Expectations matter:
Job prospects and turnover dynamics

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Abstract

This paper presents evidence on the effects of worker expectations on labor turnover, a topic largely ignored in the voluminous literature on labor mobility. Two survey instruments related to expected job duration and chances of promotion in the National Longitudinal Surveys of Youth are used to analyze the role of job prospects in predicting turnover dynamics. The key empirical finding is that workers with favorable job assessments have a lower and flatter tenure-turnover profile—i.e. the well-known negative structural relationship between the turnover rate and job tenure-than their counterparts with less favorable job assessments. This finding is consistent with search-and-matching theories that explicitly incorporate heterogeneity of prior beliefs about match quality.
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1. Introduction

Labor mobility has been a central topic in economics especially since the advent of human capital and search-and-matching theories. These workhorse theories have provided the basic framework to analyze compensation and labor turnover as outcomes of

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individual investment decisions. It is now common knowledge that investments in firm-specific skills and in the location of "good" matches lead to more durable employment relationships. Moreover, the accumulation of firm-specific skills (due to on-the-job training) and learning about match quality (due to on-the-job performance signals) are the most widely accepted explanations for why worker-firm separations are less likely to occur as the employment relationship ages.[1] Although the role of on-the-job training in predicting labor market outcomes, including job turnover, has been widespread, direct evidence of match quality is largely absent in the voluminous empirical literature on labor mobility. This paper attempts to fill this gap by using data on worker assessments about job prospects to analyze the direct effects of match quality on labor turnover.

Two survey instruments in the National Longitudinal Surveys of Youth (NLSY) are related to worker assessments about their future job prospects. The first instrument asks how long workers expect to remain with their current employer, and the second instrument asks whether workers agree with the statement that their chances of a future promotion are good. The answers to these questions are likely to reflect prior assessments of the quality of their employment relationship since expected job duration and promotion chances are directly related to significant job outcomes in the future. The fact that prior assessments of match quality are an important determinant of job value, and thus of various labor market outcomes including turnover, should be of no surprise to economists-after all, modern finance theory is built around this idea. However, the empirical literature on turnover has not explicitly focussed on worker expectations as a possible determinant of turnover. In standard turnover analyses the key empirical determinants are contemporaneous outcome variables such as current wages, tenure and experience. The exclusion of "expectations" from the standard list of explanatory variables is most likely due to the lack of such information in most micro survey data sources. The strong evidence presented in this paper of the effects of worker expectations on turnover is hopefully only the first step towards a more comprehensive analysis of the role of opinion data in predicting labor market outcomes.

To preview the main findings of the paper: workers with less favorable expectations—i.e. those who expect to remain on the job for a short duration and those who believe that they have poor chances of promotion—have a substantially higher turnover rate and a more steeply declining turnover rate with job tenure than their counterparts with more favorable expectations. For example, the initial turnover rate for those who expect to remain for less than a year on the job is more than double the rate for those who expect to stay for three or more years on the job. However, conditional on remaining in the same job for three additional years, the turnover rate of those who expected to remain on the job for

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[1] There are two broad types of explanations for this ubiquitous negative correlation between turnover rates and job tenure (Topel and Ward, 1992; Black et al., 1990). The first type appeals to unobserved heterogeneity among workers: if observationally identical workers have different fixed turnover propensities due to unobserved heterogeneity, then the observed turnover rate declines as workers sort themselves in or out of a firm according to their fixed turnover propensities. The second type of explanation of the negative correlation appeals to "duration dependence:" it claims that the turnover rate declines with tenure because individual turnover propensities decline with work experience at a firm. Human capital and job matching theories are examples of this latter type of explanation.

less than a year falls dramatically and approaches the turnover rate of those who expected to remain for three or more years. A similar turnover pattern holds among workers who report poor chances of promotion compared to their counterparts with more favorable promotion prospects. These effects of worker expectations on the time distribution of turnover hold up in multiple regression analyses that account for a host of other factors that are likely to be correlated with both expectations and turnover, and are robust to various model specifications and fixed effects corrections. Moreover, in a restricted sample, the negative impact of chances of promotion on turnover rates persists even after controlling for subsequent actual promotions.

It is not surprising that workers who expect to stay for a short duration and those who believe they have poor promotion prospects are indeed more likely to separate from their employers. The large and significant net effects of worker expectations on turnover clearly highlight the predictive content of direct reports of match quality. These job assessments clearly reflect pecuniary and non-pecuniary dimensions of a job that are unobservable to the econometrician. And, of course, such factors are likely to determine future job outcomes including turnover. The basic ideas of search-and-matching theories can indeed provide a somewhat more formal explanation for these findings.

First, search theory can easily explain why less favorable expectations will be correlated with higher turnover rates. For example, on-the-job search implies that unfavorable assessments reflect matches that were good enough to accept but not good enough to keep workers from searching for better outside job options. Since on-the-job search is likely to increase worker-firm separations, poor assessments will be correlated with higher turnover rates. On the other hand, the salient feature of job matching is learning about the quality of an employment relationship while working on the job. Hence, unfavorable job assessments could be the result of poor on-the-job performance signals, implying that the match is not great but that it is also not poor enough for the worker to have quit the job already. Of course workers with relatively poor assessments about their match quality would be at higher risk of dissolving their employment relationships in the near future.

Second, selection ramifications of these search-and-matching theories can also account for why turnover rates fall much more rapidly for those with low expectations than for those with high expectations. If the variance of match quality is relatively high among workers with low expectations (since match quality is likely to fall on a continuum) then the average match quality of this sample of workers will improve more rapidly over time because those with the poorest match quality will more quickly self select out of the sample by turning over. As a consequence, the observed turnover rate will decline more sharply for workers with poor expectations. In the matching framework, job assessments are likely to change over time because of the arrival of new signals about job performance. As a result, the expectations of some workers will change from an initially favorable job assessment to a less favorable assessment later. Since workers who change to more favorable job assessments are less likely to turnover, they will constitute an increasingly higher fraction of the sample of workers who initially reported poor job prospects. Hence the turnover rate of this sample will decrease with job tenure. For workers with initially favorable expectations there is less scope for improvement in their job assessments and therefore their turnover is likely to decline by less with job tenure compared to their

counterparts with less favorable assessments.[2] The model presented in Section 2 follows the logic of this matching explanation.

The model in Section 2 incorporates key elements of search-and-matching theories—i.e. heterogeneity of prior assessments about match quality and the updating of such priors. The derivation of a tractable relationship between prior job assessments and the time distribution of turnover provides a simple theoretical framework to guide the empirical model specifications. These analytics highlight the idea that what people expect will happen in the future is related not only to what actually happens in the future but also to what people do in the present. So, for example, a worker who expects to receive training (or promotion) in the future—as reflected in their job assessments—will have a lower propensity to quit even prior to actually receiving the training (or promotion) the worker expects. If these prior expectations are more or less confirmed later they will continue to have a lower propensity to quit. Hence workers with favorable expectations are likely to have a lower and flatter tenure-turnover profile compared to their counterparts with poor expectations.

Before proceeding to the details of the paper, a few noteworthy issues need to be addressed. First, the empirical analysis in this paper identifies an omitted variable in the standard empirical treatment of turnover: it shows that the estimated negative effect of tenure on turnover is misleading in the absence of a proxy for prior job assessments. For example, the widely observed negative coefficient of tenure on turnover has been routinely interpreted as an effect of firm-specific training. But if workers who in fact receive firm specific training also have more favorable priors of receiving such training in the future then they are likely to have a lower and flatter tenure-turnover profile. This amends Mincer and Jovanovic's (1981) prediction that steeper [negative] slopes and eventually lower levels of turnover characterize tenure functions of large firm-specific capital investors. The large estimated differences in tenure effects across different prior job assessments show why it is misleading to interpret the negative tenure effect on turnover as simply indicative of large firm-specific capital investors.[3] Of course, there are other well known explanations for this finding. The prominent alternative explanation as mentioned earlier is the mismatch theory (Jovanovic, 1979a). Note that in the standard matching framework the interpretation of the downward sloping tenure-turnover profile is based on the assumption of uniform and uninformative priors. If differences in prior information are unaccounted for then the estimated negative effect of tenure on turnover will conflate the differential tenure effects on account of this heterogeneity of prior expectations.

Second, although this paper focusses on heterogeneity of prior job assessments across workers, it does not empirically address the source of variation in these assessments.

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[2] A test to discriminate between the heterogeneity explanation and the matching explanation is to implement a "job" specific fixed effects model. If the sharply declining turnover rate among workers with less favorable job prospects is because of greater heterogeneity of their match quality then correction for this heterogeneity should nullify the "expectations" effect on the tenure effect on turnover. Unfortunately, given the very short duration of jobs this correction is infeasible.

[3] The important point is that tenure is a proxy for potentially many factors that impact turnover, and hence the lesson is perhaps that we need to be careful in how we interpret the coefficient estimates of proxy variables by considering what they represent and how it might interact with other variables in a turnover equation.

Clearly this is an important issue that underpins the role of prior expectations in predicting turnover. Simon and Warner (1992) argue that different job search methods are likely to be more or less informative about prospective match quality. In particular, they conjecture that job applicants referred by current employees lead to more precise information about match quality, and find empirical evidence to support numerous implications of this hypothesis. Both, Simon and Warner's study and the results in this paper highlight why the source of informational heterogeneity among workers is an important question to address.

Finally, the paper does not explicitly distinguish voluntary and involuntary job separations. Since the example presented in Section 2 is motivated from the worker's perspective it may appear as a model only of worker-initiated job separations, i.e. as encompassing only quits, and not also layoffs. This, however, is not the case. Given the standard matching assumption that prior information is symmetric across the worker and employer, the implications of these theoretical models are the same for job separations of both types. Hence search-and matching models are typically interpreted as encompassing both voluntary and involuntary job separations.[4] However, in the empirical section results for total separations and quits are separately presented.

The remainder of the paper is organized as follows. The next section presents a stylized version of a search-and-matching model and explicitly derives the turnover rate as a function of a worker's prior job assessments and job tenure. Section 3 presents the empirical analysis. First, the NLSY data and the survey instruments on job prospects are described. Second, the estimation framework is detailed. Third, the empirical results are presented and discussed. Section 4 concludes with a brief summary and discussion of further applications.

2. A simple model

This section presents a simple model to illustrate the link between prior job assessments and turnover dynamics. Although the model is highly stylized, its implications are tractable and it provides a theoretical underpinning to the empirical model specifications.

Assume match quality (MQ) of each worker-firm pair is either good (G) or bad (B), reflecting a high output or a low output match, and that neither workers nor firms know their match quality with certainty at the start of an employment relationship. However, the arrival of performance signals on the job reveals further information about match quality as the employment relationship ages. Suppose in every period the worker and the firm observe a performance signal μ that is either high (H) or low (L). Since these signals are informative about match quality, assume in particular that:

$$1 = Pr(\mu = H | MQ = G) > Pr(\mu = H | MQ = B) > 0 \qquad (1)$$

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[4] See McLaughlin (1991) who argues that in models where labor turnover is always efficient or joint wealth maximizing, there is no meaningful economic distinction between quits and layoffs.

Good matches never observe an L signal, but bad matches sometimes do. If firms compensate workers on the basis of expected match quality then a worker will quit after observing an unfavorable L signal. Hence the turnover rate at time t is the probability of observing an L signal between t and $t+1$, conditional on surviving up to time t–i.e. $\Pr(\mu_{t+1}=L|t$ observations of H signals).

To explicitly derive the turnover rate, the distributional assumptions of the priors of observing a L signal and the evolution of signals need to be specified. Assume that a worker's prior about the probability of observing a H signal is Beta distributed with the parameters δp and $\delta(1-p)$. Hence the mean and precision of this prior distribution are p and $(\delta+1)/(p(1-p))$, respectively. The mean and precision of the posterior distribution, conditional on t observations of H signals, are given by:

$$\frac{\delta p + t}{\delta + t} \quad \text{and} \quad \frac{(\delta + t)^2(\delta + t + 1)}{\delta(\delta p + t)(1 - p)},$$

respectively. Note the turnover rate is simply one minus the probability of observing a H signal, conditional on having observed only H signals in the past. Hence the turnover rate at time t, denoted by $T(t)$, is given by:

$$T(t) = \frac{\delta(1 - p)}{\delta + t} \tag{2}$$

Eq. (2) defines the tenure-turnover profile as a function of prior assessments—i.e., of the mean p and precision index δ—and of tenure t. Clearly, the turnover rate $T(t)$ is a decreasing convex function of tenure. The effect of the mean of prior assessments on turnover is easily determined. If p increases the turnover rate falls and the turnover profile flattens. This is verified by taking the first derivative and second partial derivative of $T(t)$ with respect to p and t,

$$\frac{\partial T(t)}{\partial p} = -\frac{\delta}{\delta + t} < 0 \quad \text{and} \quad \frac{\partial^2 T(t)}{\partial p \partial t} = \frac{\delta}{(\delta + t)^2} > 0,$$

respectively. These comparative statics imply that workers who have high expectations about match quality will have a lower and flatter tenure-turnover profile-the key prediction that guides the empirical analysis of "expectations" effects on turnover.

Although the details of how performance signals evolve and their link to match quality is highly stylized in this example, the key result is that tenure is a proxy for good signals about match quality. In the absence of performance signals this is a standard result of the matching framework, namely, that the reason why turnover decreases with tenure is because those who survive for long must have received better signals; otherwise of course they would have left earlier. The obvious advantage of the assumption that a L signal implies a bad match and a H signal implies only a possible good match, is that it generates a very tractable relationship between turnover and tenure. In a more general setting such as Jovanovic's matching model (1979), the relation between turnover and tenure is less straightforward. For example, the turnover rate can initially increase before it starts to decrease with tenure. The point, however, is that in "matching environments" turnover eventually decreases with tenure, a feature that is also clearly shared by the stylized model presented here.

A limitation of matching models in general is that they do not typically incorporate the role of actual job–related outcomes in predicting turnover, especially of those outcomes that may be directly related to priors. As a consequence, tenure is the only proxy for realized outcomes or performance signals. However, in a Bayesian framework the interesting implication is that priors have an effect on posterior assessments even after controlling for performance signals. In the context of our model a worker who has favorable priors about match quality will have a lower turnover rate compared to a worker who has unfavorable priors even if both workers receive the same number of H signals. A more pertinent example is whether a worker who has favorable expectations of promotion is still less likely to quit compared to a worker who has less favorable expectations given that both workers actually receive promotions.

The role of realized outcomes is especially important for the empirical analysis. Clearly the NLSY data contain a host of job related variables including, among others, information on wages, training, promotions, and subjective evaluations of overall job satisfaction. Thus the important question is not simply whether expectations are related to such outcomes and turnover, but whether expectations have an effect on turnover after controlling for these various job related outcomes. These considerations guide some of the empirical specifications below.

It is important to note that if all workers share the same prior information then the interpretation of the estimated effect of tenure on turnover coincides with the job matching interpretation. Put differently, tenure would be a sufficient statistic for updated information since priors are assumed to be uniform across all workers. But if workers have different priors about job prospects, and thus react differently to information revealed on the job, then the estimated relationship between tenure and turnover will reflect this heterogeneity. Hence the inclusion of prior assessments in a turnover regression corrects for a potential bias on the tenure coefficient resulting from informational heterogeneity. Moreover, this bias on the estimated tenure effect on turnover cannot be corrected by including proxies for prior job assessments simply as independent variables in a turnover regression. Theoretical considerations show that such priors not only have a direct effect on the turnover level but that they also determine the negative effect of tenure on turnover. Thus the empirical specifications of turnover models must allow priors to impact the entire time distribution of turnover.

One final point to note is that even in this very stylized setup turnover is also a function of the precision of prior assessments. Given the absence of direct information about the precision of a worker's priors, the focus of this paper is not on the effects of precision per se on turnover dynamics. Note however that updating of high precision priors lead to minor revisions of priors and hence flatter turnover profiles could be correlated with high precision priors. Therefore a related question is whether the mean and precision of prior expectations are likely to be correlated.

Although this paper addresses the role of prior information in determining turnover dynamics, it does not address the source of differing prior assessments about job prospects. Various factors are likely to contribute to different search strategies, including search costs, training complementarities, access to networks, etc. As a consequence of

more or less search effort, prospective workers will have different expectations about match quality. One way to think about higher search effort is in terms of obtaining signals about match quality prior to accepting a job. Differential search effort coupled with an option value argument — for a given mean, a high variance is attractive since you can always leave your job if things turn out poorly — suggests a positive correlation between the mean and precision of observed priors. A worker will decide to search more or less intensely by comparing the marginal gains and costs of an extra unit of search effort. The cost is of course the time and effort to seek out information about a prospective job, and the benefit of such information is the faster resolution of match quality. Since workers are less likely to accept jobs that they know are bad, prior search effort helps to weed out bad matches. If search costs differ among workers then this option value argument implies a positive correlation between the mean and precision of priors about match quality.[5]

If the survey questions related to job prospects were collected for a longer duration of the NLSY panel a more careful empirical analysis of the correlation of the mean and precision of prior job assessments may have been feasible. Given the data limitations on job prospects, the evidence — based on job satisfaction and an imputed precision measure from Eq. (2) — presented in the paper is indirect and only suggestive of a possible correlation between the mean and precision of priors.

3. Empirical analysis

3.1. NLSY data and job prospects

The empirical analyses are based on NLSY data that track a panel of 12,686 young women and men, first interviewed in 1979. The availability of work histories of early careers, including detailed information on job duration and separation, labor market experience, wage rates, and other individual and job characteristics, make this data ideal for a rigorous analysis of turnover dynamics. Only Current Population Survey (CPS) designated jobs are tracked, although the NLSY have information on additional jobs. The CPS job is typically the main or most recent job, and more job–related information is available about CPS jobs.

In addition, the NLSY data contain two survey instruments directly related to future job prospects. The first instrument is based on the question: "how much longer do you intend to stay at this [current] job?" This question is asked only in 1980–1982. The second instrument is based on responses to the statement: "chances of promotion are good," and it is asked in 1979–1982 and 1988. These job assessments allow an empirical investigation

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[5] Considerations other than this option value argument can of course lead to different predictions about the correlation between mean and precision of priors. For example, if workers are sufficiently risk averse then they may trade off mean versus variance in choosing jobs, and thus the relationship between mean and precision may in fact be negative. The heuristic here is to provide a benchmark for some of the empirical exercises. Although a formal derivation of the relationship between mean and precision of priors under less restrictive modeling assumptions is likely to yield further insights, it is beyond the scope of this paper.

of the role of worker expectations in predicting the time distribution of job turnover. In the first set of regression analyses I use responses on chances of promotion and expected job duration for the three survey years from 1980 to 1982. During each of these survey years the two same set of questions are asked of those respondents currently employed. I use the last reported prior for a given job in each period.[6] If a new prior is reported for the same job in a subsequent year, then tenure at reporting is redefined and tenure since reporting is set to zero. The sample data can span the years 1980–1994. The sample however is heavily biased towards the years 1980–1982, since each job is followed to its termination point, the years can span up to 1994.[7]

The turnover variable is constructed as follows: If a respondent is working at the same current CPS job at the time of the next interview year then no turnover is recorded for the current year. If the job terminates between the current and the next year survey date for whatever reason, a turnover is recorded. If the termination is voluntary then a quit is recorded. Since the surveys (till 1994) were conducted annually, the turnover and quit models estimate an annual turnover rate.

In the earlier theory section we concluded that the key predictor of turnover, in addition to job assessments, is job tenure. In the simplified model, tenure is the only proxy for favorable signals or realized job outcomes. However, tenure is an imperfect proxy for favorable signals, and thus in the empirical section many other job related variables are included as regressors. One of the shortcomings of the NLSY data is that these questions on priors are asked only in the very early years of the survey (1980 to 1982) when detailed information on other job related outcomes such as company provided training and actual promotions are not available. In addition during the early period of this survey a large percentage of the sample had not entered the labor market. Hence the empirical analyses are somewhat limited by both a smaller set of control variables and a relatively small sample size. One exception is that the question about promotion chances are also asked in 1988, and, in the survey years that immediately follow, information on actual promotions and company provided training is recorded. Hence for this limited time period it is possible to analyze the effects of promotion chances on turnover given a richer array of control variables, including actual promotions and company provided training.

3.2. Estimation framework

Although the earlier theoretical discussion focussed on the distinction between information acquired before job start and information revealed on the job, the prior job assessment questions in the NLSY are asked only of those employed at the time of the survey. Hence, responses to these questions clearly do not reflect a worker's prior assessments about job prospects at the time of job start only. Hence, I test the more general hypothesis that different assessments of job prospects imply different future time distributions of turnover. Since tenure at the time of the survey is recorded, it is possible

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[6] Using the first reported prior and carrying it forward yielded similar qualitative results.

[7] Note further that individuals enter the sample only if they are full time participants in the labor market, and hence current and returning students are excluded from the analysis.

to control for the turnover effects of time already vested with the current employer.[8] Hence, in the model specification, I allow for the time distribution of turnover to vary not only on the basis of differing assessments of job prospects, but also on the basis of tenure at the time of reporting about job prospects.

To estimate turnover profiles across different job assessments, I adopt the following estimation framework. Consider a latent turnover variable y_{it}^*, and interpret it as individual i's propensity to turnover. What is observed, however, is an indicator variable on whether the individual separates or not between period t and $t+1$ given that the individual has survived with the current employer for t periods. Hence:

$$y_{it} = \begin{cases} 1 \text{ if } y_{it}^* > 0 \\ 0 \text{ otherwise,} \end{cases}$$

and

$$y_{it}^* = \beta_0 + \beta_1 n_i + \beta_2(t_i - n_i) + \beta_3 P_i + \beta_4 P_i(t_i - n_i) + \beta X_{it} + \varepsilon_{it},$$

where i is the individual index, t_i is total number of periods the individual has been working for the current employer (tenure), and n_i is tenure at the time of reporting about job prospects. Hence $(t_i - n_i)$ is tenure on the job since reporting about job prospects. P_i is an indicator variable on whether expectations about job prospects are high, and X_{it} is a vector of individual and other characteristics that may vary across time.

In addition, consider a random effects model by assuming that the error term is given by:

$$\varepsilon_{it} = v_{it} + u_i,$$

where $Var[\varepsilon_{it}] = 1 + \sigma_u^2$ and $\rho \equiv Corr[\varepsilon_{it}, \varepsilon_{is}] = \sigma_u^2/(1 + \sigma_u^2)$.[9] This specification allows one component of the error to be correlated within individuals but not across individuals.

For example, if some individuals had a higher propensity to quit compared to some others, and if we did not have information about these individual quit propensities then we would predict that $\rho > 0$, namely, that the errors would be serially correlated within individuals. In practical terms, the inclusion of job tenure, work experience and proxies for

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[8] If the model presented earlier completely describes job turnover then this control would not be necessary since the reported "prior" summarizes all the information revealed up to that point. The fact that tenure at the time of reporting negatively impacts turnover despite the inclusion of priors suggests that tenure summarizes information beyond what is represented in these prior job assessments. A sample selection issue can of course arise because questions about future job prospects are asked only of employed workers. If the sample of workers employed are systematically different from the sample of workers not employed then our estimates of the effects of job prospects on turnover may be biased. For example, if employed workers are more future oriented than their non–employed counterparts, then their answers to questions about job prospects may be relatively more informative. Hence the negative effect of high expectations on turnover may be less significant for a randomly chosen individual than for an individual from a sample of employed workers.

[9] Another option is to use a fixed effects model. However, fixed effects models do not yield estimates for time invariant characteristics, and since for many individuals their job assessments are time invariant, this model is infeasible. Further, fixed effects models can only be estimated on observations that do not have only positive or negative outcomes. And since our data contain a large sample of individuals with such observations we would lose a large fraction of our data if we implemented a fixed effects model specification.

individual mobility propensities such as prior number of jobs held in the turnover models, reject the random effects specification.[10] Further if we assume that the error terms are logistically distributed, then the probability of turnover is given by:

$$T_i = \frac{Exp\left(y_{it}^*\right)}{1 + Exp\left(y_{it}^*\right)}$$

The parameters of this logit model are estimated using standard maximum likelihood procedures.

The coefficients on the indicator variable P_i and on its interaction with tenure since reporting, i.e., $P_i(t_i-n_i)$, reveal the intercept and slope differences of the turnover profiles. Completed tenure at the time of reporting about job prospects n_i is included in the regression to control for time already vested with the employer. In addition, a host of other control variables and higher order terms are included.

3.3. Empirical results

3.3.1. Summary statistics

Table 1 describes the key variables and presents simple descriptive statistics of the sample used in the regression analyses. The annual turnover rate is 33% and the quit rate is 22%. Average tenure at the time workers report about their job prospects is 1.6 years, tenure since reporting is about 1.9 years, and net labor market experience is a little over 5 years. For about 20% in the sample wages are set by union or collective bargaining contracts. Mean age is 24, completed years of schooling is about 12, women comprise a little less than half the sample, about 40% are married and living with their spouse, and 36% are nonwhites. These statistics reflect the fact that this is a young sample of workers in the very early part of their careers.

Table 2 shows the gross turnover and quit rates for the different response groups to the question "how much longer do you expect to stay with your current employer" and to the statement "promotion chances are good," respectively. These turnover (quit) rates demonstrate the dramatic differences in turnover (quit) dynamics between workers with favorable and unfavorable assessments: Workers who expect to remain with their current employer for a long duration and workers who expect to get promoted in the future have a substantially lower and flatter turnover (quit) profile. At the time of reporting (*Tenure*=0) the differences in turnover (quit) rates are large between those with unfavorable versus favorable job assessments. However, these differences become much smaller as tenure on the job lengthens. Of course, these job assessments are highly correlated with other key predictors of turnover dynamics, and the question is whether the net effect of these assessments on turnover dynamics remain significant and sizeable after controlling for other determinants of turnover.

One data concern is a potential attrition bias across difrent job assessment categories. For example, if workers with less favorable expectations are more likely to become

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[10] The results from a random effects specification are similar to the results from a standard logit specification, and the estimated ρ is not significantly different from zero when the full set of control variables are included.

Table 1

Variable descriptions and summary statistics national longitudinal surveys of youth (NLSY), 198-01994 (# of Observations=19,596; # Individuals=5,831)

Variable	Description	Mean	Std Dev
D1	If expected job duration less than 1 year	.20	.40
D2	If expected job duration between 1 and 2 years	.30	.46
D3	If expected job duration 3 or more years	.50	.50
P1	If not true at all that promotion chances good	.11	.32
P2	If not too true that promotion chances good	.22	.41
P3	If true that promotion chances good	.67	.47
Turnover	If separate from employer by next survey	.33	.47
Quit	If quit by next survey	.22	.42
Experience	Net labor market experience (years)	5.37	3.94
Tenrep	Tenure at reporting about job prospects	1.60	1.30
Tenure	Tenure since reporting about job prospects	1.92	2.97
Wages	Hourly real wage rate (1987 $s)	7.38	3.69
School	Completed years of schooling	12.23	1.91
AFQT	Armed forces qualifying test score	45.00	27.40
N jobs	Number of jobs ever held	3.39	2.10
Union	If wages set by collective/union bargaining	.22	.42
Jobsat1	If dislike job	.11	.32
Jobsat2	If like job fairly well	.50	.50
Jobsat3	If like job very much	.39	.49
Married	Married, living with spouse	.37	.48
Age	Age	24.00	3.82
Female	If female	.47	.50
Nonwhite	If non-white	.36	.48
RQT	Required years of training by occupation	.99	.66
Unrat	Local unemployment rate index	3.30	1.09

noninterviewers and if they were also more likely to quit then our parameter estimates would underestimate the population parameters. However, the attrition rates are uniformly about 2 percent across all the job assessment categories in the NLSY. Hence this attrition bias is not likely to be an issue in this sample.

3.3.2. Job prospects and turnover dynamics

Tables 3–5 present the main regression results of the paper. Table 3 presents logit coefficients estimates and their robust standard errors from various turnover and quit

Table 2

Turnover (quit) rates across different job assessments

Tenure	Expected Job Duration			Promotion Chances are Good:		
	< 1 year	1–2 years	3+years	Not true	Not too true	True
0	.70(.52)	.45(.29)	.28(.15)	.57(.40)	.50(.33)	.42(.27)
1	.44(.35)	.34(.25)	.20(.13)	.34(.24)	.30(.22)	.27(.19)
2	.32(.24)	.29(.23)	.18(.13)	.27(.21)	.24(.16)	.22(.17)
3	.19(.16)	.24(.21)	.18(.12)	.23(.14)	.21(.17)	.19(.14)
4+	.15(.11)	.14(.09)	.11(.08)	.16(.11)	.18(.08)	.11(.08)

Table 3

Impact of job prospects on turnover and quits (coefficients from logistic regressions; # Obs=19,596; # Individuals=5,831)

Variables	Turnover Models			Quit Models		
	Basic	Duration	Promotion	Basic	Duration	Promotion
D2/P2		−.860 (.055)	−.184 (.068)		−.771 (.054)	−.154 (.070)
D3/P3		−1.31 (.059)	−.420 (.061)		−1.26 (.062)	−.297 (.064)
D2/P2* Tenure		.226 (.034)	.047 (.033)		.196 (.038)	.042 (.038)
D3/P3* Tenure		.280 (.033)	.076 (.030)		.275 (.038)	.080 (.034)
W ages	−.513 (.065)	−.288 (.067)	−.469 (.065)	−.665 (.074)	−.439 (.075)	−.632 (.074)
Jobsat2	−.588 (.059)	−.290 (.063)	−.500 (.060)	−.567 (.060)	−.288 (.063)	−.505 (.061)
Jobsat3	−1.00 (.062)	−.472 (.068)	−.865 (.064)	−.998 (.064)	−.469 (.070)	−.902 (.067)
Tenure	.070 (.055)	−.126 (.060)	−.092 (.059)	−.066 (.064)	−.089 (.070)	−.088 (.067)
Experience	−.244 (.025)	−.213 (.026)	.245 (.025)	−.149 (.028)	−.114 (.029)	−.151 (.028)
Tenrep	−.452 (.046)	−.427 (.046)	−.469 (.047)	−.344 (.048)	−.307 (.049)	−.352 (.048)
School	−.033 (.012)	−.050 (.012)	−.032 (.012)	−.004 (.013)	−.020 (.013)	−.003 (.013)
Union	−.234 (.045)	−.201 (.046)	−.231 (.045)	−.313 (.051)	−.279 (.052)	−.309 (.051)
N jobs	.103 (.011)	.100 (.010)	.102 (.011)	.074 (.011)	.070 (.011)	.073 (.011)
Wald Chi^2	2976	3198	3020	2133	2499	2149
Pseudo R^2	.1618	.1853	.1641	.1323	.1550	.1334

Note: Models also include: higher order terms for Tenure, Tenrep and Experience, Tenure interactions with Wages and Job Satisfaction (Jobsat), AFQT scores, gender, race, marital status, and fifteen 2-digit industry dummy variables. The omitted categories for job prospects are expected job duration less than 1 year and poor promotion chances, respectively. Robust standard errors are in parentheses next to the coefficient estimates.

Table 4

Impact of job prospects on turnover and quits sample restricted to tenure less than 1 year at time of reporting about job prospects (coefficients from logistic regressions; # Obs=8,517; # Individuals=4,408)

Variables	Turnover Models			Quit Models		
	Basic	Duration	Promotion	Basic	Duration	Promotion
D2/P2		−.855 (.075)	−.242 (.102)		−.692 (.068)	−.239 (.095)
D3/P3		−1.30 (.083)	−.540 (.090)		−1.08 (.081)	−.423 (.087)
D2/P2* Tenure		.264 (.050)	.052 (.058)		.214 (.056)	.038 (.065)
D3/P3* Tenure		.304 (.048)	.090 (.050)		.258 (.055)	.075 (.053)
Wages	−.499 (.092)	−.267 (.094)	−.457 (.092)	−.578 (.098)	−.378 (−098)	−.546 (.097)
Jobsat2	−.644 (.084)	−.354 (.090)	−.525 (.087)	−.551 (.079)	−.309 (.083)	−.461 (.082)
Jobsat3	−1.09 (.089)	−.526 (.097)	−.906 (.093)	−.976 (.085)	−.487 (.093)	−.837 (.090)
Tenure	−.235 (.086)	−.271 (.093)	−.256 (.094)	−.178 (.097)	−.182 (.104)	−.191 (.103)
Experience	−.183 (.038)	−.166 (.038)	−.182 (.038)	−.099 (.041)	−.081 (.041)	−.098 (.041)
Tenrep	−2.62 (.364)	−2.60 (.369)	−2.69 (.362)	−1.67 (.353)	−1.60 (.355)	−1.71 (.351)
School	−.045 (.017)	−.061 (.017)	−.042 (.017)	.002 (.017)	−.011 (.018)	.003 (.017)
Union	−.249 (.065)	−.215 (.068)	−.243 (.066)	.286 (.069)	.252 (.071)	−.278 (.070)
N jobs	.092 (.014)	−091 (.014)	−092 (.014)	.058 (.013)	.056 (.013)	.057 (.013)
Wald Chi^2	1377	1554	1554	883	1046	909
Pseudo R^2	.1510	.1762	.1762	.1039	.1235	.1064

Note: Models also include: higher order terms for Tenure, Tenrep and Experience, Tenure interactions with Wages and Job Satisfaction (Jobsat), AFQT scores, gender, race, marital status, and fifteen 2-digit industry dummy variables. The omitted categories for job prospects are expected job duration less than 1 year and poor promotion chances, respectively. Robust standard errors are in parentheses next to the coefficient estimates.

Table 5
Predicted tenure-turnover profiles

Tenure	Expected job duration			Promotion chances are good:		
	< 1 year	1–2 years	3+years	Not true	Not too true	True
0	0.500	0.298	0.212	0.359	0.318	0.269
1	0.428	0.284	0.210	0.322	0.293	0.252
2	0.358	0.270	0.208	0.289	0.271	0.237
3	0.293	0.256	0.205	0.259	0.251	0.224
4	0.234	0.243	0.202	0.231	0.232	0.211

Note: These predicted turnover rates are generated by the estimated coefficients of the models in columns 2 and 3 of Table 3, respectively. They are evaluated at the sample means. Experience is held constant at 5 years.

model specifications. The dependent variable as mentioned earlier is whether a worker separates (quits) from his or her current employer by the next interview date. All models include a host of control variables, including wages, job satisfaction, tenure at the time of reporting about job prospects, tenure since reporting (and various interactions with this tenure variable), labor market experience,[11] completed years of schooling, Armed Forces Qualifying Test (AFQT) scores, marital status, union status, net labor market experience, number of prior jobs held, a measure of occupational training requirement, local unemployment rate, gender, race, and 15 industry indicator variables. Table 4 replicates these models after restricting the sample to those with less than one year of tenure at the time of reporting about job prospects. Table 5 presents predicted tenure-turnover profiles for the different job assessment categories.

The key finding is that the coefficients on D2 and D3 are progressively more negative, and the interaction terms with tenure are progressively more positive. Since these coefficient estimates are highly significant they show that those who expect to stay longer with their employer have lower and flatter tenure-turnover and tenure-quit profiles (see the second and fifth columns of Table 3, respectively). Similar results are obtained with P2 and P3, except that the tenure effects on turnover and quit rates between P1 and P2 are not significantly different.[12]

The inclusion of job satisfaction and wages as control variables addresses the potential concern that job prospects may only be picking up pecuniary or non-pecuniary dimensions of the job and thus have little to do with the effects of what workers think will happen in the future. The fact that favorable job prospects have a strong negative net impact on turnover and quits should allay some of these concerns. However, it is important to note that even controlling for wages and job satisfaction, these job assessments will reflect unobserved dimensions of match quality. Hence the inclusion of wages and job satisfaction does not provide conclusive evidence of the job matching hypothesis. As

[11] The higher order terms for "tenure at the time of reporting," "tenure since reporting," and experience are also included but not reported in the table.
[12] These coefficient estimates represent the differences between the omitted category-i.e. D1/P1-and hence the question arises whether the coefficients estimates of D2/P2 is significantly different from the coefficient estimates of D3/P3. Re-running these models with D1/P1 (and its interaction terms with tenure) included and with either D2/P2 or D3/P3 excluded allows us to address this question. The differences in the coefficients are significant across all models except between the interaction terms P2 * Tenure and P3 * Tenure.

indicated in the introduction, this evidence is also consistent with the hypothesis that heterogeneity of match quality is greater among those with low expectations.

Note that in the basic model, the effect of tenure (since reporting) is imprecisely estimated because the inclusion of job prospects shows that the tenure effect on turnover (and quits) varies significantly across favorable and unfavorable job assessments.

Since various other factors are included in the regression models, a short summary of some of the more notable findings are reported here. Not surprisingly, current wages reduce turnover. The marginal effects evaluated at the sample means imply that doubling the wage rate reduces the turnover rate somewhere in the range of 8 to 10 percentage points, which translates to a 25% to 30% reduction in the turnover rate given that the mean turnover rate for the sample is about 33%. Local unemployment rate, labor market experience, and completed years of schooling reduce turnover. If wages are set by union negotiation then turnover decreases by about 4 percentage points. The number of prior jobs held is strongly and positively correlated with turnover, suggesting that high turnover in the past is a strong predictor of current turnover. People satisfied with their jobs are less likely to turnover. Marital status, gender and race have no significant impact on turnover, when all the other controls are included in the turnover model specification.

Since reported job assessments are made while workers are employed, they typically do not represent a worker's job assessment at the time an employment relationship commences. Although in Table 3 we control for tenure at the time of reporting, Table 4 replicates the models in Table 3 with the sample restricted to those with less than one year of tenure at the time of reporting to better assess the role of prior job assessments on turnover dynamics.[13] Despite loosing more than half the sample the coefficients estimates are strikingly similar. Perhaps the only noteworthy observation is that the effect of good promotion prospects appear to be slightly stronger-i.e. a lower and flatter turnover profile-for this restricted sample.

To better appreciate the magnitudes of the effect of these expectations on turnover, Table 5 presents predicted turnover rates for each of the job prospects response groups for the first five years of tenure. These predicted values are computed at the mean values of the other independent variables, except of course for tenure. Note that net labor market experience is held constant at 5 years, which to a large degree explains why the predicted turnover rates are smaller in size than the gross turnover rates presented in Table 2. The monotonic decline in the turnover rate with tenure for each response group, viewed by going down each column, highlights the well-know negative tenure effect on turnover. What is striking, however, is the dramatic decrease in turnover rates with tenure for those with unfavorable job assessments.

First consider the predicted turnover rates for the three response groups regarding expected job duration. The turnover rate at tenure=0, interpreted as the intercept of the tenure turnover profile, is 50% for the lowest response group, but this rate falls dramatically to about 20% for the highest response group. Hence the intercept of the turnover profile is 125% higher for those who expect to stay for less than one year

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[13] The variable *Tenrep* is still included in the model although its range is greatly diminished. Excluding *Tenrep* hardly changes the coefficient estimates on job prospects and its interactions with Tenure.

compared to those who expect to stay for three or more years. Perhaps the more interesting fact, however, is the dramatic fall in the turnover rate for the low response group as tenure (since reporting) lengthens to five years. For example, the turnover rate falls by more than 25 percentage points over four years of tenure for the lowest response groups, and by less than 2 percentage points for the highest response group. Put differently, the predicted turnover rates, mirroring the gross turnover rates, falls so rapidly for those who expect to stay for less than one year, that, conditional on surviving 4 years, their turnover rate is less than the turnover rate of their counterparts who expected to stay for more than 1 year.[14] These predicted turnover rates not only confirm the basic prediction of lower and flatter turnover profiles among those with more favorable expectations, but also highlight the sizeable effects of expected job duration on turnover profiles.

The results for the different response groups to the statement about promotion chances qualitatively parallel the findings on expected job duration. The predicted turnover rates are not as dramatically different across the different response groups as they were previously, but still the differences are large. The turnover rate at the intercept (*tenure* = 0) goes from 36% to 27% from the lowest to the highest response group, which is still a sizeable 33% difference in the turnover rate. Note that the turnover rates across all three response categories converge after four years of tenure to around 23%. Hence the turnover rates still fall far more dramatically with tenure for the low response group than it does for the high response group, confirming that the tenure turnover profiles are lower and flatter for those who expect to be promoted than for those who do not expect to be promoted.

3.3.3. Effects of actual versus expected promotions

In a Bayesian framework priors have an impact even if realized outcomes are the same. I explicitly test this by using information on both chances of promotions and actual promotions. In the 1988 survey year the question about chances of promotion is repeated and in the subsequent survey years actual promotions are also reported. I use this limited sample to analyze the role of expectations of future promotions in predicting turnover, after controlling for turnover effects of actual promotions. Tables 6–8 presents the results.

Table 6 confirms the previously documented fact that quit rates and separation rates are lower for those who expect to be promoted compared to those who do not expect to be promoted. The bottom panel of Table 6 focuses on the sample of workers who have the same employer in 1989 as they did in 1988. For this sample of workers who survive, we note that almost twice as many were promoted in the group that expected to be promoted than in the group that did not expect to be promoted. So expectations about promotions have content. Also those who expected to be promoted received on average three times as many hours of company provided training. Finally, future separation and quit rates (that is by the 1990 interview date) are significantly lower for those who expect to be promoted.

Table 7 shows the separation and quit rates across those who were not promoted and those who were promoted (see the first and second columns, respectively). Although these rates are lower for those who were promoted, as we would expect, they are only

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[14] The convergence or crossing of turnover rates across high and low expectations groups is of neither theoretical nor empirical significance. Note that the number of observations are few at high levels of tenure since reporting, which may also explain why the second order term is insignificant.

Table 6
Means of future job outcomes by promotion prospects

NLSY, 1988

Outcome variables	Promotion chances reported in 1988	
	Low	High
# of Observations	2,434	4,499
Separate by 1989	.396	.304
Quit by 1989	.282	.209
	Promotion chances reported in 1988 if jobs survive to 1989	
	Low	High
# of Observations	1,381	2,920
Promoted since 1988	.166	.299
Company training (hours)	4.94	15.38
Separate by 1990	.246	.199
Quit by 1990	.177	.146

Note: All variable means are significantly different across high and low promotion chances. The sample observations in the bottom panel are smaller than in the top panel because only jobs in 1988 that survive to 1989 are included in the bottom panel.

marginally smaller than the turnover rates for those who were not promoted. Comparing the numbers in the first and second rows of the second column shows that the mean separation and quit rates across High and Low promotion chances are significantly different in the presence of an actual promotion. The first column also shows that the mean separation rates are significantly different in the absence of a promotion, but that the quit rates are not. Note, however, that the chances of promotion, unconditioned on actual promotions, have a strong impact on separations and quit rates (see the numbers in the first and second row of the third column of Table 7). The question is whether these gross findings hold up in a multiple regression context with controls for various other factors.

Table 8 presents logit coefficients of key variables from turnover and quit regressions, respectively. The striking finding is that the coefficient on chances of promotion remains robust even after controlling for actual promotions, wages, and company provided training, in addition to the standard array of other control variables. Also notice that the effect of actual promotions is weaker and only marginally significant. Not surprisingly, when promotion chances are excluded the effects of actual promotion on separations and

Table 7
Turnover/quit rates by expected and actual promotions (# of Observations in parentheses)

Promotion Chances	Actual Promotion		
	Not Promoted	Promoted	Total
Low Promotion Chances	.239/.172 (1, 134)	.279/.195 (226)	.246/.176 (1, 360)
High Promotion Chances	.203/.152 (2, 022)	.192/.134 (863)	.200/.147 (2, 885)
Total	.216/.159 (3, 156)	.210/.147 (1, 089)	.214/.156 (4, 245)

Table 8
Impact of promotion prospects on turnover and quits controlling for realized future job Outcomes (# of Observations=3,935; # of Individuals=3,935)

Variables	Logit coefficients (Robust Standard Errors)					
	Separations			Quits		
High Promotion Chances	−.38 (.09)	−.36 (.09)	−.30 (.09)	−.29 (.1)	−.25 (.1)	−.20 (.1)
Promoted		−.16 (.09)	−.12 (.1)		−.28 (.11)	−.25 (.11)
Log Wages			−.54 (.12)			−.40 (.13)
Company Training			−.003 (.002)			−.004 (.002)

Note: All models include other control variables.

quits become larger and much more significant.[15] These results confirm that what people think will happen in the future matter, and in fact matter much more than what actually happens currently.

3.3.4. Precision measures and job satisfaction

In this section I present some indirect and some simple statistics on job satisfaction to address some potentially interesting questions that have arisen in this study about the effects of job prospects on turnover dynamics. The first question is whether precision of job assessments might be correlated with favorable assessments. In the absence of direct precision measures and the limited nature of the panel data on job assessments, the question is whether there might be an alternative way to assess this correlation. The second issue is whether there might be any evidence that heterogeneity of match quality is greater among workers who have less favorable job assessments. The third question is whether poor job assessments are more likely to improve over time than good assessments, conditional on survival.

Although a high expectation is suffficient to imply a flatter tenure-turnover profile, high precision priors could also imply a flattening of the turnover profile. As a consequence it might be of interest to assess whether the mean and precision of prior expectations are positively correlated. The estimated tenure-turnover profiles for each job assessment category allows a precision estimate via Eq. (2). The precision measures presented in Table 9 are based on the implied precision from the change in the predicted turnover rates between consecutive years. These imputed numbers are then averaged over tenure for each of the job assessment categories and reported in Table 9. The numbers show that the precision measures are dramatically higher for the estimated turnover profiles of those with favorable job assessments. For example, the precision estimate is over 10 times bigger for those who expect to stay for three or more years with their current employer than it is for those who expect to stay for less than one year.[16] Although the increase in precision is not so dramatic for those who expect to be promoted, the estimates double from the lowest to the highest category. This evidence suggests that the mean and precision of priors might be

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[15] These results are not shown in Table 8.
[16] The cardinal measures derive from the specifics of the Beta distribution, and have little meaning beyond that. What is important here of course is the ranking of these precision measures across the different expectations. Hence the reported numbers have only ordinal significance.

Table 9
Precision estimates across job prospects

Precision	Expected job duration			Promotion chances are good:		
	< 1 year	1–2 years	3+years	Not true	Not too true	True
δ	4.6	18.5	74.4	8.6	12.4	16.6

Note: These precision estimates are calculated on the basis of the predicted turnover rates given in columns 2 and 3 in Table 5 above. A precision measure can be calculated for each change in the turnover rate with tenure as given in Eq. (2). The number reported above for each job prospect category is an average of precision measures computed for every annual change in predicted turnover with tenure.

positively correlated as conjectured earlier in the model section. However, it is important to note that these precision estimates are based on the functional form given in Eq. (2), which arises from a highly stylized model of turnover. Hence this evidence should be interpreted with caution to only suggest a possible correlation between the precision and mean of prior expectations.

Table 10 exploits information on job satisfaction to get a sense of match heterogeneity across job assessments. The idea here is that job satisfaction may also be correlated with unobserved dimensions of match quality and thus we might be able to use the more extensive panel of information on job satisfaction to assess heterogeneity of match quality across different job assessment categories. Unsurprisingly, job satisfaction is correlated with favorable job assessments. Mean job satisfaction improves as you move from less favorable to more favorable job assessments. These mean differences are statistically significant in various pair-wise t-tests. The key question is whether the variance of job satisfaction decreases with job assessments. The third row clearly shows that the variance of job satisfaction is much higher among those with less favorable assessments. These variances differences are statistically significant, and they suggest that heterogeneity of match quality may indeed be greater among those with less favorable assessments. As argued in the introduction, greater heterogeneity among those with less favorable job assessments is one possible explanation for why their turnover rate falls more rapidly with job tenure.

Table 11 asks how job satisfaction reports change from one period to the next if the worker survives to the next period on the same job. The interesting finding is that the percent of people who report an improvement in job satisfaction in the next period is much higher among those with less favorable assessments. This finding suggests that workers who initially claim to have poor job prospects are more likely to revise their assessments in a positive direction. This was the basis of the matching explanation for why those with less

Table 10
Job satisfaction across job prospects

	Expected job duration			Promotion chances are good:		
	< 1 year	1–2 years	3+years	Not true	Not too true	True
# of Observations	3,949	4,170	5,299	4,109	5,946	16,300
Mean	2.83	3.18	3.49	2.77	3.01	3.36
Variance	.632	.417	.359	.809	.523	.432

Table 11
Change in job satisfaction across job prospects

	Expected job duration			Promotion chances are good:		
	< 1 year	1–2 years	3+years	Not true	Not too true	True
# of Observations	1,081	2,174	3,632	1,356	2,634	8,619
Mean	.060	−.037	−.102	.092	.011	−.088
% No change	52	60	64	56	60	63
% Higher Jobsat	27	19	14	25	21	15
% Lower Jobsat	21	21	22	19	19	22

favorable job assessments might experience a more steeply declining turnover rate with tenure.

4. Conclusion

Heterogeneity of worker expectations is an important tool in the analysis of turnover dynamics. What people believe about their job prospects is a crucial determinant of their current and future turnover decisions. Greater information on a worker's job prospects means that a mismatch is less likely to be revealed on-the-job, and hence less likely for a separation to occur. This idea has led to significant empirical implications about the time distribution of turnover. The empirical evidence shows that workers with high expectations about their future job outcomes have lower and flatter tenure turnover profiles than their counterparts with lower expectations. In addition, this model corrects the assumption that all workers have uniform assessments about their job prospects, which is a cornerstone of the standard theories of labor turnover.

The implications of this model go beyond data focused only on worker expectations. The prior information hypothesis may also provide sharper insights into differences in turnover patterns across a variety of observable worker and job characteristics, thus extending the applicability of the model. For example, differences in prior assessments offer a unified explanation of why more educated workers, and workers in large firms, have lower and flatter tenure turnover profiles. The standard theories of job duration are non-committal about these systematic differences in turnover behavior. If education is complementary with job training, then more educated workers will have a greater incentive to search for jobs with better training opportunities than their less educated counterparts. Greater search activity is likely to lead to better prior assessments, which in turn can explain why more educated workers have a lower and flatter turnover profile.

Evidence that large firms better screen their workers (Barron et al., 1985) also suggests that mismatches are less likely to be revealed ex post in large firms than in small firms. Also note that large firms are likely to be better known. Hence the greater expenditure of resources to establish, presumably, a better match prior to job start can explain the observed differences in turnover patterns across firm size.

Other worker and job characteristics that suggest a linkage with prior information about job prospects include sex, marital status, union membership, intelligence measures, length of exposure to the labor market, and occupations differentiated in terms of training

requirements. A promising line of research is to theoretically model the linkage between worker/job characteristics and job search behavior such that it leads to a non-degenerate distribution of priors across workers. The motivation behind this presumed linkage is the recognition of significant complementarities between future investments in human capital (e.g. training) and current investments in information (e.g. job search).

The idea that favorable expectations about job prospects reduce turnover is also related to the recent literature on wage dynamics and turnover. Topel and Ward (1992) find that past wage growth on a job reduces turnover, and Munasinghe (2000) explains this result by arguing that within-job wage growth is serially correlated. Hence past wage growth reduces turnover because past wage growth predicts future wage growth. In this paper favorable expectations about future job outcomes are shown to also reduce turnover.

Acknowledgements

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