**DO COMPANIES PAY A WAGE PENALTY FOR HAVING OFFSHORED?**

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**INTRODUCTION**

Offshoring is a business practice that has attracted considerable public and scholarly attention. Research has explored aspects such as its drivers (Kotabe & Mudambi, 2009; Mudambi, 2008), location choice (Doh, Bunyaratavej, & Hahn, 2009), and performance gains (Bertrand & Bertrand, 2011; Mol, van Tulder, & Beije, 2005). More recently, some attention has been devoted to the potentially adverse consequences that offshoring may produce, including ‘hidden costs’ (Larsen, Manning, & Pedersen, 2013; Stringfellow, Teagarden, & Nie, 2008) and decisions to re- or backshore activities (Albertoni, Elia, Massini, & Piscitello, 2017).

In this article, we focus on the offshoring consequences for hiring employees in the onshore location. Extant research in labor economics has explored how the wages of the onshore employees are affected by offshoring (Hummels, Jørgensen, Munch, & Xiang, 2014), and that the offshoring survivors in the onshore location often feel that their jobs prospects are insecure (Geishecker, Riedl, & Frijters, 2012). However, we lack a theoretical understanding of the consequences for the attractiveness of offshoring companies for prospective employees. This is surprising, given that hiring strategic human capital is a major source of competitive advantage for most companies (Barney, 1991; Campbell, Coff, & Kryscynski, 2012; Coff, 1997; Wright, Mcmahan, & Mcwilliams, 1994).

Offshoring can be seen as an event that sends a negative signal of job insecurity and working conditions to existing onshore employees (Geishecker et al., 2012) and we sugest that is the case also for prospective onshore employees. By using the reasoning of signaling theory, we integrate mechanisms from the offshoring literature into models of compensating wage differentials (Rosen, 1986; Smith, 1979). We argue that offshoring is a visible and salient negative signal for prospective employees. Consequently, we hypothesize that offshoring companies pay a wage penalty for newly hired employees compared with non-offshoring companies. In addition, we argue that offshoring is not an unambiguous, negative signal for job insecurity and that the interpretation of the signal depends on the signaling context. In particular, we theorize that the context related to employment conditions and job security such as company profitability, cost differentiation focus, and (international) company ownership moderate the effect of the job insecurity signal on the newly hired employees’ wages.

To test our hypotheses, we merge a company-level survey to capture information about the history of offshoring among Danish companies with Statistics Denmark’s employer-employee register data. We employ a Coarsened Exact Matching (CEM) strategy and identify a sample of comparable employees joining offshoring and non-offshoring companies. Subsequently, we use the CEM weights in wage regressions. We show consistent results for different matching procedures.

**THEORY AND HYPOTHESES**

**Hiring and applicant preferences**

Human capital resources embedded in individuals’ knowledge, skills, abilities (Ployhart & Moliterno, 2011) can be a source of competitive advantage (Barney, 1991). Hence, given certain geographical and occupational job markets, companies compete for prospective employees who compare potential new employers. For example, research have shown that less environmentally responsible companies find it more difficult to attract employees than companies that are more environmentally responsible (Burbano, 2016; Turban & Greening, 1996).

Within the recruitment literature, signaling theory is used to explain how applicant attraction occurs. It comprises two streams of research. The first stream focuses on employee-to-employer signals used by employers as a proxy for the unobserved “productive capabilities” by looking at educational attainment or experience (Spence, 1973). The second stream (i.e. employer-to-employee signals) explores firm-level signals, by focusing on how job seekers perceive certain company characteristics as proxies for unobservable qualities (Ryan, Sacco, McFarland, & Kriska, 2000). In contexts characterized by uncertainty, observed socio-economic cues serve as signals of the unobserved quality (Sanders & Boivie, 2004), which allows market actors to engage in a quality sorting process. This sorting process is seen also in labor markets (Fombrun & Shanley, 1990). Namely, prospective employees draw inferences from company signals in the market (Lievens & Highhouse, 2003), and if the signals are positive, companies are likely to be perceived as attractive workplaces (Lievens, Van Hoye, & Anseel, 2007). Conversely, negative signals or aspects can make employers look less attractive in the eyes of the potential job applicants. For example, to be able to compete with other (more attractive employers), less attractive employers pay wage penalties for unsafe working conditions (Cousineau, Lacroix, & Girard, 1992; Dale-Olsen, 2006; Deleire & Levy, 2004).

**Offshoring decisions of companies and their signalling effect to prospective employees**

Negative signals to prospective employees are consequential for company attractiveness, especially when they are amplified by negative media attention. Negative publicity alters organizational attractiveness (Van Hoye & Lievens, 2005), and being less attractive or having a bad reputation affects organizations’ inability to recruit new talent (Cable & Turban, 2003). Consequently, such companies need to pay a wage penalty, defined as the additional wage that a firm with a negative signal for particular work conditions has to offer to prospective employees.

Companies’ offshoring decisions can be visible signals for a lack of job security. They are often accompanied by negative media attention, labor union protests (Refslund, 2012; The Australian, 2019) and political debates on the offshoring issue (Financial Times, 2019; New York Times, 2019; Reuters, 2017; Wall Street Journal, 2016). We argue that offshoring is a visible and salient negative signal for prospective employees, and that an offshoring company will need to offer higher wages to prospective employees to attract them compared with companies that do not have a history of relocating activities abroad. Therefore, we hypothesize:

*Hypothesis 1 (H1): Offshoring companies pay a wage penalty to newly hired employees compared to non-offshoring companies.*

**Heterogeneous signalling effects of offshoring**

Hypothesis 1 presents our baseline expectation for the average offshoring firm. However, the offshoring signal is not unambiguously tied to job insecurity, i.e. the unobservable attribute of a potential employer that a prospective employee would like to assess. In fact, offshoring decisions can improve companies’ chances of survival (Coucke & Sleuwaegen, 2008). Such offshoring outcomes may send positive signals about job security to prospective employees based on the competitiveness of the company and the attractiveness of its future projects. Under such conditions, the interpretation of signals hinges on the signaling context (Connelly, Certo, Ireland, & Reutzel, 2011). The signaling context affects the level of uncertainty about the true but unobservable qualities of a company, i.e. job security, making the signaling value increasingly salient (Sanders & Boivie, 2004), and helping prospective employees to sort company attractiveness (Fombrun & Shanley, 1990). Thus, signals affect individuals’ beliefs about companies’ quality and working conditions, and work as proxies for the unobserved aspects. Thus, we argue that offshoring is not an unambiguous negative signal for job insecurity and that the interpretation of the signal depends on the signaling context. In particular, we theorize that the company context related to employment conditions and job security such as company profitability, cost differentiation focus, and (international) company ownership moderate the effect of the job insecurity signal on the newly hired employees’ wages.

Just as companies compete for customers, they also compete for status, and the public evaluates reputation based on available information (Cable & Graham, 2000). In addition, we know that socio-economic cues are often used for sorting companies (Sanders & Boivie, 2004). Unprofitable companies cannot demonstrate their economic viability and thus, raise doubts about the job security for prospective employees, whereas in the case of profitable companies, prospective employees have fewer reasons to be concerned that career prospects are not secure. Under such conditions, the uncertainty about job security in unprofitable companies is high and an offshoring signal is likely to be interpreted by prospective employees as a cost cutting strategy, when offshoring from profitable companies is more likely to signal that companies are expanding their operations or target new markets. Taken together, the wage penalty from signaling job insecurity through offshoring should be weaker for profitable companies. We propose:

*Hypothesis 2 (H2): Offshoring companies pay a wage penalty to newly hired employees compared to non-offshoring companies and this effect is weaker if the company is profitable.*

Companies following product cost differentiation strategies typically compete in industries with intense competition. Maintaining cost leadership typically requires improving processes continuously and maximizing efficiency (Schroeder, 1990). Such strategies can signal poorer working conditions. When companies position themselves as cost‐conscious, this dictates the necessity of global sourcing and relocation of activities and jobs wherever there are opportunities for cost-savings Tarnovskaya, Elg, & Burt (2008). Within such contexts, prospective employees are more likely to interpret offshoring signals as cost cutting, which could ultimately also affect the job security of its employees. It is important to note that the actual intent of an offshoring company for reducing jobs and thereby reducing job security is not credibly observable for prospective employees. Instead, the low-cost offerings creates ex-ante a signaling environment with increased uncertainty about job security in which offshoring signals are comparatively more likely to be interpreted as reducing job security. Accordingly, offshoring companies with cost differentiation product or service strategies are comparatively more likely to pay wage penalties to new hires. We predict:

*Hypothesis 3 (H3): Offshoring companies pay a wage penalty to newly hired employees compared to non-offshoring companies, and this effect is stronger if the company focuses on cost differentiation.*

Finally, a substantial body of empirical studies previously found support for a wage penalty in the case of foreign companies (Aitken, Harrison, & Lipsey, 1996; Heyman, Sjöholm, & Tingvall, 2007; van der Straaten, Pisani, & Kolk, 2019). An underlying explanation is that foreign companies face legitimacy issues and lack local networks, and thus have a difficulty in finding and attracting employees. Another explanation for the wage penalty is related to how attractive these companies are giving the home-host country differences to prospective employees in the host country (van der Straaten et al., 2019). Namely, foreign companies could be less attractive to potential employers than domestic companies (Newburry, Gardberg, Belkin, & Newburry, 2006), as foreign companies appear to be less connected to the domestic location, likely to leave during difficult times (Berry, 2013). Both mechanisms lead us to argue that, on average, foreign companies pay more to be able to attract employees. Conversely, domestic companies have the location and network advantage, and are also culturally embedded and have had all the resources to build a national brand and be recognizable to prospective employees. Thus, we expect that domestic companies do not have to pay a wage penalty to be able to attract employees. However, domestic companies’ advantage may, on average, turn into a disadvantage in an offshoring context. When a domestic company engages in relocating jobs to foreign locations, we posit that such events might as well be a shock to prospective employees in that country, given that offshoring decisions are found to be interpreted as a lack of patriotism (Musteen, 2016), and are more likely to get local media attention. More specifically, we believe that in the case of domestic companies, the job offshoring decisions and the job insecurity signal becomes even more relevant for prospective employees. Thus, Hypothesis 4 follows:

*Hypothesis 4 (H4): Offshoring companies pay a wage penalty to newly hired employees compared to non-offshoring companies, and this effect is stronger for domestic companies than it is for foreign companies.*

**METHODS**

**Data and sample**

To test our hypotheses, we merge two sources of data. Specifically, we combine a company-level survey to capture information about the history of offshoring among Danish companies across industries with more than 50 employees with Statistics Denmark’s employer-employee register data to link longitudinal company information with individual labor market and employee characteristics. Thus, the merged dataset provides rich information about the surveyed companies’ offshoring activities and the employees that they are hiring. Most importantly for testing our hypotheses, we obtain information on hiring wages for both offshoring and non-offshoring companies. We choose to empirically test our hypotheses on the occupation levels 1, 2, and 3 as defined by the Danish version of the International Standard Classification of Occupations (DISCO). These individuals are classified as having technical, professional or managerial tasks and have been the primary focus of other studies focusing on hiring decisions and their outcomes (Distel, Sofka, de Faria, Preto, & Ribeiro, 2019). These occupations require high degrees of knowledge are particularly what companies would want to attract if they want to be able to have valuable, rare and hard to be imitated type of human capital (Raffiee & Coff, 2016).

**Variables**

Our dependent variable of interest is the natural logarithm of hourly wage for a newly hired employee. The main independent variable in our model is a dummy variable for whether the newly hired employee is joining a firm that has offshored in the past 2 years. For testing hypotheses 2, 3, and 4, we use moderation effects tests. For testing hypothesis 1, we include a dummy variable for profitability (i.e. positive financial results). Hypothesis 3 is tested by creating a dummy variable for the cost differentiation orientation of hiring companies, relying on survey information. For hypothesis 4, we include a dummy on whether the company is a domestic company or not. We include various individual, firm and labor market control variables in our wage regressions.

**Empirical strategy**

We employ a Coarsened Exact Matching (CEM) strategy and identify a sample of comparable employees joining offshoring and non-offshoring companies. By using CEM, we can mimic an experimental setting by adjusting the weights of observations to make sure we compare similar control and treated groups (Iacus, King, & Porro, 2012). As conditioning variables for the matching procedures, we include a dummy variable for whether the employee has received a college education, previous income deciles, and the occupation code for the new job. In addition, we exactly match on the type of hiring company (i.e. small, medium, large company), exporting experience, and we coarsen on past 3 years average wages of the company. Finally, we also match exactly on the region in the country, and year of the hiring event. Next, we use the CEM weights in our wage regressions. We find consistent results across different matching procedures.

**FINDINGS AND DISCUSSION**

Our study focuses on the unintended offshoring consequences for prospective employees in the onshore location and companies’ ability to hire. The empirical data support our theoretical model, in which we integrate mechanisms from the offshoring literature into models of wage differentials, to predict wage penalties. We suggest that offshoring can be seen as an events that sends a negative salient and visible signal of job insecurity and working conditions to both existing and prospective onshore employees, and that this signal can explain wage differences between newly hired employees. The findings of our study show that offshoring companies pay on average a 5% penalty when hiring, and that this effect appears to be stronger for cost differentiation oriented companies and weaker when the newly hired employee joins a profitable company. We conduct several additional consistency check analyses, and find that the offshoring coefficient is significant and positive only after offshoring, pinpointing that companies with offshoring history send a signal to prospective employees only after offshoring. Also, instead of a binary variable for offshoring, we use the number of employees being affected by the last offshoring implementation, as reported in the survey. We find no empirical support for the notion that signaling effects from offshoring increase with the size of the offshoring event. Consistent with our theorizing, the signaling effects about job insecurity emerges from offshoring per se, not a particular number of offshored jobs.

Our findings have important implications for academic research. First, we add to the literature on the adverse consequences of offshoring (Larsen et al., 2013; Mol et al., 2005; Stringfellow et al., 2008) by emphasizing how companies’ offshoring decisions affect their ability to hire. Second, existing offshoring studies largely assume that offshoring effects are limited to existing employees (e.g. employee commitment (Zimmermann, E, & J.S., 2017), while we identify disadvantages when attracting new employees. Taken together, this article advances our understanding of the adverse consequences of offshoring by emphasizing the labor market effects. By providing support for our prediction that offshoring is associated with higher costs of hiring has substantial economic implications for practice. Our findings can make managers aware of the costs of hiring and the costs of attracting human capital to support the business activity in the onshore location following an offshoring event.

**REFERENCES AVAILABLE FROM THE AUTHOR(S)**