves allocation, we show that it can be inefficient when preferences are private information. Workers switch jobs too often among similar firms in order to preserve bargaining power, and too infrequently toward more productive firms because higher-productivity employers face steeper labor supply curves. We show that the full-information allocation is constrained efficient and can be implemented with appropriate policy instruments. This isolates incomplete information about job amenities as a distinct source of inefficiency in job ladders.

Our third contribution is quantitative. Estimating the model, we find that dispersion in worker preferences is large and that incomplete information about worker preferences has meaningful aggregate effects. Incomplete information depresses wages, especially at long tenure, and reduces wage inequality. While private information can in principle generate information rents, we find that the dominant force is reduced competition across firms, leading to lower wages overall. Inefficient job-to-job mobility also generates misallocation and welfare losses, lowering aggregate productivity relative to a benchmark with observable preferences.

Overall, our results highlight the importance of accounting for worker preferences and learning when studying wages, mobility, and labor market efficiency.

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A Proofs

A.1 Proof of Lemma 1

The reservation threshold $\xi^*(w_I, w_P, z_I, z_P)$ is implicitly defined by

$$W(\xi^*, z_I, w_I, \xi^*) = \mathbb{E}_{\xi_2 \sim B_0}\left[W(\xi_2, z_P, w_P, B_0)\right].$$

We first consider changes in the incumbent wage w_I. The worker's value function $W(\xi, a, w, B)$ is increasing in the wage w. Holding (w_P, z_I, z_P) fixed, an increase in w_I raises the left-hand side for any given ξ^*, while the right-hand side is unaffected. To restore equality, ξ^* must decrease. Hence, ξ^* is decreasing in w_I.

Next, consider changes in the poaching wage w_P. Holding (w_I, z_I, z_P) fixed, an increase in w_P raises the right-hand side of the indifference condition, while the left-hand side is unaffected. To restore equality, ξ^* must increase. Hence, ξ^* is increasing in w_P.

This establishes the result. □

A.2 Proof of Proposition 1

The next two proofs assume that the distribution of preferences is Pareto. We are working on updating the proofs to the case of the uniform distribution.

The incumbent chooses w_I to maximize

$$G_I(w_I; w_P, z_I, z_P, B) = \left[1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid B)\right] \Pi(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I).$$

We distinguish two cases.

Case 1: $\xi^* > B$. Under a Pareto distribution, the retention probability is

$$1 - F(\xi^* \mid B) = \left(\frac{B}{\xi^*}\right)^{\alpha}.$$

Maximizing G_I is equivalent to maximizing $\log G_I$:

$$\log G_I = \log(1 - F(\xi^*(w_I, w_P, z_I, z_P) \mid B)) + \log \Pi(w_I, \xi^*(w_I, w_P, z_I, z_P), z_I).$$

Beliefs B enter only through the first term. Differentiating with respect to B yields

$$\frac{\partial \log G_I}{\partial B} = \frac{\partial}{\partial B}\left[\alpha \log B - \alpha \log \xi^*\right] = \frac{\alpha}{B} > 0.$$

Moreover, since $\xi^*(w_I, w_P, z_I, z_P)$ does not depend on B conditional on wages and productivities,

$$\frac{\partial^2 \log G_I}{\partial w_I \, \partial B} = 0.$$

Thus, $\log G_I$ has weakly increasing differences in both (w_I, B) and $(w_I, -B)$. By Topkis' Theorem, the incumbent's best response $w_I^*(w_P)$ is independent of B in this region.

Case 2: $\xi^* \leq B$. If $\xi^* < B$, the worker stays with probability one under the Uniform belief, since $\xi \geq B$ almost surely. In this case, the incumbent can lower the wage until the constraint $\xi^* = B$ binds. When B increases, maintaining $\xi^* = B$ requires lowering w_I, given that ξ^* is decreasing in w_I (Lemma 1). Hence, the incumbent's best response is decreasing in B in this region.

Combining the two cases implies that the incumbent best response $w_I^*(w_P)$ is weakly decreasing in B. □

A.3 Proof of Proposition 2

The poaching firm chooses w_P to maximize

$$G_P(w_P; w_I, z_I, z_P, B) = F(\xi^*(w_I, w_P, z_I, z_P) \mid B) \, \Pi(w_P, B_0).$$

We again distinguish two cases.

Case 1: $\xi^* > B$. Consider the log objective

$$\log G_P = \log(F(\xi^*(w_I, w_P, z_I, z_P) \mid B)) + \log \Pi(w_P, B_0).$$

Since the initial distribution of ξ is Pareto,

$$F(\xi^* \mid B) = 1 - \left(\frac{B}{\xi^*}\right)^{\alpha}.$$

Differentiating with respect to B yields

$$\frac{\partial \log G_P}{\partial B} = \frac{1}{F(\xi^* \mid B)} \left[-\alpha \frac{B^{\alpha-1}}{\xi^{*\alpha}}\right] < 0.$$

Using Lemma 1, ξ^* is increasing in w_P, so $\partial \xi^* / \partial w_P > 0$. It follows that the cross-partial derivative $\partial^2 \log G_P / (\partial w_P \, \partial B)$ is positive. Therefore, $\log G_P$ has increasing differences in

(w_P, B). By Topkis' Theorem, the poaching firm's best response $w_P^*(w_I)$ is increasing in B in this region.

Case 2: $\xi^* = B$. In this case, the worker never switches, so $G_P = 0$ and the poaching firm's payoff is flat in w_P. If the equilibrium involves the poaching firm setting the maximal feasible wage (as in the slides), an increase in B does not affect the best response. Hence, $w_P^*(w_I)$ is independent of B in this region.

Combining the two cases implies that the poaching firm's best response $w_P^*(w_I)$ is weakly increasing in B. □

A.4 Proof of Lemma 2

Fix a meeting between an employed worker at the incumbent firm and a poaching firm, and fix the state

$$(w, z, B, z') \equiv (w_I, z_I, B, z_P).$$

Let $\xi^{PL}(z_I, z_P)$ denote the cutoff for efficient job-to-job mobility in the relaxed planner's problem.

Step 1. For any pair of wage offers (w_I, w_P), the worker's switching decision in the competitive equilibrium is characterized by a cutoff $\xi^* = \xi^*(w_I, w_P, z_I, z_P)$ solving

$$W(\xi^*, z_I, w_I, \xi^*) = \mathbb{E}_{\xi_2}\big[W(\xi_2, z_P, w_P, B_0)\big].$$

By Lemma 1, the cutoff ξ^* is decreasing in w_I and increasing in w_P. Therefore, implementing the planner's target cutoff ξ^{PL} is equivalent to implementing a pair of wages (w_I, w_P) that satisfy

$$W(\xi^{PL}, z_I, w_I, \xi^{PL}) = \mathbb{E}_{\xi_2}\big[W(\xi_2, z_P, w_P, B_0)\big]. \tag{11}$$

Step 2. Consider a constrained planner who can impose state-contingent wage taxes or subsidies on employers, denoted by $\tau^I(w, z, B, z')$ for the incumbent and $\tau^P(w, z, B, z')$ for the poaching firm. These taxes are paid by firms and rebated lump-sum to entrepreneurs. Workers are assumed not to be able to hide outside offers, so taxes can be conditioned on the relevant state at the time of the meeting.

Consider the poaching firm. With a tax τ^P, its problem is

$$\max_{w_P} \Big\{ F(\xi^*(w_I, w_P, z_I, z_P) \mid B)\, \Pi(w_P, B_0; \tau^P) \Big\}.$$

Because tax revenues are rebated lump-sum, the level of profits is unaffected, but the marginal return to changing the wage is scaled by the wedge $1+\tau^P$. The poaching firm's first-order condition can therefore be written as

$$\underbrace{\frac{\partial F(\xi^* \mid B)}{\partial \xi^*}\frac{\partial \xi^*}{\partial w_P}\Pi(w_P, B_0)}_{\text{poaching}} + \underbrace{F(\xi^* \mid B)\frac{\partial \Pi(w_P, B_0)}{\partial w_P}\big[1+\tau^P(w,z,B,z')\big]}_{\text{profits}} = 0. \tag{12}$$

Relative to the competitive equilibrium, the only difference is the multiplicative factor $1+\tau^P$ on the marginal profit term.

Step 3. Equation (12) implies that, holding (w_I, z_I, B, z_P) fixed, the poacher's optimal wage is monotone in τ^P. A sufficiently large positive tax τ^P makes the profit term more negative and induces the poaching firm to lower its wage relative to the competitive equilibrium. Conversely, a sufficiently negative tax (a subsidy) increases the poaching firm's incentive to raise wages. Through this channel, the planner can shift the poacher's best response and thereby control the induced cutoff ξ^*.

If downward wage rigidity or other constraints limit the adjustment of w_I, the planner can additionally use the incumbent tax $\tau^I(w,z,B,z')$ to shift the incumbent's best response. With two instruments, the planner can both satisfy feasibility constraints and implement the indifference condition (11).

Hence, for every state (w,z,B,z'), the planner can choose taxes $\tau^I(w,z,B,z')$ and $\tau^P(w,z,B,z')$ such that the wage offers induced by firms' best responses satisfy

$$W(\xi^{PL}, w_I(w,z,B,z',\tau^I), \xi^{PL}) = \mathbb{E}_{\xi_2}\big[W(\xi_2, w_P(w,z,B,z',\tau^P), B_0)\big],$$

thereby implementing the allocation of the relaxed planner's problem in the constrained economy.