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Foreign Owners and Perceived Job  
Insecurity in Germany: Evidence from  
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**Foreign Owners and Perceived Job Insecurity in Germany:  
Evidence from Linked Employer-Employee Data**

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**Abstract:** Using linked employer-employee data from Germany, we examine the role of foreign owners in employees' perceptions of job insecurity. Our estimates show that there tends to be a positive link between foreign owners and perceived job insecurity. The link is specifically strong for foreign-owned firms with high personnel turnover or poor employment growth. It is also stronger if the foreign-owned firm provides managerial profit sharing. However, the link is negative for foreign-owned firms with product innovations.

**JEL:** F23, F66, J23, J28, J63.

**Keywords:** Foreign ownership, perceived job insecurity, managerial profit sharing, personnel turnover, product innovation.

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## **1. Introduction**

The last decades have witnessed an enormous growth in foreign direct investment (FDI) around the world (UNCTAD 2004). This also holds true for Germany which is one of the largest host economies for inward FDI among developed countries (Jost 2011). Comparing the stocks of inward FDI for the year 2009, Germany was ranked position four, after the United States, the United Kingdom, and France. It experienced a dramatic growth in the inward FDI stock in the last two decades. The stock rose from US\$ 120 billion in the year 1990 to US\$ 937 billion in the year 2009. Foreign-owned firms in non-financial industries now account for about 20 percent of total gross value added and employ more than 10 percent of all workers in those industries.

Corporate globalization is often explained by the superior products and production processes of multinational companies (MNCs) to which other firms have no access. However, the implications for national labor markets and specifically for job security remain a highly controversial issue. On the one hand, firms owned by foreign MNCs may have competitive advantages over domestic-owned firms and, hence, may provide more job security to their employees. On the other hand, foreign owners can more easily transfer production abroad so that jobs in foreign-owned firms may be less secure. Moreover, the specific production processes and management practices implemented in foreign-owned firms may reduce job security. This is reinforced if foreign owners face difficulties in adjusting their activities to the cultural and institutional framework of the host country and, thus, suffer from liability of foreignness.

This study examines the link between foreign ownership and employees' perceptions of job insecurity. Examining perceived job insecurity is interesting for

several reasons. Job loss fears not only affect job satisfaction and mental health (Burchell 1994, Clark et al. 2010, Sverke and Hellgren 2002). They also have far reaching implications for wage bargaining (Blanchflower 1991), consumption and savings (Stephens 2004), human capital accumulation (Elman and O’Rand 2002), and public support for globalization (Scheve and Slaughter 2007). Moreover, there is a close, albeit imperfect, tie between perceived and objective job insecurity. Perceptions of job insecurity are positively and significantly related to actual unemployment experience in the subsequent year (Green et al. 2001), low levels of employment protection (Anderson and Pontusson 2007), deregulation of temporary employment (Kuroki 2012), part-time work (Green et al. 2000), and low qualification (Manski and Straub 2000).<sup>1</sup> Furthermore, trends in job insecurity appear to be largely consistent with trends in job loss rates (Geishecker 2008, Schmidt 1999).

While the labor market consequences of FDI have received some attention in the literature,<sup>2</sup> research on foreign ownership and perceived job insecurity is a road less traveled. One exception is a study by Scheve and Slaughter (2004). They find a positive link between FDI and perceived job insecurity for the United States. A second exception is a study by Geishecker et al. (2012). They obtain a negative link for Germany. Both studies use employee data. Exposure to FDI is measured at the industry level.

Our study contributes to the literature by using linked employer-employee data. The data have two advantages. First, they provide information on the ownership status of the employee’s employer and, hence, allow us to measure exposure to FDI at the firm level. This is important as (perceived) job insecurity is most related to the specific firm for which the employee works. Second, the data not only enable us to account for

employee characteristics but also for a series of basic firm characteristics. This allows a detailed analysis of interaction effects. We can examine if the influence of foreign owners on perceived job insecurity depends on circumstances and type of firm.

Our results show that there tends to be a positive link between foreign owners and perceived job insecurity. The link is specifically strong for foreign-owned firms with high personnel turnover or poor employment growth. It is also stronger if the foreign-owned firm provides managerial profit sharing. However, the link is negative for foreign-owned firms with product innovations.

The rest of this paper is organized as follows. The second section provides our background discussion. The third section describes the data and variables. The estimates are presented in the fourth section. The fifth section concludes.

## **2. Background Discussion**

### *2.1 Foreign Owners and Job Insecurity*

The existence of MNCs is usually explained by their superior products and production processes to which other firms have no access (Helpman 2006, Markusen 1995). Specifically, knowledge-based assets embodied in the human capital of the employees, patents or other exclusive technical knowledge, copyrights or trademarks, or even more intangible assets such as management practices or the reputation of the firm give rise to FDI. These firm-specific assets can be transferred relatively easy back and forth across space. Moreover, like a public good within the firm, they can be supplied to additional production facilities at low costs.

However, it is an open question whether the activities of foreign MNCs lead to higher or lower job security in the host countries. On the one hand, the access to superior assets may involve a higher performance and competitiveness of firms owned by foreign MNCs (Baldwin and Yan 2011). This may imply that job security is higher in foreign-owned than in domestic-owned firms.

On the other hand, there is a series of reasons suggesting that foreign ownership entails a lower degree of job security. First, foreign owners have better exit options than domestic owners. If foreign owners maintain capacity to produce the same good in different national markets, they have the ability to respond more quickly to changing conditions in the host country by partially or completely shifting production to facilities in other country (Caves 1996, Fabbri et al. 2003). This can result in high volatility of employment.

Second, the production processes of foreign-owned firms differ from the production processes of domestic-owned firms (Dachs and Peters 2013, Girma and Goerg 2004). Foreign-owned firms have better access to higher levels of technology. Implementing those technologies requires a restructuring of work that can entail job loss. Moreover, foreign-owned firms are embedded in an international production network leading to different strategies for dividing inhouse and outsourced production. They can source inputs that may be substitutes for some types of labor.

Third, and relatedly, MNCs tend to implement unified management practices that follow (to a greater or lesser extent) company-wide standards (Doeringer et al. 1998, Freeman et al. 2008, Geary and Roche 2001, Walsh 2001).<sup>3</sup> The practices of a foreign parent company may entail a higher degree of uncertainty for the employees of the local

subsidiary. In particular, the personnel policy of foreign-owned firms is characterized by a greater use of performance management (Bayo-Moriones et al. 2013, Bloom and Van Reenen 2010, Heywood and Jirjahn 2014, Poutsma et al. 2006). This can entail an implicit or explicit threat to dismiss employees in case of low performance.

Finally, even though the firm strategies foreign MNCs bring to the host country are potentially superior, they can involve tensions with the host country's cultural and institutional context (Kostova and Roth 2002). This makes the success of the strategies less clear cut. Specifically, information asymmetries can lead to tensions (Dill et al. 2014, Jirjahn and Mueller 2014, Kang and Kim 2010). As important managerial decisions are made overseas and local stakeholders in the host country have only limited access to the information possessed by the parent company's managers, it can be difficult to create trust and cooperation between the foreign-owned subsidiary and its local stakeholders. Moreover, the parent company's managers face difficulties in successfully adjusting the strategies to the local situation of the subsidiary if they lack sufficient knowledge about this situation.<sup>4</sup> Thus, increased information asymmetries and tensions with the cultural and institutional context of the host country may imply that subsidiaries of foreign MNCs suffer from liability of foreignness (Bell et al. 2012, Zaheer 1995, Zaheer and Mosakowski 1997). This, in turn, may harm job security.

## *2.2 Interaction Effects*

Altogether, foreign ownership can have an influence on job insecurity through different channels. This suggests that the link between foreign ownership and job insecurity depends on circumstances and type of firm. The extent of job insecurity in foreign-owned



firms may depend on the incentives provided to managers. Principal-agent theory assumes that managers have some discretion in implementing the interests of the owners of the firm. Hence, managers of a local subsidiary may use this discretion either to pursue their own goals or to cooperate with the foreign owner. Managerial profit sharing aligns the managers' interests with those of the foreign owner. Thus, it makes local managers more willing to support the implementation of the foreign owner's management practices. If the foreign owner prefers more flexible hiring and firing practices, these practices should be more rigorously pursued. Moreover, profit sharing may induce local managers to make greater use of the foreign owner's performance management practices. Indeed, Heywood and Jirjahn (2002) provide evidence that managerial profit sharing is a critical determinant of using various types of performance-related pay for non-managerial employees. To the extent performance management practices also involve an increased threat to dismiss employees in case of low performance, the influence of foreign ownership on job insecurity is reinforced.

The employment dynamics of the firm may also play a moderating role. A positive link between foreign ownership and job insecurity should be particularly strong for employees who work for firms that face low or negative employment growth. Stagnating or declining employment indicates a poor economic situation. A foreign parent company can respond to a poor economic situation of its local subsidiary by using the exit option made possible through its production facilities in other countries. This means that the foreign parent company can further reduce employment in its subsidiary by partially or completely shifting production to those facilities. Using the exit option may be even more attractive if a lack of sufficient information on local conditions does

not allow the foreign parent company's managers to adequately assess possible solutions to overcome the crisis of the subsidiary.

The link between foreign ownership and job insecurity should be also particularly strong if there is a high degree of personnel turnover (a high amount of worker flows that is not part of growth or decline of the size of the workforce). A high degree of personnel turnover is likely to reflect a restructuring of the local subsidiary to implement the production processes of the foreign parent company. This restructuring can entail a (partial) replacement of current employees by new hires. Moreover, a high degree of personnel turnover may reflect quits driven by the tensions and conflicts that result from new strategies and management practices transferred by the foreign parent company to its local subsidiary.

The influence of foreign ownership on job insecurity should be less strong to the extent the local subsidiary successfully adopts the superior products and market strategies of the foreign parent company. The superior products and market strategies increase the subsidiary's competitiveness and, hence, may weaken or even outweigh the effect foreign ownership has on job insecurity through alternative management practices or production processes. Assuming that the know-how of the foreign parent company is incorporated in new products launched by its local subsidiary, we take product innovations as an indicator of the adoption of the superior products.

### **3. Data, Variables and Method**

#### *3.1 The Data Set*

Our empirical investigation uses linked employer-employee data collected by Great Place

to Work<sup>®</sup> Germany in the year 2006 (Berger et al. 2011, Bundesministerium für Arbeit und Soziales 2008). The survey was conducted on behalf of the German Federal Ministry of Labor and Social Affairs. The data set is a representative sample of 339 firms with 20 or more employees. The firms are almost evenly spread across the different industries in Germany. Based on a comprehensive online questionnaire, managers provided information on various aspects of firm structure and firm behavior. In addition to this information, an employee survey was conducted at each firm in the sample yielding over 37,000 observations in total. For our empirical analysis we exclude the public sector and non-profit organizations. After eliminating observations for which full information is not available, the investigation is based on data from 13,699 employees in 138 firms.

### *3.2 Key Variables*

Tables 1 and 2 show the definitions of variables and their descriptive statistics. Our dependent variable is based on the following question: ‘Are you concerned that you eventually could lose your job?’ Interviewees had to respond on a 4-point Likert scale with 1 = ‘very concerned’, 2 = ‘somewhat concerned’, 3 = ‘little concerned’, and 4 = ‘not concerned’. In what follows, we use the probit procedure to estimate the determinants of perceived job insecurity.<sup>5</sup> An advantage of the probit model is that the results are relatively easy to interpret. Thus, we define a dummy dependent variable equal to 1 if an employee is somewhat or very concerned that he or she could lose the job. The variable is equal to 0 if the employee is little or not concerned. 49 percent of the employees in our sample are somewhat or very concerned about the security of their job.

Our key explanatory variable is a dummy variable equal to 1 if the firm the

employee works for is majority-owned by a foreign parent company. 11 percent of the firms are foreign-owned and 15 percent of all employees work for a foreign-owned firm. Table 3 provides a first indication that foreign ownership is associated with increased job insecurity. The table shows the relative frequency of perceived job insecurity separately for domestic- and foreign-owned firms. The share of employees reporting job insecurity is 47 percent in domestic-owned firms and 57 percent in foreign-owned firms. Hence, it is 10 percentage points higher in the latter type of firms. At issue is whether this result remains in a multivariate analysis and whether interaction effects play a role.

As suggested by our background discussion, the link between foreign ownership and job insecurity may depend on circumstances and type of firm. The link should be stronger if the managers of the firm receive profit sharing. Thus, we account for the average share of profit-related pay in managers' total pay.

The employment dynamics of the firm is captured by two variables. First, we include a dummy variable for poor employment growth. The dummy is equal to 1 if the firm hired less employees during the last three years than similar firms in the industry. The link between foreign ownership and perceived job insecurity should be stronger if the firm faces poor employment growth. Second, we include an ordered variable of whether the firm faced higher personnel turnover during the last three years than similar firms in the industry. The link between foreign ownership and job insecurity should also be stronger if there is a high degree of personnel turnover.

By contrast, the link between foreign ownership and job insecurity should be less strong for firms that pursue an innovation-based market strategy. We capture the firm's innovation activities with a dummy variable equal to 1 if the firm has launched new

products or services in the last three years.

### *3.3 Control Variables*

In the regressions, we control for a series of further firm characteristics. A dummy variable for domestic-owned subsidiaries is included to examine whether subsidiaries in general or foreign-owned subsidiaries in particular are associated with perceived job insecurity. We also account for the coverage by a collective bargaining agreement.<sup>6</sup> In Germany, collective bargaining agreements are usually negotiated between unions and employers' associations on a broad industrial level. Employers are covered by an agreement if they are members of an employers' association. Collective bargaining agreements may involve increased job insecurity as they involve increased labor costs and impose restrictions on the firms' flexibility (Jirjahn 2010, Lindbeck and Snower 2001). Furthermore, general firm characteristics are controlled for by variables for the size, the age, and the legal form of the firm. We also include 9 out of 10 industry dummies to capture sectoral differences in product markets and the nature of production.

Moreover, we take a series of employee characteristics into account. In order to account for the skills of the employees we include dummy variables for a completed blue-collar or white-collar apprenticeship training, a completed trade or technical school training, and a university degree.<sup>7</sup> The employee's skills should be negatively associated with job insecurity. First, employers invest more in further training and development of skilled employees (Lynch and Black 1998). This investment increases their interest to hold skilled employees. Second, technological change raises the relative demand for skilled employees (Machin 2008). We also account for gender. Even though women

appear to be more risk-averse than men (Dohmen et al. 2011), they may be segregated into jobs with less employment security (Petrongolo 2004). Finally, we control for age and German citizenship.

#### **4. Results**

Table 4 presents a series of probit estimations on the determinants of perceived job insecurity. To take into account that random disturbances of the employees' job insecurity are potentially correlated within firms, standard errors are clustered at the firm level by using the Huber-White sandwich estimator of variance.<sup>8</sup>

Many of the control variables take statistically significant coefficients. Among the employee characteristics, education, gender and age play a role. Education is negatively associated with job insecurity. Women are more likely to report job insecurity. The relationship between worker age and job insecurity is inversely U-shaped. Several of the variables for firm characteristics also emerge with significant coefficients. Collective bargaining coverage and personnel turnover are positive determinants of job insecurity while firm size and firm age are negative determinants.

Regression (1) includes only a constant and the dummy variable for a foreign-owned subsidiary. In regression (2), we expand the specification by additionally including industry controls and variables for employee characteristics. In regression (3), we continue to add controls by taking variables for firm characteristics into account. The variable for a foreign-owned subsidiary takes a statistically significant coefficient in all three regressions. Hence, employees working for a foreign-owned subsidiary are more likely to report job insecurity. Importantly, the variable for domestic-owned subsidiaries

does not emerge with a significant coefficient. This suggests that increased job insecurity is not a general phenomenon of subsidiaries, but a specific phenomenon of foreign-owned subsidiaries.

At issue is whether the link between foreign owners and job insecurity depends on specific circumstances. In order to address this issue, regression (4) includes a series of interaction variables.<sup>9</sup> The coefficient on foreign-owned subsidiaries remains significantly positive and all of the interaction variables take significant coefficients of the expected sign. Foreign ownership interacts positively with poor employment growth, high personnel turnover and managerial profit sharing whereas it interacts negatively with the firm's innovativeness.

In Table 5, we use estimation (4) to project the change in the probability of perceived job insecurity due to foreign ownership (the difference between the probabilities with and without foreign ownership). In order to interpret the results we first consider a firm that has no managerial profit sharing, poor employment growth, personnel fluctuation, and product innovation. That is, all moderating influences are set equal to 0. Taking this situation as a benchmark, we successively discuss the influence of each interaction variable.

In our benchmark case, foreign ownership is associated with a 32 percentage point higher probability of job insecurity. This is a quite substantial influence. As suggested by our background discussion, foreign owners can more easily shift production abroad. Moreover, they implement specific production processes and management practices that may reduce job insecurity. Furthermore, liability of foreignness may contribute to job insecurity.

The link between foreign owners and job insecurity is even stronger if the managers of the foreign-owned subsidiary receive profit sharing. Assuming that profit-related pay, on average, accounts for 10 percent of managerial pay within the subsidiary, foreign ownership implies a 43 percentage point higher probability of job insecurity. Managerial profit sharing aligns the interests of the subsidiary's managers with those of the foreign owners. This increases the managers' willingness to support the implementation of the foreign owners' strategies including performance management practices and more flexible hiring and firing practices.

The link between foreign owners and job insecurity is also stronger if the firm faces poor employment growth. Foreign ownership coupled with poor employment growth increases the probability of job insecurity by 43 percentage points. This interaction effect also conforms to theoretical expectations. Stagnating or declining employment indicates a poor economic situation of the local subsidiary. Such a situation increases the risk that the foreign owners use their exit options and shift production to their facilities in other countries.

Furthermore, the link between foreign owners and job insecurity is stronger if foreign ownership is coupled with high personnel turnover. Considering a firm with personnel turnover high above the average of the industry, foreign ownership is associated with a 37 percentage point higher probability of job insecurity. Excessive personnel turnover in a foreign-owned subsidiary may reflect a particularly deep restructuring of the subsidiary to adopt the production processes and practices of the foreign parent company. This deep restructuring entails a high degree of replacement of current employees by new hires and, hence, leads to a stronger increase in job insecurity.



By contrast, innovativeness mitigates the positive association between foreign ownership and job insecurity. If there is no further moderating factor at work, foreign ownership coupled with product innovations is even associated with an 8 percentage point lower probability of job insecurity. This result fits the hypothesis that the competitiveness and performance of the local subsidiary is strengthened if it adopts the superior products of the foreign parent company. Improved competitiveness and performance, in turn, decrease job insecurity.

## **5. Conclusions**

The consequences of globalization are a highly controversial issue. Our study examines the link between foreign ownership and perceived job insecurity in Germany. The analysis is based on linked employer-employee data that allow controlling not only for employee but also for firm characteristics. This is important as it enables us to examine whether the relationship between foreign ownership and job insecurity depends on circumstances and type of firm.

Our estimates show that foreign ownership tends to be associated with a higher probability of job insecurity. This result conforms to the hypothesis that foreign owners can respond relatively quickly to changing conditions in the host country by shifting production to facilities in other countries. Moreover, foreign owners may implement specific production processes and management practices that entail increased job insecurity. They may also face difficulties in adjusting their activities to the cultural and institutional framework of the host country so that liability of foreignness contributes to

increased job insecurity. As a consequence, employees in foreign-owned firms feel more insecure.

However, our results also show that the relationship between foreign ownership and job insecurity is not uniform. The relationship is particularly strong if foreign ownership is coupled with managerial profit sharing, poor employment growth or high personnel turnover. Managerial profit sharing increases the local managers' willingness to support the implementation of the foreign owners' strategies including flexible hiring and firing practices. Stagnating or declining employment indicates a poor economic situation that involves a higher risk that the foreign owners use their exit option and shift production to their facilities in other countries. High personnel turnover may reflect a particularly deep reorganization of the local subsidiary to adopt the production processes and practices of the foreign parent company. This reorganization can involve a high degree of replacement of current employees by new hires leading to a stronger increase in job insecurity.

By contrast, innovativeness mitigates the positive link between foreign ownership and job insecurity. Depending on the other circumstances, foreign ownership coupled with innovativeness can even be associated with reduced job insecurity. This fits the notion that foreign ownership contributes to increased firm performance if the local subsidiary successfully adopts the superior products and market strategies of the foreign parent company.

All in all, our results provide a differentiated view of the role corporate globalization plays in job insecurity. On the one hand, there is a clear tendency that employees in foreign-owned firms are more likely to report job insecurity than employees

in domestic-owned firms. This tendency appears to be particularly strong if a foreign-owned firm has a poor performance or undergoes a deep restructuring to adopt the production processes and management practices of the foreign owner. On the other hand, foreign ownership can be associated with lower job insecurity if foreign owners manage to successfully transfer their superior know how to the local subsidiary. Thus, our results suggest that it depends on circumstances whether corporate globalization is a boon or a bane for national labor markets. From a policy viewpoint, it appears to be crucial to attract those foreign owners who face little difficulties in adjusting to the host country and do not need a deep restructuring of their local subsidiaries to successfully transfer their superior assets.

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**Table 1:** Variable Definitions and Descriptive Statistics; Employee Characteristics

<i>Variable</i>	<i>Definition</i>	<i>Mean, std.dev.</i>
Perceived Job Insecurity	Dummy equal to 1 if the employee is somewhat or very concerned that he or she could lose the job.	.4881, .4999
Employee Age	Age of an employee categorized from 1 '< 19 years' to 11 '> 65 years' (5-year interval).	5.783, 2.041
Employee Age Squared	Square of employee age.	37.62, 23.70
Skilled Blue-Collar Worker	Dummy equal to 1 if the employee has completed a blue-collar apprenticeship training.	.1863, .3894
Skilled White-Collar Worker	Dummy equal to 1 if the employee has completed a white-collar apprenticeship training.	.3600, .4800
Completed Trade or Technical School Training	Dummy equal to 1 if employee has completed a trade or technical school training.	.1225, .3279
University Degree	Dummy equal to 1 if employee has graduated from a university.	.1841, .3876
Female	Dummy equal to 1 if the employee is woman.	.3377, .4729
German	Dummy equal to 1 if the employee has a German citizenship.	.9556, .2060

Number of employees =13,699.

**Table 2:** Variable Definitions and Descriptive Statistics; Firm Characteristics

<i>Variable</i>	<i>Definition</i>	<i>Mean, std.dev.</i>
Foreign-Owned Subsidiary	Dummy equal to 1 if the firm is majority-owned by a foreign company.	.1087, .3124
Domestic-Owned Subsidiary	Dummy equal to 1 if the firm is majority-owned by a German company.	.2029, .4036
Collective Agreement	Dummy equal to 1 if the firm is covered by a collective bargaining agreement.	.6667, .4731
Product Innovation	Dummy equal to 1 if the firm has launched new products or services in the last three years.	.7899, .4089
Managerial Profit Sharing	Average share of profit-related pay in total pay of a manager.	.0670, .0921
Ln(Firm Size)	Log of the number of employees in the firm.	5.090, 1.310
Ln(Firm Age)	Log of the time span between the year 2006 and the year of foundation of the firm.	3.623, 1.102
Stock Corporation	Dummy equal to 1 if the firm is a stock corporation.	.0507, .2202
Limited Company	Dummy equal to 1 if firm is a private limited liability company.	.3986, .4914
Personnel Turnover	Personnel turnover during the last three years in comparison to similar firms in the industry. The ordered variable ranges from 0 'far below the average' to 4 'high above the average'.	1.051, .8823
Poor Employment Growth	Dummy equal to 1 if the firm hired less employees during the last three years than similar firms in the industry	.1159, .3213
Industry Dummies	9 industry dummies	---

Number of firms = 138.

**Table 3:** Relative Frequency of Perceived Job Insecurity in Domestic- and Foreign-Owned Firms

	<i>Domestic-Owned Firms</i>	<i>Foreign-Owned Firms</i>
Perceived Job Insecurity	47.36	57.30
Number of Employees	11,699	2,000

**Table 4:** Determinants of Perceived Job Insecurity

	(1)	(2)	(3)	(4)
Foreign-Owned Subsidiary	0.250 (0.087)**	0.271 (0.084)**	0.223 (0.081)**	0.832 (0.128)**
Employee Age	---	0.314 (0.032)**	0.310 (0.032)**	0.307 (0.032)**
Employee Age Squared	---	-0.026 (0.003)**	-0.026 (0.003)**	-0.025 (0.003)**
Skilled Blue-Collar Worker	---	-0.077 (0.043)	-0.061 (0.042)	-0.052 (0.041)
Skilled White-Collar Worker	---	-0.223 (0.039)**	-0.209 (0.039)**	-0.208 (0.039)**
Trade or Technical School	---	-0.308 (0.052)**	-0.304 (0.052)**	-0.295 (0.051)**
University Degree	---	-0.462 (0.055)**	-0.461 (0.053)**	-0.470 (0.053)**
Female	---	0.093 (0.035)**	0.078 (0.032)*	0.077 (0.033)*
German	---	-0.025 (0.068)	-0.002 (0.078)	0.010 (0.078)
Domestic-Owned Subsidiary	---	---	0.029 (0.072)	0.071 (0.073)
Collective Agreement	---	---	0.187 (0.073)*	0.155 (0.074)*
Product Innovation	---	---	-0.018 (0.064)	0.008 (0.061)
Managerial Profit Sharing	---	---	-0.020 (0.406)	-0.290 (0.401)
Ln(Firm Size)	---	---	-0.035 (0.022)	-0.041 (0.021)*
Ln(Firm Age)	---	---	-0.054 (0.029)	-0.069 (0.026)**
Stock Corporation	---	---	-0.075 (0.141)	-0.156 (0.124)
Limited Company	---	---	0.024 (0.075)	-0.013 (0.075)
Poor Employment Growth	---	---	0.148 (0.120)	0.014 (0.137)
Personnel Turnover	---	---	0.100 (0.036)**	0.103 (0.035)**
Product Innovation X Foreign-Owned Subsidiary	---	---	---	-1.041 (0.158)**
Managerial Profit Sharing X Foreign-Owned Subsidiary	---	---	---	0.038 (0.014)**
Poor Employment Growth X Foreign-Owned Subsidiary	---	---	---	0.393 (0.167)*
Personnel Turnover X Foreign-Owned Subsidiary	---	---	---	0.152 (0.077)*
Constant	-0.066 (0.050)	-0.862 (0.149)**	-0.640 (0.246)**	-0.581 (0.248)*
Observations	13,699	13,699	13,699	13,699
Pseudo $R^2$	0.004	0.041	0.049	0.052

Method: Probit. The table shows the estimated coefficients. Standard errors in parentheses are clustered at the firm level by using the Huber-White sandwich variance estimator. \*\*Statistically significant at the 1% level; \*at the 5% level.

**Table 5:** Predicted Changes in the Probability of Perceived Job Insecurity

Moderating Variable	Predicted Change in the Probability of Job Insecurity Due to Foreign Ownership
Managerial Profit Sharing = 0, Poor Employment Growth = 0, Personnel Fluctuation = 0, Product Innovation = 0.	0.3165
<b>Managerial Profit Sharing = 0.1</b> , Poor Employment Growth = 0, Personnel Fluctuation = 0, Product Innovation = 0.	0.4254
Managerial Profit Sharing = 0, <b>Poor Employment Growth = 1</b> , Personnel Fluctuation = 0, Product Innovation = 0.	0.4286
Managerial Profit Sharing = 0, Poor Employment Growth = 0, <b>Personnel Fluctuation = 4</b> , Product Innovation = 0.	0.3704
Managerial Profit Sharing = 0, Poor Employment Growth = 0, Personnel Fluctuation = 0, <b>Product Innovation = 1</b> .	-0.0791

The table shows the influence of moderating variables on the change in the probability of job insecurity due to foreign owners. The change is the difference between the probabilities of job insecurity with and without foreign owners. All probabilities are projected using the estimation in Table 4, Column (4). The respective moderating variable is in bold letters. All control variables and all variables with insignificant coefficients are assumed to be at their mean level.

## Endnotes

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<sup>1</sup> More generally, Oswald and Wu (2010) show that subjective and objective measures of human well-being are highly correlated.

<sup>2</sup> Some studies have analyzed the role of foreign ownership in outsourcing (Girma and Goerg 2004), employment volatility (Buch and Lipponer 2010, Fabbri et al. 2003, Navaretti et al. 2003), firm closure (Bernard and Sjoeholm 2003, Harris 2009, Wagner and Weche Geluebcke 2012), and short-termism (Dill et al. 2014, Liljeblom and Vaihekoski 2010).

<sup>3</sup> Even rent sharing across borders appears to play a role (Budd and Slaughter 2004, Budd et al. 2005, Martins and Yang 2014).

<sup>4</sup> Of course, local managers of the subsidiaries may find solutions in adjusting the strategies. Yet, they face difficulties in convincing the managers of the headquarter if the information about the local conditions of the subsidiary cannot be verified.

<sup>5</sup> Ordered probit estimates with a 4-point ordinal dependent variable yield very similar results. The estimates are available from the authors upon request.

<sup>6</sup> The German system of industrial relations is not only characterized by worker representation through unions but also by worker representation through works councils. Works councils provide a highly developed mechanism for codetermination at the firm level. The presence of a works council in a firm depends on the initiative of the workforce. We also experimented with a specification that included a dummy variable for the presence of a works council. The variable did not emerge as a significant determinant of job insecurity and its inclusion did not change the pattern of results on our other explanatory variables. We decided not include this variable in our final regressions as

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previous studies have shown that works council presence is endogenous with respect to employment issues (Jirjahn 2009, 2010).

<sup>7</sup> The reference group consists of unskilled employees.

<sup>8</sup> Ignoring clustering in the regression is likely to produce downward biased standard errors (Moulton 1990) as firm characteristics and the individual employee's job insecurity differ in the level of aggregation.

<sup>9</sup> The interpretation of interaction effects in nonlinear models such as probit or logit remains a matter of debate. Ai and Norton (2003) have suggested that the interaction effect of two explanatory variables is the cross derivative of the expected value of the dummy dependent variable. This interpretation has been criticized as potentially resulting in artificial and atheoretical predictions (Frant 1991, Greene 2010). The functional form of a nonlinear model implies that all explanatory variables have nonlinear effects on the probability of interest. Hence, the interpretation suggested by Ai and Norton can produce interaction effects simply by distributional assumption. For example, the cross derivative of the expected value may be nonzero even if the coefficient of the interaction variable is zero or no interaction variable is included at all. To avoid such spurious interpretation, Nagler (1991) and Greene (2010) have suggested to interpret interaction effects with respect to the cross derivative of the underlying latent variable of the model and, hence, to primarily focus on the coefficient of the interaction variable. In a second step, one may present predicted changes in the expected value of the dependent variable to provide a sense of practical importance. However, one should keep in mind that these changes are not the interaction effect itself, but rather implications of the interaction effect. In our analysis, we follow this approach.