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Job security and long-term investment: An experimental analysis

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ABSTRACT

We investigate an experimental labor market setting in which we introduce the novel aspect that workers have the chance of investing money in a long-term project in order to increase their income. We find a strong relationship between what happens inside the labor market (worker's performance) and what happens outside the labor market (long-term investment). Contrary to the theoretical predictions with selfish preferences, we find that the mere presence of long-term projects acts as an effort-enforcement device; this effect seems to be driven by an increase in long-term employment relationships. In the other direction, long-term labor relationships seem to provide a safer environment for undertaking successful long-term projects. This article also considers three different types of experimental labor contracts. We find that performance-based dismissal barriers, whereby firms are required to retain workers if they have satisfied the effort level required by firms, lead to more long-term employment relationships and higher overall productivity. As theory predicts, the presence of renewable dismissal barriers makes it likely that workers will provide the desired effort level. Firms appear to correctly anticipate this, leading to greater social efficiency.

1. Introduction

There is an inter-relationship between many situations *inside* the labor market and decisions made *outside* the labor market. For instance, McDonald (2000), Adsera (2004), De la Rica and Iza (2005), Blossfeld et al. (2005) and Hondroyiannis (2010) show how the economic uncertainty inside the labor market has a significant negative impact on fertility decisions. They argue that many parents decide to have children when they are expect to be able to financially support a family, not only in the current economic situation but also in the future. Haurin and Gill (1987), Haurin (1991), Robst et al. (1999) and

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Diaz-Serrano (2005) also find an unequivocal negative effect of labor-income uncertainty on the propensity to own one's own home. The economic intuition behind this evidence is that individuals take into account both their present and their projected future job situation when making decisions outside the labor market (such as buying a house or having children).

As a consequence, attaining a strong degree of stability in employment has been one of the historical main aspirations of the working population. Indeed, one of the main goals of trade unions is to achieve some kind of employment protection legislation (EPL) that introduces dismissal barriers in the labor market.[1] However, current dismissal barriers are mostly non-performance-based. This may lead to a lack of incentives for high productivity; a familiar example is the behavior of some academics after receiving tenure. In fact, even if a worker has the intrinsic motivation to work hard, this may be undermined by peer pressure, as other workers may be unhappy with workers who provide too much effort without incentives. This leads to the question of whether it could be useful to relate dismissal barriers to performance.

In this sense, the main contribution of this paper is our experimental analysis of how labor market uncertainty affects decisions outside the labor market and vice versa (i.e., how decisions outside the labor market influence behavior in the labor market). We investigate this in a labor-market experiment in which we incorporate the opportunity for workers to invest in long-term projects. We also wish to study the importance of relating dismissal barriers to worker performance; we hypothesize that performance-based dismissal barriers could satisfy workers' demand of stability while maintaining a high effort level from those workers once they have attained a permanent position. Our work would be applicable both to many European labor markets and to public-sector employment in most developed countries.

Our baseline experimental framework is similar to that of Brown et al. (2004), in which firms and workers in a labor-market setting can endogenously form long-term relationships. Firms offer contracts involving a wage and a desired effort level, and workers, after accepting a contract, choose any feasible effort irrespective of the level contractually agreed upon. With the aim of investigating the inter-relationship between decisions inside and outside the labor market, we introduce an additional stage (outside the labor market) labeled *the investment stage*. For simplicity, in this stage workers decide only whether or not to undertake a *long-term project*. If a worker chooses to do so in a given period, he must pay a fixed periodical amount from then on.[2] This project will end only when he no longer pays this fixed amount (perhaps because he becomes unemployed or his salary in a period is insufficient). To capture the importance of the job stability on the subjects' decisions of undertaking long-term projects, we make the profitability of the project depend crucially on the job situation. Only if a worker is employed for at least eight consecutive periods does the project yield positive profits.

To analyze how the features of the labor market affect the investment decisions, we consider three different treatments. In the *baseline* treatment, there is no dismissal barrier. Firms can always end a labor relationship after any period. In the *permanent* treatment, adapted from Falk et al. (2015), there is a dismissal institution present in the market, such that only the worker can end a relationship once the firm chooses to hire the worker in two consecutive periods. In addition, once workers are protected against dismissal, firms cannot reduce their wages.[3] Falk et al. (2015) instantiate non-performance-based dismissal barriers of real-world labor markets and find that these barriers reduce efficiency. To study how labor-market outcomes are affected by basing dismissal barriers on performance, we introduce a novel treatment (labeled *renewable* contract) in which dismissal barriers are fully performance-based: worker's performance is rewarded with the automatic renewal of his contract, *contingent upon satisfactory performance*.[4] A worker must be re-hired if he provides an effort level at least as high as that demanded by the firm. In this case, the worker earns the right to get an offer in the next period from the same firm with at least the same wage.[5] We acknowledge that this treatment might not map well to a world in which effort is non-contractible, but it allows us to observe labor performance in the best scenario in which tenure is permitted. Additionally, by comparing markets with non-performance-based dismissal barriers and with fully-performance-based dismissal barriers, we can examine the market consequences of connecting performance to dismissal barriers.

Before summarizing the experimental results, we develop some theoretical predictions with selfish preferences (standard theory). First, there should be no differences in the effort levels provided by workers between the Investment treatments and the No-investment treatments. Second, workers should not invest in any treatment where long-term projects are available. Finally, linking performance to dismissal barriers should lead workers to provide higher effort levels, increase the number of private offers and give rise to more long-term relationships. We also discuss some informal behavioral predictions based on the assumption in Brown et al. (2004) that firms believe there is a sufficient proportion of "fair" workers who will provide a non-minimal effort whenever firms offer wages above the equilibrium wage. First, we expect a larger frequency of non-minimal effort levels and long-term relationships in the contracts when investment is feasible than when it is not. And to the extent that firms are sympathetic to worker investment, we would expect them to provide more wage/effort request combinations that would yield a sufficient amount of units to allow workers to invest. We also expect that there will be higher wages, higher effort, and more compliance with requested effort in the renewal contracts compared to the other two treatments (same prediction as the standard theory).

[1] Dismissal barriers arise, for example, in the presence of employment protection legislation (EPL), where hiring a worker beyond approbation period triggers barriers to dismissal, or in the case of relationship-specific investments that accrue over time and raise firing costs (see Mincer, 1962).

[2] For expositional purposes, we assume throughout the paper that firms are female and workers are male.

[3] This feature is implemented to rule out *de facto* dismissal by reducing wages to zero.

[4] Previous experimental literature has found that rewarding performance is an effective incentive device to increase efficiency (see, among others, Fehr et al. 1997, and Fehr et al. 2007).

[5] Examples for automatically renewable contracts can be found in sports; in many cases contracts are automatically renewed if the sportsman plays a previously fixed number of matches.