



## Unions and firm innovation in China: Synergy or strife?

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### ABSTRACT

The ‘monopoly face’ of unions suggests that the rent-seeking activities of unions discourage research and development investment and that the collective bargaining rules may restrict management flexibility, thus deterring innovations. On the other hand, the arrival of unions in the workplace may ‘shock’ the management into adopting more systematic rather than ad hoc management practices and that such innovative workplace practices may enhance an organization’s ability to introduce new products and/or new processes. Further, the ‘voice face’ of unions argues that the independent ‘questioning’ of the management deliberations by the unions can also lead to better, more creative and, hence, more productive solutions. This paper investigates the link between unions and firm innovations in China. Different from their counterparts in advanced economies, Chinese unions are found to encourage firm innovations and R&D investment.

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### 1. Introduction

In the post-1950 period in North America, a great deal of interest has been focused by researchers and practitioners on what impact, if any, unions have on the workplace. Freeman and Medoff’s (1984) book *What Do Unions Do?* puts this topic in focus by presenting original research and summarizing previous evidence of union impacts on a range of workplace outcomes such as wages, benefits, turnover, and productivity. Although some of the effects such as union wage premiums and union tendencies to reduce turnover are well known and documented (Freeman & Medoff, 1981), relatively less is known about the effect unionization may have had on the ability to introduce innovations in the last two decades, a period of extensive restructuring in the global workplaces.

According to the theory of competitive advantage (Porter, 1980), businesses must innovate to stay competitive. These innovations can be in products or in processes. Without such innovations, a business cannot distinguish its products or processes from others. Thus, these innovations remain at the heart of business success in the contemporary marketplace. Meanwhile, workplace changes have occurred in non-wage workplace practices such as flexibility, employee involvement, and technology adoption (Kochan & Osterman, 1994). These developments lead to the question of whether introducing workplace practices helps make a workplace more innovative.

In both the United States and Canada it appears clear that unionization reduces the profitability of firms (see, among others, Becker & Olson, 1992; Hirsch, 1991; Laporta & Jenkins, 1996), deters investment (Bronars & Deere, 1993; Fallick & Hassett, 1999; Hirsch, 1991; Odgers & Betts, 1997), deters critical research and development investment (Betts, Odgers, & Wilson, 2001; Menezes-Filho & Van Reenen, 2003), reduces growth (Bronars & Deere, 1993; Dunne & Macpherson, 1994; Long, 1993), and increases the chances of plant closure (Fang & Heywood, 2006). Overall, the international evidence demonstrates a deleterious

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effect of unionization on research and development (R&D) investment (e.g., [Betts et al., 2001](#); [Hirsch, 2004](#); [Metcalf, 2003](#)). However, most empirical evidence is based on experience in advanced economies. Little is known about the unions in developing economies, which have different features and operate in different economic and social environments.

The rest of the paper is organized as follows: [Section 2](#) presents the theoretical considerations and past empirical evidence. [Section 3](#) discusses the unique features of Chinese unions which merit special attention. [Section 4](#) describes the data and estimation strategy. The main empirical results are reported in [Section 5](#); [Section 6](#) concludes the paper.

## 2. Theoretical considerations

There are two competing hypotheses about the relationship between unionization of a workplace and workplace's ability to innovate.

The first link can be found in the high cost of unionization and the historical trend in collective bargaining toward rules that restrict management flexibility ('monopoly face of the unions'). That literature suggests that union rent-seeking activities act as a tax on firm innovation, thus deterring firms from long-term investment in research and development and in advanced technology, both of which are critical to firm innovation, survival, and growth. In terms of union restrictions on management flexibility, rules such as 'featherbedding' (i.e., hiring more employees than needed), restrictions on merit pay, and part-time or contract employment have been documented in numerous case studies ([Verma, 1984, 2005](#)). One may expect that restrictive work rules are likely to reduce the ability of an organization to innovate. Thus, all else being equal, we would expect union workplaces to report fewer product and process innovations and R&D investments than do non-union workplaces.

In another stream of research, [Brown and Medoff \(1978\)](#) and [Clark \(1980\)](#), among others, have reported higher productivity in unionized plants relative to comparable non-union plants. A central explanation for these outcomes lies around the 'shock effect', which holds that unions shock management into efficiency by forcing a degree of formalization in management processes ([Slichter, 1941](#); [Slichter, Healy, & Livernash, 1960](#)). Most studies published after [Freeman and Medoff's \(1984\)](#) book are essentially supportive of the pattern of differences documented in that work.

The shock effect can be used to explain the observed fact that union workplaces generally report a higher level of innovative workplace practices such as flexible work organization and training. The presence of unions 'shocks' management into adopting flexibility, training, and other practices ([Fang & Verma, 2002](#); [Kizilos & Reshef, 1997](#); [Reshef, Bemmels, & Wolfe, 1993](#); [Verma & Fang, 2003](#)). Flexible practices, in turn, can be hypothesized to enhance an organization's ability to introduce product or process innovations. In this way, unions would have a positive effect on an organization's ability to introduce product or process innovations. However, as discussed below, the 'shock effects' of the unions may be muted in the Chinese context.

Econometric evidence consistent with a positive effect of unions on outcomes such as productivity has been well documented by [Freeman and Medoff \(1984\)](#). In addition, some organizational studies provide qualitative evidence supporting the above explanation. Such evidence suggests that it is very difficult for management in a hierarchical organization, to develop the most efficient process on its own because of its inherent inability to question hierarchy or the dominant paradigm. The implication is that when unions enter the scene they are able to question management. Such questioning sets up a dialectic, otherwise absent from managerial deliberations, which leads to better, more creative and, hence, more productive solutions. In their study of the Saturn car plant, [Rubenstein and Kochan \(2001: 36\)](#) cite from the notes of a colleague, Bob McKersie, who sat in on many deliberations of labor-management interactions:

[I]t is clear that the role of the UAW partners is absolutely pivotal for the functioning of Saturn. At the most recent meeting of the SAC [joint labour-management body], the only individuals who were willing to take issue and to 'tell it like it is' were the UAW representatives. Other participants in the meeting did not speak their minds as freely and tended to back off when the CEO expressed a point of view....

This example resonates with a major theme of the industrial relations literature that suggests one of the union's major functions is to question management decisions. A related dynamic of labor-management interaction may be called the learning effect, i.e., both sides learn of new arrangements that can be used to govern the workplace and to guide efficient production. Such learning would be less likely to occur in the absence of unions and the dialectic they establish. Clearly, the learning effect, as defined herein, forms a part of the 'voice effect' (the 'voice face of the unions'). Recent studies suggest that higher productivity in unionized establishments is associated with a high proportion of workers meeting regularly ([Black & Lynch, 2001](#)), and high performance workplace practices tend to have greater effects on wages in unionized firms ([Black, Lynch, & Krivelyova, 2004](#)). Using data from the 1998 British Workplace Employment Relations Survey (WERS), [Bryson, Forth, and Kirby \(2005\)](#) also found that high involvement practices are associated with higher productivity in the private sector, but only in unionized workplaces. However, no evidence was found that such practices improve worker well-being ([Wood & Bryson, 2009](#)).

In practice, the two effects described above would overlap and to some extent could cancel each other out. The question of which effect would dominate is an empirical one. So far studies have generated mixed and inconsistent finding over time and across countries. The literature on the relationship between labor unions and firm performance has long been an important research area for labor economics and industrial relations scholars. Although earlier studies ([Brown & Medoff, 1978](#); [Freeman & Medoff, 1984](#)) presented some evidence of positive effects of labor unions on firm productivity, a later study by [Addison and Hirsch \(1989\)](#) reviewed empirical studies in the 1980s and concluded although the evidence is mixed, the contention that unions, on average, significantly raise productivity cannot be sustained. They also called for the examination of the more robust and

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