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Employer moral hazard and wage rigidity. The case of worker owned and investor owned firms

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ABSTRACT

This paper studies wage and employment rigidity in a labor relationship in different organizational contexts. In investor owned firms, if the contract allows for flexible wages, the employer may have an incentive to opportunistically claim low demand and cut wages. Anticipating the employer's opportunism, workers may demand a fixed-wage contract, which may lead to inefficient layoffs in the presence of negative demand shocks. In contrast, in cooperatives, where the employer does respond to workers, the risk of employer's opportunism diminishes and results in an equilibrium characterized by more flexible wages and fewer layoffs. By developing these arguments we challenge the traditional explanation of workers' preference for fixed wages based on risk aversion. To support our claim, we develop a principal agent model in which there is incomplete information on both sides of the employment relation. We model both the case of investor-owned firms and worker cooperatives.

1. Introduction

This paper studies wage and employment rigidity in a labor relationship where the employer has private information on the level of demand. We hypothesize that the preferences expressed by workers are crucially affected by the organizational context in which they operate. In particular, when the employer does not respond to workers (as in investor-owned firms), and the employment contract allows for flexible wages, the employer may have an incentive to opportunistically claim low demand and cut wages. Anticipating the employer's opportunism, workers may demand a fixed-wage contract, which may lead to inefficient layoffs in the presence of negative demand shocks. In contrast, when the employer does respond to workers (as in cooperatives), the risk of employer's opportunism diminishes and results in an equilibrium characterized by more flexible wages and fewer layoffs. By developing these arguments we challenge the traditional explanation of workers' preference for fixed wages according to which the firm is an agreement between risk-averse workers and risk-neutral entrepreneurs to whom, as in the seminal contribution by Frank Knight (1921), workers hand over control on the activity in exchange for a risk-free remuneration.

In their review of contract theory and labor market models, Mori and Tedeschi (1994) clearly state that the solution to the worker's utility maximization problem implies rigid remuneration and is crucially dependent on the assumption of risk-averse workers facing risk neutral firms. In the same line the implicit contract literature (Azariadis, 1975; Azariadis and Stiglitz, 1983; Baily, 1974), which starts by observing that wages fluctuate much less than the marginal productivity of labor and that, more specifically, business cycles are more likely to produce changes in employment rather than fluctuations in wages. The interpretation of this evidence given

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by these authors is, again, that labor contracts involve an insurance component between a risk-neutral firm and a risk-averse worker. In exchange for this insurance, workers let the employer control the organization and appropriate its residual revenue. Baily (1974) proves that it's profitable to the firm to adopt an asymmetric strategy toward wages and employment, that is to pay a preannounced non-stochastic wage, but be free to change the size of the employed workforce. This component makes it possible to have wages that are more stable than the marginal productivity of labor.

We critique these approaches and maintain that the theoretical connection between workers' risk aversion and wage rigidity is basically flawed because of different reasons:

(1) It assumes risk aversion as a psychological characteristic of workers. This way important pieces of empirical evidence are overlooked.
(2) It explains the employment contract as an insurance contract without considering in a suitable way the problem of employment fluctuations.

On what concerns the first observation, there are two groups of facts that are unaccounted for by the theory of workers' risk aversion. The first is that different ownership forms behave differently when dealing with the trade-off between wage rigidity and employment fluctuations. More specifically, the evidence shows that worker cooperatives are characterized, in relative terms, by fixed employment levels and fluctuating labor income, while for profit firms are characterized by fixed wages and fluctuating employment levels. These results have been evidences by many contributions. Pencavel et al. (2006) compare firm adjustment to idiosyncratic price changes in Italian worker-owned and investor-owned firms: using within group estimation (in log form), they find an effect on daily wages of 2.9% in capitalist firm and 10.7% in worker cooperatives. Burdin and Dean (2009) find similar results in the case of Uruguayan firms: wage response to price changes is 15.2% in the case of cooperatives and 3.1% in the case of capitalistic firm; interestingly, in their case, this wage response in cooperatives is statistically significant for worker-members and not significant for employees. Craig and Pencavel (1992, 1994), in a regional study on plywood industry, US Pacific Northwest find that the elasticity of real hourly wages to output price is unitary in cooperatives and not significantly different from zero in investor-owned firms. Other studies that find similar results are Bartlett et al. (1992) and Burdin (2014). Bonin et al. (1993) deliver a thorough review of the early contributions. Evidence that employment is more stable in cooperatives than in investor-owned firms is also widespread. In a pioneering empirical study on Italian and US cooperatives Smith (1984) cannot reject the hypothesis that labor does not respond to product price in cooperatives. In Craig and Pencavel (1992, 1994) the elasticity of employment to output prices is nil in cooperatives, while it is positive and significant in conventional firms. In a recent study Sanchez et al. (2013) highlights through four case studies in France, Mexico, Spain and Canada that cooperatives have been more resilient during the economic crisis with respect to investor-owned firms also in terms of better preserving employment levels.

These results imply that the actual degree of wage related risk aversion cannot be assumed as an overarching pre-contractual psychological feature of workers since it is context dependent. Consequently, while Jossa and Cuomo (1997) underline that worker cooperatives accomplish a notable inversion of the employer to employee relation vis à vis capitalistic firms, we highlight that this inversion implies also a modification of the wage-to-employment relation: employment becomes rigid in the short run, while labor income tends to fluctuate. Indeed, Miyazaki and Neary (1983) evidenced that "job insurance" instead of "wage insurance" is likely to be the dominant objective in worker cooperative. This conclusion, however, does not fully clarify what are the features of cooperatives that allow workers to overlook wage variability as a potential source of losses and allow them to concentrate on guaranteeing long term stability in employment. Following the conclusions reached by other authors (Dow, 1987; Meade, 1972; Miceli and Minkler, 1995), we hypothesize that worker cooperatives are able to modify the structure of risk faced by workers, shifting risk from employment fluctuations to wage fluctuations.

Concerning the insurance function of the employment contract, while it is clear that the smoothing of labor income can have this function, it is not convincing to conclude that workers always prefer to smooth wages and to face the risk of unemployment, as the empirical evidence clarify that employment stability is one of the main workers' objectives (Depedri et al., 2012; Guest, 2002). Hence, workers can be hypothesized to be willing to trade-off some degree of wage stability with enhanced employment protection. In other words, even when an empirically informed hypothesis concerning workers' risk aversion can be substantiated, risk aversion can be extended to include the risk of unemployment.

Our paper is set to work out a convincing explanation of this set of facts by reinterpreting the relationship between wage rigidity and worker risk aversion for incomplete contracts in light of the risk of employer post contractual opportunism connected with the presence of private information and diverging objectives relative to the employee. We also contribute to explain why cooperatives show anti-cyclical and more resilient behavior during economic crises (they hire less workers in periods of economic growth and shed less labor during downturns).

The remainder of the paper is organized as it follows. In Section 2 we critically review the literature on wage rigidity in profit maximizing firms and spell out the hypothesis of employer moral hazard under asymmetric information as the main determinant of wage rigidity. In Section 3 we introduce our efficiency wage model explaining wage rigidity in for-profit firms. In Section 4 we establish the conditions under which workers prefer fixed to flexible wages in investor owned firms. In Section 5 we compare worker choices in investor owned firms and worker cooperatives. Section 6 concludes and adds some policy implications.

2. Labor contract under information asymmetries and employer moral hazard

In the new institutionalist tradition initiated by Coase (1937), the employment contract is characterized in terms of hierarchy and not in terms of insurance. Later writers in this tradition, for example the property right school (Grossman and Hart, 1986; Hart and Moore, 1990), stressed the importance of contract incompleteness, asymmetric distribution of power and asymmetric information more than the insurance functions of contracts. A vast literature integrates private information into labor contracts as one of the elements that makes these contracts incomplete. Incompleteness, asymmetric information and opportunism apply to both sides of the employment relationship and the literature on agency relations has widely acknowledged the possibility that the misalignment between employers' and employees' objectives favors morally hazardous behaviors (such as shirking and misreporting of information), but these problems have been evidenced mainly on the employee side and not on the employer side. The principal-agent literature sought to establish the contractual conditions that are conducive to the optimal level of worker's effort in the presence of unobservability of his actions (inter alia Alchian and Demsetz, 1972; Holmstrom, 1979; Stiglitz, 1975). Pay-for-performance contracts are understood as tools able to reach this aim, but are dependent on output measurability (Prendergast, 1999). These research streams devoted limited attention to the