

Frick, Bernd

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## Retirement Decision

### The Effect of Employment Protection Legislation on Dismissals in Germany

by Bernd Frick

Apart from its often criticized "restrictiveness", one of the special features of German dismissal protection legislation is the large difference in the statutory notice periods enjoyed by blue- and white-collar workers. In 1990, the Federal Constitutional Court declared this disparate treatment to be unconstitutional. The court instructed parliament to pass legislation providing for equal notice periods for the two groups before June 30, 1993. The most likely outcome is that notice periods will be lengthened for blue-collar workers and slightly reduced for white-collar workers. Despite this recent legislative activity, little is known about the impact of advance notice provisions on the labour market outcomes of displaced workers.

It is argued that notice periods allow employees to avoid postdisplacement joblessness and minimize financial losses. Econometric studies from the United States suggest that advance notification significantly reduces the probability of experiencing unemployment as well as the length of the unemployment spell. Yet no empirical analysis of this hypothesis exists in Germany<sup>1</sup>. This paper attempts to fill this void by measuring the impact of notice periods on the probability of being dismissed and on the likelihood of postdisplacement joblessness.

#### Imperfections of the Labour Market, Advance Notification and Postdisplacement Joblessness

Support for advance notice legislation depends heavily on one's view of how labour markets function. Those who believe that labour markets are competitive and efficient argue that the onus is on those who propose government intervention to document empirically costs and benefits of proposed legislation. Those who believe that labour markets are either not competitive or that important externalities exist when workers are displaced, are more likely to argue that the private as well as the social costs associated with worker displacement make a strong case for mandatory advance notification (Ehrenberg and Jakubson 1989).

In a competitive market with perfect information and no externalities or public goods, statutory notice periods have, at best, no effects on equity or efficiency and, at worst, negative effects on both. By dropping some of the assumptions of the competitive market, arguments can be made for statutory notice periods within a neoclassical framework. For instance, Büchtemann (1991: 10) argues that firms do not adequately take into account the full marginal costs of dismissals on workers or the community at large. Dismissal protection legislation, of which notice periods are an integral part, forces firms to endogenize at least part of these costs and thereby avoid externalities.

Dropping the assumption of perfect information, the introduction of notice periods can be justified with information asymmetries, adverse selection and signalling arguments. Since firms usually have better information about their financial situation than workers, employees are likely to invest in the acquisition of firm-specific skills even though the employer knows about a pending plant closure or mass dismissal (Hamermesh 1987). Requiring firms to inform workers in advance will reduce the incentive of firms to withhold information, allowing better decisions by workers. With perfect information, workers will avoid firms that are known to engage in dismissals that are "socially unwarranted." In this case, the firm's reputation acts to enforce desirable behavior. However, when potential employees do not have such information, the reputation mechanism loses its force and government regulation is likely to improve job decisions (cf. Sadowski 1988). Adverse selection problems are likely to occur on the demand as well as the supply side of the labour market. In the presence of imperfect information about the characteristics of employees, firms do not voluntarily offer advance notification because this would increase the probability of attracting low-quality workers (cf. Levine 1991). Likewise, when

<sup>1</sup> During the last years, several longitudinal studies have been published which try to measure the private as well as social costs of long-term and/or recurrent unemployment (cf. Büchtemann 1983, Büchtemann and Brasche 1985, Andreß 1989, Büchel 1992, Karr and John 1989, Licht and Steiner 1992, Hujer et al. 1990). Since these studies usually fail to distinguish between dismissals and voluntary quits, they are not of immediate relevance in the context of this analysis.

workers have imperfect knowledge about dismissal probabilities, companies will not adopt an advance notice policy because this is likely to be taken by workers as a signal that a plant closing or mass dismissal is likely.

Deere and Wiggins (1991) show that some positive level of notice is a feature of all efficient labour contracts. The notion that it is efficient for firms to inform their employees in advance about pending dismissals rests on the assumption that both parties to the employment contract invest in specific assets generating quasi-rents that end with the termination of the employment relationship. A decision by one party to terminate the employment relationship impacts adversely on the other by raising search costs and wasting training investments. Moreover, such decisions have important externalities. A worker gains from prenotification because of a reduction in the spell length of joblessness. Advance notification causes the worker to search more intensively for work while on the job and lower his or her reservation wage. Both factors reduce the probability of unemployment. The cost to the employer, on the other hand, is the lost output if the worker quits prior to the date of dismissal. The optimal length of notice is determined by equating the marginal costs and benefits of prenotification. For the worker, the marginal benefit of an additional day's notice is the increased probability of locating an acceptable job multiplied by the gain from finding a job today minus the expected gains from notice tomorrow. For the employer, the marginal cost of an additional day's notice is the increased probability that the worker finds a job multiplied by the output loss from a quit today minus the expected loss from notice tomorrow. Marginal benefits remain positive but tend to zero as the notice interval increases while marginal costs are zero in the absence of notice and rise with the length of statutory notice periods. Deere and Wiggins (1991: 25) estimate that the optimal level of notice will be about 14 weeks. Based on the assumption that labour markets are different from other commodity markets with respect to the occurrence of externalities, the hypothesis can thus be derived that notice periods are likely to improve the overall efficiency of the labour market.

Most empirical studies of voluntary advance notification practice in the United States and the 1988 "Worker Adjustment and Retraining Notification Act" in particular show that advance notice reduces both the probability that displaced workers suffer any spell of unemployment and the average length of unemployment. (For recent examples, see Addison and Portugal 1992, Nord and Ting 1991, and Ehrenberg and Jakobson 1989). No empirical evidence exists for Germany in this subject.

### **The Impact of Statutory Notice Periods on Postdisplacement Joblessness in Germany**

German labour law strictly regulates the conditions under which workers may be dismissed from their jobs<sup>2</sup>. In general, a dismissal must be socially warranted: it must be justified in terms of either the conduct of the individual

employee or the operational requirements of the enterprise. If the dismissal is deemed socially justified, the employer must notify the individual before dismissal<sup>3</sup>. Required periods of notice vary from two weeks to six months, depending on whether the worker holds a blue- or white-collar job and on his or her seniority and age. Moreover, notice must be given so that the last day of work coincides with the last day of the quarter for all white collar workers and the last day of the month for all blue-collar workers entitled to at least one month's notice.

The data set used to study the impact of German advance notice regulations was constructed from the first eight waves of the German Socio-Economic Panel, 1984-1991. Each wave provides information on the reasons for job termination, labour market experience, tenure with last employer, gross monthly earnings, and weekly working hours. Comprehensive information is also available on personal characteristics such as gender, nationality, educational background, and social security status. In this study, displaced workers are defined as persons between the ages of 20 and 59 who were previously employed as blue- or white collar workers<sup>4</sup> and who reported that they had been displaced at least once during the period under investigation. Altogether, these restrictions yielded a sample of 441 workers. The whole subpopulation (blue- and white-collar workers aged 20-59 who were employed either full- or part-time) consisted of 5,378 persons.

Since the individual determinants of the length of notice periods (age, tenure, and social security status) are known, the distribution of notice periods among the German working population can be calculated (cf. Table 1). As Table 1 shows, 50 percent of all displaced employees had notice periods of at most four weeks, 30 percent had between six and eight weeks and 20 percent had a notice period of at least three months<sup>5</sup>. Compared to the German "core

<sup>2</sup> Contrary to the United States, there is no such thing as a temporary layoff in Germany. German workers who are dismissed have no recall rights, and they lose their entitlement to most company benefits (pensions are the principal exception).

<sup>3</sup> Coverage of these regulations is limited to workers who have completed a minimum probationary period of six months. Moreover, small firms with fewer than five employees are explicitly excluded from these regulations and works councils, which are central to dismissal procedures, are not obligatory and do not exist in many, especially smaller firms (cf. Sadowski/Frick 1993, Frick 1993). Furthermore, special provisions for mass dismissals and social plans are only applicable in firms with more than 20 employees and require the presence of a works council. Finally, pregnant women, disabled workers, men drafted into the armed forces and members of works councils enjoy special protection against all forms of dismissal, or at least against individual dismissals.

<sup>4</sup> I set 59 as the upper age limit, because in Germany women and disabled persons can retire at the age of 60, if they have paid social security contributions for 15 and 35 years respectively.

<sup>5</sup> Despite the virtual absence of legal dismissal regulations in the United States, the average notice period of German workers of slightly more than six weeks is remarkably close to the value given for American workers by Deere and Wiggins (1991: 28).

Table 1

**The Distribution of Notice  
Periods Among Dismissed  
and Employed Workers in Germany**

Notice Period (in weeks)	Percentage of Dismissed Workers	Percentage of Employed Workers <sup>1)</sup>	Relative Risk of Dismissal <sup>2)</sup>
0	8.0	0.4	20.0
2	26.8	4.5	6.0
4	15.2	8.4	1.8
6	13.6	9.4	1.5
8	16.3	19.2	0.9
12	10.2	18.7	0.6
16	0.8	2.9	0.3
20	0.8	3.3	0.2
24	8.2	33.3	0.3

1) Workers who did not change or who only voluntarily changed their employer during the period under investigation (1984-1991). By definition, a voluntary change is always employee initiated, an involuntary change is due to a dismissal, the expiration of a fixed-term contract or a joint agreement to terminate the employment relationship. —  
2) Column 2/column 3. Values larger than one indicate a disproportionately large risk of being dismissed, values smaller than one a lower than average risk.

Source: German Socio-Economic Panel, waves 1-8.

workforce" (as defined in column 3 of Table 1), persons with a notice period of at most six weeks are heavily over-represented among the dismissed population. Thus, the latter group consists primarily of blue-collar workers with less than ten years of tenure and white-collar workers with less than five years of service with their last employer.

To measure the impact of advance notice periods on the probability of being dismissed and the likelihood of postdisplacement joblessness, two dependent variables were constructed, *DISMISS* and *UNEMPL*. The former is a dichotomous variable equal to one if the person had been dismissed at least once during the period under investigation and zero if he or she had never been dismissed. The latter one is also a dummy-variable equal to one if the dislocated worker experienced one month or more of joblessness (registered unemployment or out of the labour force without being registered as unemployed) and zero if he or she experienced no joblessness. To measure the impact of differing notice periods, two standard logistic regression models have been estimated. Table 2 contains the results of these estimates.

The first logistic regression shows that *EXPER*, *TENURE*, *NATION*, *NOTICE* and *NOTICESQ* have a signifi-

cant influence on the likelihood of being dismissed. Other things equal, older workers are more likely to be dismissed than younger workers, while employees with longer tenure have a lower probability of being dismissed than otherwise comparable employees with shorter tenure. Furthermore, foreigners have a significantly higher probability of being dismissed than Germans. Most important in this context, however, is the finding that the longer the notice period, the less likely a worker is to be dismissed. This relationship is

Table 2

**Determinants of Postdisplacement  
Joblessness in Germany**

Independent Variable	Dependent Variable	
	DISMISS	UNEMPL
SEX	-0.1066+ (0.2072)	1.2750** (0.6185)
NATION	-0.6007* (0.1831)	0.1843+ (0.4646)
SCHOOL	-0.0525+ (0.0605)	0.1879+ (0.1465)
VOCTRA	-0.0032+ (0.0533)	-0.0001+ (0.1249)
INCOME	0.1112+ (0.2099)	-0.7282+ (0.6449)
HOURS	0.0043+ (0.0086)	0.0175+ (0.0291)
STATUS	-0.4170+ (0.2990)	-0.0632+ (0.7370)
EXPER	0.0169** (0.0080)	0.0455** (0.0235)
TENURE	-0.0443** (0.0199)	0.0058+ (0.0504)
NOTICE	-0.1412* (0.0558)	-0.2624*** (0.1583)
NOTICESQ	0.0048* (0.0018)	0.0074+ (0.0047)
CONST	-0.0014+ (1.7004)	3.2761+ (4.9960)
2 LL Base Model	1088.11	192.43
2 LL Full Model	984.03	169.61

Standard errors for the coefficient estimates are reported in parentheses — \*\*\* denotes significance at the .10 level; \*\* at the .05 level; and \* at the .01 level (two-tailed tests).

not a linear one, because workers who enjoy very long notice periods have again a higher probability of being dismissed.

The second estimate reveals that apart from NOTICE only SEX and EXPER have a statistically significant influence on the probability of experiencing postdisplacement joblessness. Women and older workers are — others things equal — more likely to become unemployed following a dismissal than men and younger workers. Once again, NOTICE has the predicted negative influence: the longer the notice period, the higher the probability that workers will not experience any postdisplacement joblessness.

The main finding, that the length of notice periods has, other things equal, the predicted statistically negative impact on both the probability of being dismissed and the likelihood of experiencing unemployment should be interpreted with the following qualifications in mind. First, the available data do not allow a distinction between dismissals justified by the conduct or the behavior of the individual employee, on the one hand, and dismissals justified by operational requirements of the enterprise on the other hand. Second, and possibly even more important, the data do not allow a distinction between ordinary and extraordinary dismissals. In the latter case, i.e., in the case of severe personal misconduct, the employer does not have to provide advance notice. As Jo (1991) has shown, it is reasonable to assume that workers who have been dismissed for personal reasons are more likely to have "a bad reputation" than workers who have been dismissed because of a plant shutdown or mass dismissal. Therefore, the former workers are more likely to experience positive spells of joblessness. Third, the data set has no information on regional labour markets. It is reasonable to assume that postdisplacement joblessness is more likely to occur and to last longer in areas with high unemployment rates than in local labour markets where unemployment is low. Finally, in a large number of industries mandatory notice periods have been supplemented by collective agreements which often by far exceed the notice periods stipulated by law (cf. Warnken and Ronning 1989: 262). It is therefore possible that industry affiliation has a significant influence on the probability of being dismissed as well as on the likelihood of unemployment. Because of these data limitations, the empirical findings concerning the impact of mandatory notification are likely to be downward biased, i.e., the "true" coefficients are likely to be larger.

### **Summary and Implications for Future Research**

The hypothesis that mandatory notice has negative effects on the economic performance of firms is commonly

based on the implicit assumption, that limiting manager's discretion by law or contractual obligations necessarily leads to an inefficient allocation of resources and finally to welfare losses. Even if we analyze the impact of the German regulatory framework with this narrow conception of the term "efficiency" in mind, it is helpful to conceive of these measures as attempts to "re-allocate" property rights. Given incomplete and asymmetric information, bounded rationality and different degrees of mobility of factor owners, legal interventions not only limit (from the managers' and capital owners' point of view) but at the same time try to shift property right entitlements to employees, for instance in terms of better protection of their specific human capital and their seniority rights against depreciation by dismissal. Thus, advance notification of dismissals would be of no value to workers if information were perfect. It is a reasonable assumption, however, that workers' information about the probability of individual as well as mass dismissals is less than perfect (cf. Hamermesh 1987). By making the labour market more transparent, advance notification benefits workers and society alike. This does not mean, however, that employment protection legislation is without costs. In general, it is likely to add to the user costs of labour by raising the cost of adjusting labour input to changes in demand.

The findings presented above allow first conclusions with regard to the benefits of advance notification; longer notice intervals are efficient because they reduce the probability of dismissal, thereby protecting the quasi-rents of employees. Longer notice intervals also lower the probability of experiencing postdisplacement joblessness as a result of the heightened search intensity of those with longer notice periods.

A comprehensive assessment of the economic impact of dismissal protection legislation requires empirical evidence on the precise nature of the costs of prenotification. So far, research on the costs of dismissal protection legislation is limited by the absence of good demand side information on firms. Since firms adjust their employment levels fairly rapidly to shocks (cf. Hamermesh 1989), longitudinal, quarterly or monthly, establishment data is necessary to study the speed of workforce adjustments as well as the costs of dismissal protection legislation. In a similar context, Thaler (1989: 190) has recently argued that "economists would have to get their hands dirty collecting data on the actual operation of organizations. Unless the profession is willing to reward this type of time consuming research activity, many important questions will remain unsolved".

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