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Working Paper

11-011

February 10, 2014

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Multinational Firms, Labor Market Discrimination, and the Capture of Competitive Advantage by Exploiting the Social Divide

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This Draft: February 10, 2014

The organizational theory of the multinational firm holds that foreignness is a liability, and specifically that lack of embeddedness in host-country social networks is a source of competitive disadvantage; meanwhile the literature on labor market discrimination suggests that exploiting the bigotry of others can be a source of competitive advantage. We seek to turn the former literature somewhat on its head by building on insights from the latter. Specifically, we argue that multinationals wield a particularly significant competitive weapon: as outsiders, they can identify social schisms in host labor markets and exploit them for their own competitive advantage. Using two unique data sets from South Korea, we show that in the 2000s multinationals have derived significant advantage in the form of improved profitability by aggressively hiring an excluded group, women, in the local managerial labor market. Our results are economically meaningful, realistic in size, and robust to the inclusion of firm fixed effects. Multinationals, even those whose home markets discriminate against women, often show signs of having seen the strategic opportunity. Though the host market is moving toward a new equilibrium freer of discrimination, that movement is relatively slow, presenting a multi-year competitive opportunity for multinationals.

* The corresponding author can be reached at jsiegel@hbs.edu, Morgan Hall 231, Soldiers Field, Harvard Business School, Boston, MA 02163. We are grateful for comments and criticisms on an earlier draft from Ann Goodsell, Mauro Guillén, Ann Harrison, Heather Haveman, Michael Jensen, Sun Joo Kim, Hiroshi Ono, and Ezra Zuckerman, along with participants at the KLI Panel Data Conference, the KWDI Conference on women and work, the HBS International Research Conference, the HBS Strategy Brown Bag Seminar Series, the MIT Institute for Work and Employment Research Seminar, the Wharton Management Department Seminar Series, the Duke Strategy Seminar Series, the Boston University Innovation and Strategy Seminar Series, the Yale School of Management Organizational Behavior Seminar, the Yale University Council of East Asian Studies Seminar Series, the Academy of Management annual meeting, and the George Washington University International Business Department Seminar. We are also grateful for the research assistance of Mimi Xi and Mayuka Yamazaki. All remaining errors are our own.

INTRODUCTION

Women and ethnic minorities are frequently discriminated against in the labor markets of both developed and emerging economies, particularly when it comes to management positions (Brinton, 1989, 1993, 2001, 2007; Eagly and Carli, 2007; Estévez-Abe, 2007; Shirahase, 2007; Hewlett and Rashid, 2010; Mun, 2010). Such discrimination often takes the form of policies that have the real effect of perpetuating discrimination (Rosenbluth, 2007); it is also embodied in the actions of male purchasers and supply agents who prefer to deal with other men, and those of senior male executives who impose a glass ceiling on women's advancement to senior management (Brinton, 1993; see edited collection by Rosenbluth, 2007). Multinationals entering such markets must decide whether to aggressively hire and promote the excluded group, thus reaping the benefits of their underutilized talent, or to conform to local practice and avoid provoking bigoted policy makers, executives, purchasers, and/or supply agents (Hewlett and Rashid, 2010).

Prior organizational theory on multinational enterprises asserts that multinationals' foreignness is a clear liability, a key component of which is non-inclusion in and often ignorance of local networks in the markets in which they operate (Hymer, 1960/1976; Zaheer, 1995). In order to counteract the liability of foreignness, multinationals have been predicted to err on the side of local isomorphism in terms of social practices (Zaheer, 1995: 342), including most human resource management practices because they are typically the subject of strong local conventions and norms (Rosenzweig and Nohria, 1994: 231, 233). But a separate literature on the economic theory of labor market discrimination, starting with Becker (1957/1971) and using formal modeling and the U.S. example of the pre-civil-rights-movement era, suggests that firms might be able to enjoy a profit advantage by exploiting the bigotry of their peers and hiring the excluded group. That literature, though lacking strong empirical evidence on its profitability prediction, tends to predict opportunities engendered by being an outsider and actively exploiting bigotry embodied in certain networks' social consensus (Becker, 1957/1971). Our study challenges the organizational theory literature by building on theoretical insights drawn from the labor market literature.

We here have attempted one of the more rigorous tests ever conducted of the profitability

prediction of the economic theory of labor market discrimination. Previous empirical work on this question has often lacked clear empirical results, and much of the empirical work has lacked panel data or the use of firm fixed effects to control for unobserved heterogeneity. Not only is definitive evidence lacking on the general benefits of hiring excluded groups; there is also little or no evidence on the profit benefits or liabilities to multinational firms of actively hiring and promoting excluded groups in foreign labor markets. Also, prior studies of discrimination and profit effects have often focused on factory workers; we believe, however, that the effect of gender discrimination on firm performance may be more overt in the ranks of management, where hiring an excluded group like female middle and senior managers can have a direct impact on overall strategy and operational capabilities.

The ultimate goal of our study is to contribute to the organizational theory of the multinational enterprise by testing whether the significant competitive opportunities of the multinational include scanning the host-market social landscape, identifying social schisms in the labor market, and exploiting such schisms by actively hiring and promoting members of the excluded group to positions of management responsibility. Social biases are a common aspect of human behavior, as documented in the Carnegie and neo-Carnegie schools of organizational theory (see, for example, Gavetti, 2012) and in the social psychology-based literature on judgment in managerial decision making (Bazerman and Moore, 2012). Demonstrating through theoretical argument and empirical testing that competitive advantage for multinationals can be based on the careful, strategic response to social bias in host markets is a central part of our contribution.

NEO-INSTITUTIONAL THEORY ON MULTINATIONALS

The principal contribution of neo-institutional theory has been to show that organizations, in order to survive and grow with the help of outside resources and certification, are often legitimacy-seeking and not solely efficiency-maximizing. In order to gain legitimacy, organizations find that they must conform to the social patterns and behaviors of dominant actors in their environment. The neo-institutional literature, with its focus on the multiple institutional pressures toward conformity with local

norms that legitimacy-seeking firms face (Meyer and Rowan, 1977; Meyer and Scott, 1983), has elucidated the role of multinationals in forcing their own suppliers to adopt ISO quality certification (Guler, Guillén, and Macpherson, 2002) and the role of the state in mandating local practices in preference to global business practices (Guillén, 2000). Thus the neo-institutional literature has shown that the state and powerful actors can mandate certain local practices as a condition of doing business, support the dominance of locally divergent organizational forms (Orrú, Biggart, and Hamilton, 1996; Aguilera, 1998; Biggart and Guillén, 1999; Guillén, 1994, 2001), and even help prevent the pressures of globalization from changing locally dominant practices and organizational forms (Guillén, 2001).

There is a gap in the theory, however, when considering an important dilemma frequently faced by social outsiders in numerous institutional environments: a generic outsider must decide whether to conform to locally institutionalized norms that embody a social preference or social schism at the expense of a particular group, where the excluded group represents an underutilized talent source and thus a potential source of competitive differentiation. Jepperson and Meyer (1991) pointed to the role of the state in legitimizing certain norms and coercing firms under its jurisdiction to follow them. In the international context, the state's role has been confirmed by Hamilton and Biggart (1988). But what does the outsider do when a broad set of socially influential private actors acts through the state and the state's powers of policy enforcement to perpetuate a system in which women, or any other social group, are discriminated against in the local labor market? The specter of the state perpetuating a system of discrimination is not far-fetched. In recent years, a multidisciplinary group of political scientists, political economists, and sociologists has argued that the state, via a system of policies and policy-enforcement actions, has acted to maintain the exclusion of women from the managerial labor market in a number of emerging economies and even in the advanced economy of Japan (see edited collection by Rosenbluth, 2007). The reason why socially powerful groups would use the state to perpetuate the exclusion of women is not esoteric. Doing so maintains privileged opportunities for males, or anyone in the dominant political coalition, to monopolize senior positions in management; it also maintains a system in which the excluded group is a potentially cheap source of lower-level production labor outside the sphere of

privileged workers with legally mandated job protections.

Within the international business literature, scholars of organizational theory have emphasized multinational firms' "liability of foreignness," with the implication being that multinationals are often vulnerable to discrimination by state actors and associated powerful local elites, but it is also unclear from this organizational theory of the multinational whether multinationals should therefore refrain from going against discriminatory social norms imposed by the state and by powerful elites. Hymer (1960/1976), widely credited as the father of the global strategy/international business literature, noted the "difference in treatment because of nationality" (1960/1976: 29) that multinationals face when they venture abroad, due to "discrimination by government, by consumers, and by suppliers" (1960/1976: 34), and their unfamiliarity with how the country really works (1960/1976: 34). Zaheer (1995), expanding on what Hymer called the disadvantages of being foreign (1960/1976: 43), coined the term "liability of foreignness," subsequently used frequently in the literature. This alleged liability arises in part from being unembedded in local social networks, from lacking integration with the local information network (Mezias, 2002), and from what Zaheer (1995) called lacking roots, compounded by foreign firms' lack of overall legitimacy in the host environment. Still, despite the fact that organizational theorists, particularly neo-institutionalists, have emphasized the difficulty for multinational firms of navigating the often-conflicting institutional demands, norms, and pressures of multiple markets (Ghoshal and Westney, 1992; Morgan et al., 2001), we still know little about how multinational firms can best respond to dissimilar labor-market institutions and norms, despite earlier calls for research on this question (Rosenzweig and Singh, 1991).

WHY STATUS AND CONFORMITY THEORY MAY NOT APPLY HERE

It is worth at least briefly noting here that an altogether separate literature on status and conformity states that those with low status have the ability to act against norms without further hurting themselves (Phillips and Zuckerman, 2001). Edman (2009) has proposed that foreign companies are essentially outsiders without status and without expectations, and therefore they can afford to go against

host-country business models. It is important to note just how much Edman's hypothesis goes against one of the core beliefs of the international business literature, namely that foreign firms are frequently the subjects of nationalism in a large number of countries and do in fact worry a great deal about not being seen to go against host-country expectations of how they conduct themselves in terms of core business practice such as who to hire in positions of leadership. That said, we find convincing the argument that foreign companies have increased leeway in some areas, such as bringing in a new business model as Edman documents for multinational banks entering Japan. Yet we have seen through fieldwork conducted over the course of parts of four years that multinationals likely do not have increased leeway to go against core principles of appropriateness when it comes to culture and gender. Such principles go to the very heart of the society's ideas of roles and responsibilities, and of the allocation of power. If multinationals are seen subverting the society's beliefs about the appropriate role of women, then those multinationals face a potential for a backlash from a variety of disparate but influential societal actors, including regulators, customers, business partners, and male employees.

Thus, while this study ends up concluding that multinationals have the ability to go against norms about female leadership, multinationals clearly do identify a serious backlash. Multinationals are not exactly low-status actors, as they have profitable business models that allow them to extend their business into South Korea, and they have much to lose or gain by the treatment from male elite actors in the host market. Because multinationals have considerable status, at least that of medium status, the multinationals in this context likely increase their hiring of female managers during our sample time period because the net benefits to these multinationals from employing female managers end up outweighing the real backlash from male elite networks. Thus, the crux of the analysis is to examine whether the benefits of tapping into the excluded group outweigh the backlash, which is the same thing as asking whether the sum of selection effects from hiring talented female manager plus the treatment effect that these female managers have on their broader organizations' productivity (including but not limited to

the reduced use of command-and-control organizing¹) outweighs the backlash from government, male employees, customers, and business partners.²

That backlash, as we found out from fieldwork carried out over parts of four years, can come from male employees who refuse to be cooperative with a female boss, from male customers and male business partners who prefer male bonding rituals like drinking, and from male regulators who prefer to exchange favors with those they are most familiar with and can most easily trust. As examples of this, we were told in interviews of the male employees who refused to be cooperative with a female boss and even in some cases asked to be reassigned; of the female senior manager who was derided as a “lunch box” by male businessmen when going to a bar in which a great deal of business was conducted; and of conservative male regulators who preferred companies with male managers. Being conformist clearly buys labor peace and some reduced discrimination from many male regulators, business partners, and customers, and thus it is not the case that there are no payoffs to conformity (Phillips and Zuckerman, 2001) in the case of the multinational firm and core cultural practice. Indeed, worries of a “World War III” inside and outside of the organization were common. According to the senior manager of a European-owned executive-search firm that advised both Korean and multinational clients in Seoul, “There are clients who know there will be World War Three if they were to hire a woman above a certain level in the organization. Then you get gender-bias decisions being made” (Interview with first and second authors, August 19, 2009). Even those who did much to employ female managers feared

¹ As described by Seddon (2005: xiv), command-and-control management reflects a top-down, hierarchical form of organizing in which decision-making is separated from work, the ethos is that of control, and the role of leaders is to manage people and budgets. This contrasts with a more deliberative form of management in which there is open, inclusive debate about strategic choices within teams as well as up and down an organization. The virtue of command-and-control organizing is fast decisions on priorities, whereas the potential downside of deliberative management is more pre-decision debate and thus slower decision-making. As Smythe (2013: 9) describes, command-and-control organizing may be better for tasks involving the standardization of production methods and customer experience. On the other hand, as Smythe (2013: 9) describes, “In a traditional command and control environment, an elite concludes the thinking about the content (the what) and the execution (the how), and then casts about for ways to tell its people what has been decided... This is a value-destroying approach to decision making, as most of the population have not been invited to challenge and contribute, and thus the outcome is representative of a tiny minority of the collective memory and expertise of the enterprise, added to which those who are relied on to execute a top-down decision feel little ownership of it and are not readily motivated to help.”

² Note that this study is not about adjudicating between the aforementioned selection vs. treatment, since the key debate is about whether (selection of females + organizational treatment by females) > backlash. We will, however, present evidence later on this paper that much of the effect is about the effect of women on their organization’s broader productivity, which is itself likely the combination of both selection and treatment. The relative importance of selection and treatment is an interesting topic for future research, and it will likely require heretofore unavailable data on detailed individual attributes.

publicizing it. As one regional executive of a Western healthcare multinational put it, “We have a large number of female managers in our Korean organization, but we would not advertise it for fear of offending local men. It is not something that we publicize” (Interview with first author, October 21, 2010). Thus, this is also not the type of situation in which the multinational faces no costs to being foreign (Nachum, 2003).

Therefore, it is an empirical question as to whether the net benefits to employing female managers outweigh the backlash from male elite actors. To preview our theoretical argument, we believe that there are two distinct mechanisms by which multinationals end up choosing to hire more female managers than the typical local firm. First, multinationals are more aware of the opportunity than locals because they remain at least partially removed from network reciprocity obligations within Korean male elite networks. Second, some multinationals are removed from the local belief system about the superior efficiency of homogeneous male leadership teams. This fact also serves to explain why the Japanese multinational may be seen to occupy an intermediate role between domestics and Western multinationals. They will be shown to employ significant more female managers than domestics, but less than Western multinationals. In interviews, we discovered that the major reason for this was that while they carried the belief system, they were distant from the local network obligations of reciprocity that enforce the belief system. This led them to begin to experiment in the 2000s with employing female managers.

Thus, in concluding this section, we reject the idea that foreign firms are low status and that therefore they can afford on that basis to be deviants. Instead, we will argue that foreign firms have to carefully outweigh the potential benefits of female managerial hiring against the expected and not infrequently encountered backlash from some economically important societal actors. It is the fact that there is a tradeoff in which likely gains of underutilized talent are weighed against uncertain backlash makes this problem empirically interesting. It is interesting that while multinationals are more likely to hire female managers, a large percentage still do not hire any for fear of a local backlash. That was seen in an interview we had with the CEO of a European multinational. Even some multinationals eager to take advantage of the opportunity appeared to have been deterred from doing so by their local Korean

managers. “Gender balance presents us with a nice large vein of talent that we can no longer ignore. Women have done unusual things that help them think differently about the same problems. They have had a career path and are a resource that has not been appreciated in Korea,” the CEO of a European multinational told us. He then added, “I thought that I would hire a senior female manager in Korea, but my local management told me that women are not taken seriously by our customers” (Interview with first author, October 14, 2009).

During our fieldwork, we found that by far the most cited obstacle for hiring and promoting female managers was the internal organizational backlash from male subordinates, peers, and bosses. One senior female executive of a Japanese-owned company in Seoul remarked on how she had to leave her organization due to such backlash prior to later being implored to come back once a male subordinate had been fired: “I had a colleague who was a man, a Korean man. He came to our company after I did. So I had a higher job title. But he didn’t pay me due respect. He didn’t treat me as his boss. And yes, it was because I was a female. He was really low. Very low. The conflict was not with the Japanese management, but with the man who could not work under a woman” (Interview with second author, December 22, 2009). Another female executive described the internal backlash that she dealt with on a regular basis: “When I first started working, we can say sexual harassment happened very casually 15 years ago. One day, as a senior operations executive, I was visiting a manufacturing facility we own and the HR manager there asked me if I would like to know my nickname among the employees. He told me, “Big boobs.” There are very few women there. There’s a very high turnover rate for females. There was one female manager who quit within six months because of sexual harassment. Another subsequently quit because of sexual harassment. Even myself, I struggle to travel there” (Interview with first author, October 12, 2009). After Citibank took over a much larger local bank, one Citibank female executive described how, “Guys from the previously local bank would say things to females that are rather condescending. Like order a young female manager to make coffee for him. But in Citibank, although you are a young female manager, you can say no. So it was a culture shock for both sides during that integration” (Interview with first author, January 8, 2010). Also representative was the

following quote from a senior female executive of a Western pharmaceutical firm: “Females are not promoted because in a men’s world having one or two females compete with them can be scary; and if it becomes more, then men cut them off” (Interview with first author, October 12, 2009).

ECONOMIC THEORY OF LABOR MARKET DISCRIMINATION

A separate body of literature examines the apparently remote question of why a competitive market would exhibit racial or gender discrimination. Becker’s (1957/1971) economic theory of discrimination posited that discrimination is a consumption good of the firm’s management, and that the firms that discriminate are those willing to pay more than the prevailing market wage (or to accept less than the market-available talent level) in order to employ only members of the favored demographic group. By this reasoning, firms that discriminate should experience lower profitability, and the firms that actively hire and promote the excluded group should enjoy higher profits. Over time, bigoted management should be selected out of the market as non-bigoted competitors either capture their market share directly or buy them out at a premium. Becker (1957/1971) pointed out that his predictions would not always hold, since firms that exercise market power, whether through government-endowed monopoly, government-enforced limits on foreign entry and competition, or firm-specific resources and capabilities, will fear rivals less and be more willing to pay the price of discriminating.

One of the more intellectually provocative predictions of this literature is that a profit opportunity may arise from hiring the excluded group, but the literature is so full of contingencies as to be unclear in its ultimate prediction. First of all, will discrimination even lead to lower pay for the excluded group? Becker originally predicted that it would, but later authors asserted that Becker’s theory was really about segregation; in a competitive labor market, they argued, there might be firms populated by only one group or the other but their wages would be similar. But if there are differences in wages, or if discrimination primarily arises from senior employees with a personal incentive to preserve an economic boycott of the excluded group, or if the excluded group has a uniquely high level of productivity or a unique ability to identify market opportunities, there should be a profit difference. Over time, however, the profit

difference should be competed away, unless one of the numerous contingencies proposed in the literature prevails: adjustment costs (Arrow, 1972, 1973), or the ability of monopolists to print money and avoid paying a penalty for discrimination (Becker, 1957/1971), or agency costs as senior employees perpetuate discrimination for selfish motives contrary to the interests of the firm's capital suppliers (Becker 1957/1971), or customer pressure on firms to discriminate (Becker 1957/1971).

Perhaps unsurprisingly, in light of the numerous contingencies cited in prior literature, results testing the profitability prediction of the economic theory of discrimination have been mixed. Some executives we interviewed mentioned a short article in *McKinsey Quarterly* (Desvaux, Devillard-Hoellinger, and Meaney, 2008) reporting that among 101 U.S. (and possibly other western) companies, those with at least three female executives were likely to be better managed, a finding that in turn correlated with better financial performance and valuation. While suggestive, the sampling criteria are unclear and the pairwise correlations lack statistical rigor and do not control at all for unobserved firm heterogeneity.

In the academic literature, the evidence is also surprisingly inconclusive. One set of studies examines whether realized pay discrimination in the United States increases or decreases with monopoly power and trade competition. Ashenfelter and Hannan (1986) found that monopolistic U.S. markets exhibit more gender discrimination. Within those monopolistic markets, most firms (even those with relatively less market power) discriminated against women. Black and Brainerd (2004) used U.S. data to show that industries with growing exposure to global trade exhibited less gender discrimination over time.

Another set of studies examined whether the realized pay discrimination differential in labor markets is primarily due to productive differences among groups or to actual discrimination. Here the evidence has been especially mixed. Hellerstein and Neumark (1999), using data from Israel, attributed most of the pay differential to productivity differences, not discrimination. But the same year Hellerstein, Neumark, and Troske (1999) used the Worker Establishment Characteristics Database to find evidence of gender pay discrimination in the United States.

A third set of studies has examined whether any performance benefits result from hiring excluded

groups across countries. Deszö and Ross (2009, 2012) reported that having a female CEO had a negative effect on corporate performance among U.S. companies, but that having a top-five female executive had a positive effect when U.S. companies that chose not to report R&D expenditures were excluded. Appold, Siengthai, and Kasarda (1998) relied on self-reported financial data on a sample of 91 companies with data on demography for “supervisory” positions in Thailand in the mid-1990s and found that foreign firms had fewer women in supervisory positions than local Thai firms and that having more women in supervisory positions had no significant effect on return on assets. With publicly audited financials, more detailed demographic data on management levels, and a much larger and nationally representative sample of firms, one wonders what the demographic difference and performance implications might have been. Similarly, other authors such as Adler (1993) have predicted that foreign multinationals would benefit from hiring women but had to rely mostly on anecdotal performance evidence to frame their predictions. Szymanski (2000) in turn showed that English soccer-league clubs with a higher proportion of black players outperformed other clubs on the playing field, even after controlling for the wage bill. The latter finding is an encouraging result for our study, but the question remains whether sports-league owners are all profit maximizers or whether some view their clubs as a consumption good and are thus more willing to pay a profit penalty for discrimination than is typically the case in other parts of the global business world.

Most other studies have findings in the predicted direction but with less than uniform or definitive results. Smith et al. (2005) find that, in the presence of fixed effects, there is no statistically significant effect of female senior management on firm performance among the 2,500 largest Danish firms during 1983–2001. It is unclear whether that non-result is due to the study taking place in Denmark, a country known for its nearly world-leading high level of egalitarianism (Siegel, Licht, and Schwartz, 2011). Hellerstein, Neumark, and Troske (2002) found cross-sectional evidence in the United States of a profit benefit from hiring women at firms in industries with product market power; they also found that firms that discriminated against women were punished over time with lower growth or buyouts by nondiscriminators. The remaining question here is whether the cross-sectional evidence would be robust

to a panel analysis with firm-level fixed effects. Also, the result that the profit benefit was greatest in industries with product market power actually contradicts one of the primary predictions of Becker's theory and of Ashenfelter and Hannan's (1986) prior empirical result.

From Japan, on the one hand, we do observe prior empirical evidence on demography that is relevant and encouraging for our study. Foreign-owned firms in Japan appear to have higher average percentages of female employees and lower average pay gaps between their overall male and female workforce. In the sociology literature on labor mobility, Ono (2007) presented evidence from a survey of 10,406 Japanese workers from larger cities indicating that Japanese women are more likely to work for foreign firms.³ A small sample of Japanese female MBAs reported in interviews given to Ono and Piper (2004) that they perceived fewer gender-based career obstacles in foreign firms. Also, among 10,406 Japanese workers surveyed by Ono (2007), those women working for foreign-owned companies reported annual earnings that when tabulated were shown to be 28 percent lower than men working in foreign-owned companies, whereas the reported gender pay gap among those working for domestic Japanese firms was 43 percent.⁴

The one known study from Japan analyzing the effect of female workers on corporate performance in Japan had inconclusive results. Specifically, Kawaguchi (2007) found a profit benefit from having a higher proportion of female workers in Japan in the 1990s, but the firms that hired women did not grow faster over time and only 5 percent of the profit effect was due to gender discrimination. The remaining question about this study draws on Houseman and Abraham (2001), who showed that female workers in Japan were significantly more likely to be temporary workers. Thus it could be that the profit benefit attributed to the proportion of female labor in Kawaguchi's study was conflated with the effect of an increase in temporary workers as a percentage of all workers. This interpretation would be consistent with Kawaguchi's (2007) finding that most gender discrimination in Japan flows from

³ Ono (2010) found that among stock research analysts writing columns in the *Nikkei Financial Daily* between 2000 and 2007, the female stock research analysts were more likely to be working for foreign investment firms.

⁴ Ono and Odaki (2011) also showed in a large-sample demographic analysis of one million Japanese workers using government data from the year 1998 that there was a lower average pay gap between women and men in foreign multinational subsidiaries in Japan compared to local Japanese firms.

productivity differences, not discrimination, although the effect of gender discrimination could increase once one controls for the effect of temporary workers. In summary, there is evidence suggesting a profitability effect, but prior studies have all had limitations and as a result there is no consensus about the size or importance of the profit effect in global business.

BRIDGING THE TWO THEORETICAL TRADITIONS

In any market with persistent discrimination, the actor most unfamiliar with prevailing societal ideology and unaffiliated with formative institutions like the military should be the most likely to recognize the profit potential of aggressively hiring and promoting talented members of the excluded group. Therefore we predict:

H1: Multinationals will be significantly more likely to hire and promote the excluded group.

H2: Multinationals will be significantly more likely to implement practices that support the hiring and promotion of the excluded group.

We know, however, from the economic theory of labor-market discrimination that multinationals are not unique in their ability to derive an advantage from hiring an excluded group. Therefore, to the extent that there is a profit opportunity in hiring an underutilized pool of talent, then all firms, foreign and domestic, that recognize the opportunity should be able to derive a performance benefit from doing so. Therefore we predict:

H3: Firms, both foreign and domestic, that do more to hire and promote women to positions of managerial responsibility will see higher levels of profitability.

THE KOREAN CONTEXT

We conducted lengthy interviews with an extensive set of female managers, aspiring female managers, HR managers, CEOs, a former prime minister, and former President Kim Dae Jung, who agreed to an interview in what turned out to be the last month of his life. “I believe foreign-owned companies have less gender discrimination and put more focus on people’s individual qualities regardless

of gender. . . . Domestic companies have more of a male culture,” former President Kim observed. He continued:

To address that problem will take some time. . . . More and more women are successfully passing the high government official examinations, and females are very active and visible among government officials these days. In fact, a majority of those passing the high government exam and the bar exam are now women. There are now many women as prosecutors and judges. Also, even in the household economy, wives are the main players. Usually a man’s salary is wire-transferred through Internet to the wife’s account and so the man has to get an allowance from his wife” (Interview with first author, July 4, 2009).

As the former president acknowledged, large numbers of women in the Korean labor market have demonstrated talent. Yet the vast majority of domestic companies do not have a single female manager. Multinationals are significantly more likely to have female managers; these individuals are almost always Korean women, not transferred non-Koreans. (Non-Korean female managers in South Korea are extraordinarily rare. We have compiled an exhaustive list of this small group and interviewed many of them via snowball sampling.)

South Korea is representative of a large set of countries where the dominant ideology states that men are better suited for corporate and political leadership (King and Mason, 2001; Slote and De Vos, 1998; Li, 2000). South Korea itself belongs to the group of nations—along with China, Japan, Taiwan, Vietnam, and Singapore—known as the Confucian Core, where Confucian-inspired beliefs are still taught and practiced in everyday social life. As Tu (1998: 5) has observed, “East Asians may profess themselves to be Shintoists, Taoists, Buddhists, Muslims, or Christians, but rarely, if ever, do they cease to be Confucians.” Confucianism did not invent gender bias in East Asia (Li, 2000); some scholars have pointed out that Confucianism overlaid regard for integrity, education, caring, and good governance on pre-existing social biases (Chou, 1998). The fact remains that Confucianism is an ethical system through which restricted female roles have been reinforced by male elites (Hall and Ames, 2000). Confucius states in the *Analects* that King Wu of Zhou had nine male advisers and one female adviser, but remarks that fortunately there was plenty of male talent in the society and thus the single female should not really be counted among the king’s advisers (Li, 2000: 3). Deuchler (1992) and Duncan (2000) discuss how, immediately prior to the widespread adoption of the conservative neo-Confucianism in South Korea,

women enjoyed equal inheritance rights and equal roles in the all-important ceremonies of ancestral worship. Women were even occasionally societal leaders during the Shilla dynasty (Duncan, 1998: 86). During the Goryeo dynasty (918–1392), women not only continued to possess equal inheritance rights, but also could desert an incompatible husband, divorce, and remarry without any social stigma (Deuchler, 2003: 143). While Confucianism was not directly responsible for the extreme restriction of women's social and economic role that occurred after 1400, its gender-related precepts were used during the 1392–1910 Joseon dynasty by male elites to gradually restrict women's role in the public sphere (Deuchler, 2003).⁵

What also limits female access to leadership positions in South Korea as well across numerous cultures in the developing world (plus Japan and at least some other advanced economies) are ongoing societal rules pushing many women to marry young and leave the professional workforce (Morrison and Jütting, 2004; Rosenbluth, 2007). Restrictive inheritance norms found across developing countries, along with the practice of dowry that is still found in some developing countries, also effectively impede women from more frequently assuming roles of economic significance (King and Mason, 2001; Morrison and Jütting, 2004). Other social norms that are discriminatory are only slightly more subtle. In Latin America, a social norm revolving around the aggressiveness of males—including using their economic power to hold women back from leadership aspiration—is glorified in many parts of society, including elite culture, through the so-called culture of *machismo* (Sara-Lafosse, 1998; King and Mason, 2001). Even in the U.S., Powell et al. (2002) show through survey evidence that gender stereotyping holding that women cannot be effective managers continues to be persistent.

Yet at the same time that South Korea is similar to a great many countries for its social beliefs and social rules impeding women's economic rights, South Korea is also representative of a large number of

⁵ We adopt the contemporary method of Romanization of Korean words in this paper (with this method formally called “Revised Romanization” and put into practice during the administration of President Kim Dae Jung in July 2000). When referring to the Joseon dynasty, Joseon is alternatively spelled Chosŏn in the McCune-Reischauer transliteration method. Also, in the Korean language, the managerial titles *chajang* and *bujang* stay the same when going from singular to plural (except that a Korean suffix may be attached at the end). To make ourselves more readily understood to an international set of readers, when referring to the plural form of *chajang* and *bujang*, we use “chajangs” and “bujangs” in English writing.

countries where women have in the past two decades already broken the barriers into just about all if not all management-relevant educational fields (Hewlett and Rashid, 2010; see also Figures 1-2 for the relevant South Korea data on broad-based entry of women into business-relevant fields starting in the late 1980s). What is striking is that at the same time these cultural barriers persist to impede female managers' advancement, it is a striking phenomenon just how universal women's rise to educational attainment has been since 1990. As noted by Hewlett and Rashid (2010: 2) in a recent practitioner-oriented article on female talent, fully 65 percent of college graduates in the United Arab Emirates, 60 percent in Brazil, and 47 percent in China are women. In the Korean context, the educational glass wall started falling in 1990 as part of a global phenomenon in which democratization leads political actors to try and incorporate excluded groups by first extending educational access (Ramirez, 1987; Bradley and Ramirez, 1996; Meyer et al., 1997).

Paradoxically and perhaps inadvertently, Confucianism also helped plant the seeds of women's recent re-emergence in public life and questioning of traditional ideas about women. While Korean democratization was instrumental in encouraging expanded access to education, the seed of women's re-emergence in public life was likely aided by the traditional encouragement of female access to books and study. Both Confucius and Mencius were home-schooled in ethics and historical writings by their mothers, and their writings explicitly assert that women should be allowed to study and to attain self-awareness through access to books (Li, 2000). Confucianism also assigned certain specific powers to women: financial management of the home, home management, and deciding the future of the children (Cho, 1998). Already as of the early to mid-1990s, South Korea did not lack eligible female graduates of business schools, engineering schools, economics departments, and foreign-language departments. Numerous female managers whom we interviewed spoke proudly of the fact that Korean women had significantly increased their advancement through meritocratic competition as judges, prosecutors, civil service officials, and even military officers during the succeeding decade. Female advancement in these aforementioned and formerly almost male-only professions was occurring on a vast scale. Fully a quarter of all active Korean judges were women by the end of the succeeding decade (Lee, 2010).

To return to empirical explanations for the norm of homogeneous male leadership groups, the second justification offered by Korean executives we interviewed—also articulated in historical Korean writings—is that male life experience is unique and that homogeneous male groups are efficient at drawing on that experience when organizing economic life. From this perspective, shared understandings and beliefs arising from the male life experience, including compulsory military service, equip men to absorb a set of command-and-control practices and to understand tacitly how to act most efficiently as a group; when the leader makes a decision, for example, everyone needs to pitch in to achieve the objective (Janelli, 1993). Thus a homogeneous group of Korean men can draw on the organizing practices of the military to get things done without delay (Kearney, 1991), whereas women without military experience may suffer from a culture clash and may lack the requisite know-how. This belief calls to mind the findings of sociological studies on social homophily and its potential contribution to employee satisfaction (Blau, 1977; Nielsen, 1985; O'Reilly, Caldwell, and Barnett, 1989). Thus, though economic theory ignores mass ideology about the hypothetical efficiencies of male homogeneity in leadership groups, the fact that a substantial segment of Korean society largely believes in the empirical truth of this ideology renders the debate about whether or not it benefits companies to hire women and minorities both intellectually interesting and potentially socially meaningful.

Early on, we ruled out the possibility that enforcement of nondiscrimination laws was a significant factor in gender hiring. We found, in fact, that both lawsuits and prosecution involving gender discrimination were exceedingly rare—the list we compiled, which we believe to be complete, consists of fewer than 15 cases since 1987—and that in some cases women suffered notable losses in court. The judge in the National Agricultural Coop case stated in his opinion that the company's dire need to reduce its workforce justified targeting women for layoffs. In an ongoing case involving a large Korean business group, Lee Sun Yi, the certified labor attorney representing the plaintiffs stated that, despite evidence suggesting that women earned only 65 percent as much as their male counterparts, the judge was likely to favor the employer because of its economic importance to the country: "As Hyosung is a large business group, the court is more sensitive towards the company than otherwise would have been the case. They

believe they have to consider how their business interests may be affected—the company is too big and significant for them to ignore such concerns” (Interview with second author, May 27, 2009). Some judges acknowledged that women had suffered discrimination but awarded them little or no compensation.

Also, we found that we could rule out the possibility that the most talented men simply did not want to work for multinationals. We received confidential, aggregated data on the history of female and male qualifications and placements from two of the top three business schools in Seoul. We also conducted interviews with those who were at the top business schools in the early 1990s and witnessed the changes in both gender demography and in males started to prefer to work for foreign employers. And finally, we also interviewed a set of top recent male graduates of one of the top three business schools in Seoul. In summary, we saw from the confidential, aggregated data that multinationals had been able to hire literally hundreds of the top male graduates from those top three business schools in the 2000s (based on GPA and class ranking), that they had hired males at a rate that was at least commensurate to if not larger than their share of managerial employment in Seoul, and that there was not a large or even moderately-sized difference between the observed quality of their female and male hires from these top business schools. A male who studied at a top three business school in the early 1990s and noted the increase in female representation at his school starting in 1992, also remarked, “Starting in about 1995, males wanted the international brand names and were increasingly open and even oftentimes eager to work for foreign companies in Seoul” (Interview with first author, February 24, 2011). As one executive director of a leading American multinational stated, “It is frankly relatively easy to get the male graduating #1 in business from a top three business school” (Interview with first author, June 9, 2011). Part of why it was easy was that multinationals were in fact known to generally offer higher salaries than local companies to both male and female talent (with the same high salaries being offered to both females and males of comparable qualification).

Another idea we were able to rule out was that female managers might not be able to have an effect on their business within one to two years. The most representative quote came from the head of a

U.S. technology company's subsidiary, who noted, "Women who are given senior management roles in South Korea feel an intense pressure to prove themselves. They push themselves to show a discernible impact within even the first one to two business quarters of their tenure as a senior leader" (Interview with first author, August 15, 2011). As James Kim, the CEO of Microsoft Korea explained, "Korea is the culture of 'hurry, hurry' or 'pali, pali' where speed is everything. At Microsoft Korea, women in management roles operate in a microscope, thereby being forced to perform very quickly. The sheer pressure to perform and the Korean culture of speed makes for an ideal environment for women to thrive in Korea if given the chance to lead" (Interview with first author, August 22, 2011). As a senior female manager at Citibank Korea noted, "If you are a minority, when you catch yourself in the middle of competition, you work harder and faster as you know you are undervalued... And I think the female executives who have been successful in Korea, they felt the same too" (Interview with second author, January 8, 2010). Those quotes are representative of what we witnessed over parts of four years of fieldwork, namely that female managers are in fact often able through effort and determination to show performance improvements in their businesses within one year or less.

Another question was whether public image was forcing even otherwise bigoted employers to hire women. We found, first, that it was extremely rare for companies to publicize in any way that they had recently hired or promoted women; Samsung Electronics was one of the few exceptions. Further, we found male executives who were happy to explain why they did not have a single female manager. "I have no female managers. I tried having a female manager, and I would never do it again," said the CEO of a financial-sector firm. "I found that women are limited by emotional decision-making and that it causes problems. Maybe I might appear tomorrow in the newspaper as a chauvinist, but that is my real thinking" (Interview with first author, October 14, 2009).

The female managers we interviewed told numerous stories of the adversity they had had to overcome. While some might expect female managers to be segregated in HR, we found female senior managers in every function, including operational heads overseeing large numbers of male blue-collar staff. Numerous female managers remarked on the high cost of child care in Korea, and said that they

were able to progress in their careers only because they had remained childless or arranged for their mothers to raise their children.

The most senior multinational executives we interviewed were all aware that most local firms had no women in senior management. The head of HR for a foreign multinational reported: “When we do recruiting, typically female applicants have better qualifications in terms of standard measures. . . . So do females prefer us? Yes. Because males can target more broadly [to local companies] than women when looking for jobs” (Interview with second author, January 6, 2010). And the head of HR management for Sony Korea observed: “Females understand Sony is a really good company for females. . . . I want to share my understanding for this issue as follows. At first I will say that female employees of Sony Korea, including managers, are relatively more competitive [higher-performing] than males. It is because of, one, local companies prefer males over females, and two, females have less opportunity in local companies” (Interview with first author, January 10, 2010).

The same senior executives of multinational subsidiaries characterized local bigotry against women as universally apparent to multinationals. Furthermore, they acknowledged making a deliberate choice to try to exploit local bigotry. Of course, they were motivated in part by their awareness of the importance of attracting the best talent, but such decisions entailed weighing hiring choices against the impact of flouting the preferences of bigoted local customers, business partners, fellow executives, regulators, and policy makers. Consider the example of the previously quoted CEO of a European multinational. He delivered a speech extolling the opportunity to hire underutilized female talent, but then acknowledged in an interview that he had chosen not to hire a female executive at his Seoul office because local managers told him that customers were too bigoted to deal with a female. Even a progressive local firm with a female second-in-command experienced such pressure. “When we interview new job applicants, if we were to select only based on the score, we would have only women,” this female leader told us. “We are up to 46 percent women. The problem is that the 40- and 50-year-old managers and customers on the outside are often men who are used to dealing only with men” (Interview with first author, October 13, 2009). In short, both interviewees knew that women are an underutilized

source of talent, but both cited the difficulty of hiring and promoting women at senior levels given local prejudice and cultural norms.

The aggressive hiring and promotion of women to senior management by foreign multinationals is in part motivated by a calculation that the talent utilization outweighs the outsider liability of going against dominant local cultural norms. It is based on a relative prioritization of the competitive opportunity to exploit the bigotry of locals. The multinationals that make this calculation to aggressively hire and promote the excluded group often end up putting in place practices that go far beyond what is done in the home market. For example, the head of a major U.S. technology company's subsidiary in South Korea stated, "I just implemented a new plan. Let's say that we have 20 open managerial positions this year. When a male is hired over a female, [the hiring manager] has to send me an e-mail for clearance" (Interview with first author, January 19, 2010). And it is not the case that they are just a little more aggressive in South Korea than at home. Many of the Japanese multinationals had no or almost no female representation in management at home but yet had significant representation in South Korea, as will be discussed in detail in a later section of this paper. Even many of the heads of U.S. and European multinationals stated that the opportunity to exploit the bigotry of locals either caused them to make efforts they simply chose not to make at home, caused them to have women at senior levels they never or almost never had at home, or else caused them to be far more aggressive in Korea than they were at home. Thus, exploiting the bigotry of locals is often a part of the calculus, even if it is not always the sole reason for hiring women.

DATA

We utilize two unique data sets from South Korea, a country that is representative of a wide set of emerging economies and some advanced economies for its level of gender discrimination. Across a variety of related dimensions measuring the extent of gender-based disparity in the labor market, South Korea is actually disturbingly representative of a large number of peer countries, both most emerging economies and some advanced economies. To see that South Korea is not an outlier but rather a

remarkably representative country case, one can focus on the available, comparable cross-country data about female participation in the overall workforce, female participation in professional positions, and the overall wage gap between women and men. For purposes of comparison, we focus in on the year 2005, given that it dovetails with the start of the sample time period for this study.

First, in terms of labor market participation, while South Korea's female labor participation rate was 50 percent in 2005 according to the World Bank's World Development Indicators (WDI) database, that ranks South Korea just below the median of 52 percent, above Japan (48.4 percent), above Spain (45.6 percent), Italy (37.7 percent), and Belgium (45.7 percent), above a wide cross-section of emerging and transition economies in Latin America, Africa, Asia, and Eastern Europe (including most prominently Mexico, Chile, South Africa, Nigeria, all of the Arab countries, India, and Poland), and just slightly below France (50.2 percent), Argentina (50.3 percent), Germany (51.4 percent), Hong Kong (51.8 percent), and Singapore (53.5 percent). Similarly, the female percentage share of all professional and technical workers in South Korea was rather low at 39 percent according to the United Nations Development Programme's (UNDP's) 2007/08 Human Development Report (which utilized data from Year 2005), and yet that 39 percent figure was comparable to the female shares in Hong Kong (40 percent), Malaysia (40 percent), Mexico (42 percent) and Singapore (44 percent), and only slightly below that of Japan and Italy (both 46 percent), and of Spain (48 percent) (Watkins, 2007).

When one turns one's attention to the gender wage gap, one sees that the ratio of estimated female to male earned income in South Korea according to the UNDP's Human Development Report is 0.40, which is lower than average but comparable to Japan (0.45) and Italy (0.47). It is also the same as the comparable value for Chile (0.40), slightly above Mexico (0.39) and Malaysia (0.36), and higher than Egypt (0.23). Data from the United Nations' Statistics Division encompassing the mid to late 2000s shows that women's wages in manufacturing as a percentage of men's wages in South Korea is 57 percent, which is lower than the median of 72 percent, yet still is at a similar level with Colombia and Hong Kong (both 60 percent), Brazil and Japan (both 61 percent), and Austria (62 percent), along with being higher than a broad range of other emerging and transition economies. The above-referenced

UNDP Human Development Report, again using data from 2005, presents an overall index of female activity that placed South Korea (with its score of 68 percent) slightly higher than advanced economies such as Japan (66 percent), Italy (62 percent), and Spain (66 percent) (Watkins, 2007). Among emerging economies, South Korea ranked on the UNDP's index slightly above Singapore (66 percent), and higher than Egypt (27 percent), Chile (52 percent), Mexico (50 percent), and Malaysia (57 percent) (Watkins, 2007). Overall, the picture we see is of a South Korea that appears quite representative in the extent of its labor-market gender disparities of a rather large set of peer countries around the globe.

We have looked the world over for a data set from an economy where labor market discrimination is known to be an issue and where we have detailed data on business-level policy decisions and hiring and promoting decisions in a nationally representative sample of firms, both foreign multinational affiliates and domestically owned firms, in a panel setting where firm fixed effects can be used, and where the dependent variable for profitability benefits from publicly audited financials. To our knowledge, South Korea is unique in having the data that meets all of these criteria.

The Korean context, as pointed out earlier, also has the virtue (not a social virtue, but a virtue for econometric identification purposes) of a high level of exogeneity in the choice to hire female managers. That is because the two main sources of endogeneity that have been proposed in past literature are that (a) companies might alternatively choose to employ female managers once they become profitable in order to avoid the increased scrutiny of law enforcement focused on equal employment compliance; and (b) companies might come more into the public eye through their increased profitability and then publicize their hiring of more female managers as a public relations move in order to avoid looking sexist. Not only is the law enforcement weak and highly deferential to company owners, but also, as pointed out earlier, even those companies that employ a large number of female managers choose rarely to publicize that fact. As was delineated in a previous section, even multinationals that hire the most women are seen through our interviews to explicitly choose not to publicize it for fear of offending male elites. Also, there are also so few female managers among the domestics, and a check of possible causal determinants in the cross-sections indicates that only exogenous industry pockets of apparel and publishing were robustly

more likely to have female managers. This is logical, given that for structural reasons in the labor market the overwhelming majority of the available talent in Korean apparel and publishing is female. Also, it is important to note that such industry influences are fully controlled for through our use of company fixed effects. Any time-invariant characteristic of the companies, including especially their industry affiliation, is absorbed as part of the fixed effects.

We believe that we further benefit from having an important source of distinction even across the two data sets. The first data set covers a nationally representative sample of firms, and thus it captures the overwhelming majority of firms with not a single female manager. The second data set has a significant screening criterion, where the survey collectors chose to focus on the firms with at least one female manager and thus see if female hiring continues to matter in a population of firms that are at least minimally diverse.

The first panel data set is the Workplace Panel Survey (WPS) from the Korea Labor Institute (KLI), a think tank headed by Ph.D.-level labor economists sponsored by the Korean government. The survey was conducted in Years 2006 and 2008, with the questions about companies' demography and human resource practices in the prior years 2005 and 2007. The response rate in the first wave was a reasonably high 53.6%, with the final sample met the WPS survey team's fundamental goal for sample size and representativeness of the national economy such that no firms were further added to fill in any holes. Also, the response rate in the second wave to largely the same set of companies was 87.1%. Because some companies are multi-establishment organizations, and the WPS surveyed them by going out to several of their establishments and asking them about their demography and hiring practices at each one, we have elected to aggregate those cases at the firm level. Our main dependent variable is ROA, defined as operating profit divided by total assets. The main variable of interest is the percentage of chajangs (deputy general managers), an upper-middle management position in South Korea in which women have recently begun to make significant inroads. (Women are few and far between in more senior management positions, although in the other data set where companies are at least minimally diverse, the differentiation occurs on the more senior management position of bujang (general manager).)

We have controlled for whether a firm has at least one female *chajang*, for the percentage of females who occupy the more mid-level management position of *gwajang*, for whether the firm has at least one *gwajang*, for the total female employee percentage in each firm. In addition for including firm fixed effects, we also include a year dummy for the observation taking place in year 2005 to control for all unobserved time-period effects.

In the WPS data set, we are able to utilize a broad set of control variables. Our financial control variables include the log of each firm's total assets, along with the firm's leverage, R&D intensity, and advertising intensity. We also, for the purposes of a robustness check, test to see that there is no difference for our results of interest whether we use number of employees instead of the log of total assets.

The two variables on R&D intensity and advertising intensity are from data provided to the third author from the Korea Information Service, a leading credit-rating agency in South Korea. To account for the effect of unionization, we control for a dummy variable indicating whether a firm has an active union. To account for the firm's propensity and/or ability to hire younger workers, we control for the percentage of newly recruited workers among the firm's total employees. To account for the firm's dependence on non-permanent employees, we control for the percentage of fixed-term contract employees among the firm's total employees. Then, to control further for human resource policies that we find to have some pairwise correlation with ROA, we further control for whether a firm's support for healthcare expenses has been provided to go beyond the legal requirement; for whether a firm provides financial support for cultural, sports, and recreational expenses; for whether the firm provides a work leisure program; and for whether the firm provides financial support for commuting expenses.

We also, for the purposes of a robustness check, test to see whether there is any increase in the probability of having a female manager if a Korean domestically company itself has any experience as a foreign direct investor in Western markets. We utilized data on Korean domestic companies' foreign direct investment from the Import-Export Bank of South Korea, where the data that is available to researchers shows all foreign direct investments made until the year of the first wave of the WPS survey.

We also test to see that we get similar results when look at any FDI experience anywhere in the world, as well as alternatively the number of countries and the number of Western countries in which the Korean company has prior foreign direct investment experience.

We also examine the effect of being a multinational firm on having female managers and having specific human resource policies that may be helpful to female employees. Our primary variable here measures whether or not the firm in the WPS sample was a majority-owned multinational affiliate. We also examine the effect of being majority-owned by diffuse foreign shareholders but controlled and managed by a Korean owner-manager.

We then utilize the second panel data set, which comes from the Korea Women's Development Institute (KWDI) and is known as the Female Human Resource Panel Survey (Survey Covering HR Managers). The first wave of this KWDI panel survey was conducted in 2007 and asked companies about their gender demography and gender-related practices as of the end of 2006. The first wave had a response rate of 44%. The second wave was conducted in 2008 and asked these same companies about their gender-related demography and gender-related practices as of the end of 2007. The second wave had a response rate of 88.7%. At the same time, these survey answers from both waves of the survey are combined with publicly audited financial data on these firms.

The KWDI company sample was formed by KWDI by examining where the female managers are represented across Korean industries and by firm-level employment size. The KWDI selected a potential company sample of 350 companies to reflect that population distribution.

Because one of our main goals is to look at the causal effect of changes in gender-related demography and gender-related policies, we focus on the subsample of companies present in both the 2007 and 2008 KWDI survey waves. This sample allows us to use company fixed effects in our main models. Furthermore, we focus on the subsample of such companies with complete data on their managerial demography and financial variables. This core subsample for panel analysis consists of 185 companies. (We also have confirmed that this subsample has characteristics quite similar in mean and distribution to the sample of all companies in the KWDI data, including those with incomplete data.)

Because one of our main goals is to see if foreign-owned firms are more likely to hire female managers and derive a performance advantage from that, we therefore make use of the ownership categories defined by KWDI. In particular, we will focus on the foreign-owned companies and their differences from the other non-foreign-owned companies. As in the case of the KLI data, these foreign-owned companies of interest are in fact managerially controlled affiliates of foreign multinationals.

Our main dependent variable of interest is ROA, defined as the ratio of operating profit to total assets. To deal with a few extreme cases, likely involving firms in the process of being reduced in size or firms in the process of rapidly accumulating assets, we winsorize the ROA data at the 1 and 99 percentiles. Our alternative dependent variable is Operating Margin, defined as operating profit divided by total sales, and then multiplied by 100. Here to, because of a few extreme outliers, likely involving firms in the process of being reduced in size or firms in the process of rapidly accumulating assets, we winsorize the operating margin data at the 1 and 99 percentiles.

The main independent variables involve gender demography and gender-related policy at the firm level. Since this KWDI sample was selected by KWDI contingent on each firm having at least one female manager, we saw that the differentiation among these firms occurred at the yet higher level of upper-middle management—the *bujang* (general manager) level—than in the overall Korean firm-level population studied by KLI's WPS data set. In the KWDI sample, firms have made more progress than the population as a whole in promoting women to the *bujang* level, and the relatively progressive companies have made more progress in the years since Lee (2002) showed Samsung to be a relatively progressive domestic company for promoting women initially only to the *gwajang* position in greater and greater numbers. So our primary independent variable of interest here is the representation of women as *bujangs* in the firm. In terms of other demographic data, with the KWDI data we can control for the percentage of female new recruits (female *sawons*) as well as the total female employee percentage of the firm. Then, because we are interested in gender-related policy, especially gender-related policy of ambiguous positive or negative causal significance for firm performance, we examine whether firms have implemented a family nursing holiday or not. The holiday is intended by some companies to give time

off on a regular basis to new mothers. Key control variables focus on R&D intensity, the log of assets, leverage (measured by total liabilities divided by total assets), and export orientation (exports of merchandise and manufactured products divided by total sales).

SUMMARY STATISTICS FROM THE KLI'S WPS DATA

As seen in the KLI's WPS data set, most Korean firms simply do not have a single female manager during the period of 2005–2007. Fully 60.8 percent of firms in the sample do not have a single mid-level female gwajang, and an even larger 73.5 percent of firms in the sample do not have a single upper-mid-level chajang. In contrast, it is not the case that Korean firms are all-male in their non-managerial workforce. As seen in the same table, the average firm's total workforce is 22.083 percent female with a standard deviation of 19.991 percent.

Among the other variables, one can see some interesting patterns. As seen in Table 1, the average Korean firm is only modestly profitable, with an average ROA of 5.3 percent, which is consistent with the fact that Korea is actually a fairly competitive market environment. At the time, one can see a large variation in company performance across the economy. The average Korean firm spends a relatively small 0.7 percent on R&D and a relatively small 1.1 percent on advertising. The average firm has a relatively moderate percentage of recent recruits, with a few firms even turning over their workers to a very high degree in the course of a given year. As is widely known, Korea has a relatively high percentage of its workforce that is unionized, and Korean firms tend to provide a great deal of benefits, including help with commuting expenses, that go beyond what is required under the law. Also, while there is as should be expected some collinearity across demography variables as shown in Table 1, we are primarily interested in female representation beyond tokenism at the level of the glass ceiling then prevailing in South Korea (the chajang/deputy general manager level), and we will show below in Table 3 that our focal variable of interest is not substantively impacted by the inclusion or absence of those other variables.

MODELS AND RESULTS FROM THE KLI DATA

First, in order to test H1 and H2, we model the existence of management policies and hiring actions that may be considered beneficial to female employees as a function of being a majority-owned multinational affiliate and controlling for R&D intensity, the log of firm assets, leverage, and export intensity. In order to test the importance of being an actual multinational affiliate controlled by foreign management, we contrast that independent variable with one focusing on Korean-controlled firms that happen to have a majority of their cash-flow rights owned by foreigners. This comparison shows the relative importance of foreign management control.

We find in Table 2 that majority-owned multinational affiliates are significantly more likely to have female managers and to have implemented policies and benefits that are believed to be quite beneficial to female employees. For example, by 2007 foreign multinationals are significantly more likely to have a female *chajang* and *bujang* in their Korean affiliate than other firms. In contrast, firms that are controlled by Koreans but have a diffused foreign shareholder majority are only slightly more likely to have a female manager. Also, in contrast, Korean domestic companies with foreign direct experience in Western countries are not more likely to have a female manager (thus indicating that the phenomenon of interest is squarely about non-Korean multinationals doing business in South Korea). Among the control variables, we find that larger firms and firms with higher R&D intensity were more likely to have at least one female *chajang*. As seen in Model 3, we get similar results for our main variable of interest even if we use the number of employees instead of the log of total assets. Because the log of total assets is a statistically significant predictor of female managerial hiring while the number of employees is not, we therefore choose to rely on the log of total assets as our control variable for firm size throughout the rest of the paper. Also, as seen in Table 2, majority-owned multinational affiliates are significantly more likely to have implemented a maternity leave by 2005, and they are significantly more likely to have opened a childcare facility and to provide two different forms of financial support for childcare. Together, these results support the predictions of H1 and H2 by showing that multinationals are significantly more likely than domestic firms to have female managers and to put in place benefits and

policies that are believed to be beneficial to female employees' advancement.

Next, we examine the effect of female management on profitability, and we find support for H3 in Table 3. A significant percentage of the WPS sample consists of small firms without any professional managers, and as one would expect, the results are perhaps most clear when focusing on the firms with at least three executives. Yet even across the models, a clear pattern emerges showing that having a higher percentage of female chajangs is significantly associated with higher profitability. As seen in the prior table, majority-controlled multinational affiliates are themselves significantly more likely to have female chajangs. While multinational affiliates within the WPS sample are not benefiting any more than domestic firms that have female chajangs, we find that a 10 percent nominal increase in the percentage of female chajangs is associated with a 1 percent nominal increase in ROA. Moreover, while most of the sample does not go above a 10 percent female representation of chajangs, some go much higher, and one even goes as high as 77.778 percent. Thus we find evidence for H3, namely that higher female representation in management is associated with higher profitability regardless of whether the firm is foreign or domestically owned. In the WPS sample, we checked and found that there is no statistical difference in the incremental returns to profitability from hiring female managers between multinationals and domestics. It is solely the higher intensity at which multinationals employ female managers that gives them an advantage in the WPS sample.

We next perform a set of extra robustness checks. Ono (2007) argued that multinationals in Japan might be going significantly against the grain in terms of not following the seniority-based and lifetime-employment systems of Japanese locals. South Korea and Japan are known to differ on these dimensions, as a large percentage of South Korean firms have increasingly turned to lateral hiring of managers and the involuntary dismissal of even male managers. We test Ono's (2007) argument for Japan directly in the Korean case and find that multinationals doing business in South Korea are not significantly less likely to be using seniority and are not giving a higher percentage of their workforce an involuntary push out the door. This lack of difference in work practices in the Korean context is largely due to the fact that even a large and growing percentage of Korean local firms have chosen over time to deviate from strict seniority

and to move away from the prior Korean version of lifetime employment. Ono (2007) also argues that workers in Japan are less likely to trust their multinational employers and more likely to quit their jobs voluntarily if they have a foreign employer, but we find no such difference between multinationals and locals in South Korea in terms of the number of voluntary leavers after controlling for size or the percentage of voluntary leavers over total leavers. We were also concerned that perhaps the multinationals are simply more technologically savvy and that this was perhaps an omitted factor. Nevertheless, we find as a robustness check that the level of use of computers in the workplace is not an omitted factor and does nothing to affect the results. Finally, we also performed a robustness check to see if the effect of female hiring on profitability was being driven by certain industry sectors. As seen in Appendix Table 1, with wholesale and retail trade as the benchmark, we find that while there are some differences across sectors, with manufacturing have no meaningful difference from wholesale and retail trade, but construction and transportation have somewhat expectedly less of a female managers' effect than wholesale and retail trade, and real estate, business facilities management, and business support services having more of a positive female managers' effect than wholesale and retail trade, the results clearly are not being driven just one or a few industries. Also we found in a robustness check in Appendix Table 2 that female managerial employment itself is certainly not restricted to a few micro-defined industries either. With expected and unexpected industries like professional services, apparel, education, architectural, engineering, and other scientific technical services, business support services being more likely to have companies with at least one female *chajang*, clearly the results are not being driven by just one or a few industries. Manufacturing is simply not significantly different from the baseline sector of agricultural firms, and there clearly is an economically significant amount of and organizational effect from female managerial representation in manufacturing, as will be seen later below when we will show statistical as well as qualitative evidence suggesting that female managers contribute to higher productivity in manufacturing firms.

SUMMARY STATISTICS FROM THE KWDI DATA

Next, we proceed to analyze the KWDI data, where as was previously stated all firms have at least one female manager. What this also means for the sample is that firms are typically larger and more profitable. As shown in Table 4, the average firm in the KWDI sample has natural log value of assets of 18.555 and a 6.7 percent ROA, which are both significantly higher than in the WPS sample which include many mom-and-pop businesses. Also, as would be expected given the screening criteria for the KWDI sample, firms in this sample differentiate themselves by having introduced the concept of having women in the next-higher level of upper-middle management, that of bujang. The average firm has 6 percent women among its bujangs with a standard deviation of 14.4 percent. At least one firm has fully 100 percent women among its bujangs.

MODELS AND RESULTS FROM THE KWDI DATA

Next, we proceed to find further support for H1 in the KWDI sample. Based on the models in Appendix Table 3, we find that the average difference between domestic firms and foreign-owned firms in Fiscal Year 2006 is that the percentage of female bujangs is 10.8 nominal percentage points higher. In Fiscal Year 2007, that number actually grows to 13.2 nominal percentage points higher.

As shown in Table 5, we find that this significantly higher representation of female bujangs is associated with high profitability, which provides further confirmation for H3. Using the information from the models 3-6, we find that a 10 percent higher nominal representation of female bujangs is associated with between 1.66 and 1.96 higher nominal ROA as a percentage (which is the same thing as 0.0166-0.0196 where ROA is expressed as a ratio, as it is in the regressions). In our opinion, this is both an economically meaningful increase in profitability, but also one that is realistic given that most firms in Korea completely shut out half of the labor talent pool from management and given that even among the firms in the KWDI sample most are shutting out females entirely from all but the gwajang and chajang levels. Leaving out so much of the labor talent pool from management can logically impact profitability by at least a nominal ROA point or two, as we in fact find.

Next, we turn once more to examining whether multinationals in this sample of larger firms are in

fact gaining some kind of competitive advantage from having female senior managers. By taking the multinationals and domestic firms at their group means and then multiplying the gender-related coefficients from Model 6 of Table 5, we next find that at least within the sample of KWDI firms in which all firms have at least one female manager, the multinationals are gaining more competitive advantage than are the domestic firms. As seen in Appendix Table 4, the gender composition of the average multinational is associated with a 4.0 positive increase in nominal ROA, whereas the gender composition of the average domestic firm is associated with a 2.1 percent increase in nominal ROA.⁶ Thus, we conclude from this that at least among the larger firms that are seen to be in the market for hiring and promoting female managers, multinationals are hiring and/or promoting a higher percentage to the *bujang* level and are reaping a 1.9 percent nominal ROA advantage directly from doing so.

MULTINATIONALS AND STRATEGIC ACTION

We next sought to examine whether even multinationals from a home market that heavily discriminates against women were acting any differently in South Korea. The first group that comes to mind is the significant number of Japanese multinationals. Therefore, utilizing the sample, we examined these Japanese multinationals' managerial demography back in Japan. Those data come from a comprehensive examination by year of the *Shikihou* annual handbook on Japanese corporate demography, along with a comprehensive review of all sample company websites and annual reports. Among the companies in the KWDI panel, which are by design those among the active set in Korea in terms of hiring female managers, we find it quite striking that none of the Japanese multinationals had a single female executive in Japan during the sample time period. For those that reported their female percentage of total managers, all but one had less than a five percent rate of female managers. In contrast, all of them had at least one female *gwajang* during the sample time period, and their female percentage of total *gwajangs* in

⁶ Model 6 of Table 5, while complicated because it introduces multiple interaction terms simultaneously and because those interaction terms have some collinearity and go in different directions, in turn is found to show that the ROA gains go disproportionately to multinationals that simultaneously and fully “walk the walk and talk the talk.” In other words, those foreign multinationals whose policies become more supportive of work-family balance and that at the same time hire more female managers enjoy the biggest ROA gains.

Korea often was relatively high (even approaching 41 percent in one case). All but one had at least one female *chajang*, with the female percentage of total *chajangs* reaching as high as 36 percent.⁷

We then also examine the Japanese companies in the KLI data set and found that while there is much more subsample heterogeneity in female hiring, there too one sees a large number of Japanese multinationals that act one way in Japan and another way in South Korea. Among the Japanese companies in the KLI sample, only one is seen to have even a single female executive back in Japan. Their female percentage of total managers, for those that reported it, is almost invariably in the low single digits. Yet several of them have a female executive in South Korea, and a significant minority have at least one *gwajang* or one *chajang* over the sample time period, and it is not terribly uncommon to see a Japanese company with a double-digit percentage of females among their *gwajangs* or *chajangs*.

In summary, as summarize in Table 6, our examination of the Japanese multinationals suggests that many firms are acting strategically (by having a significantly different demography between Korea and Japan). Yet others have chosen not to have a single female manager. On the one hand, we are restricted by the rules of KWDI and KLI data access from being able to present any piece of data that could potentially lead to the identification of a firm in the KWDI or KLI sample, but we instead attempted to contact female managers at Japanese companies in Seoul listed in the old Ministry of Commerce, Industry and Energy database of inward foreign direct investors via alumni networks we were acquainted with through prior research projects in Korea. We did find evidence of some Japanese firms that discriminated heavily against Korean women and some that gave clear opportunities based on performance. Among the ones that discriminated heavily, we were told the stories of women passing actual internal company examinations for promotion and then being denied the promotion because the

⁷ It is interesting to note the contrast between our results and those of Wu, Lawler, and Yi (2008), who presented data on job recruitment advertisements by multinationals in Thailand and Taiwan during 1993-1999. Wu, Lawler, and Yi (2008) found that multinationals from countries with strong anti-discrimination laws on the books were less likely to overtly discriminate by gender in job ads. Perhaps Japanese multinationals doing business in Taiwan and Thailand were sometimes so overtly bigoted in the 1990s, as Wu, Lawler, and Yi (2008) indicated, but had learned by the 2000s to seize the strategic opportunity of hiring talent female managers. Indeed, among the Japanese multinationals we visited, the ones that had senior female managers had often first hired and/or promoted them in the 2000s, which suggested learning effects and/or changes in their view towards the idea of having women as managers in their Korean subsidiaries.

men's military service was counted as a positive. The following quote from a female managerial-track employee at a Japanese consumer-products company was representative of the wider set: "Because we know and don't think it's possible for us to change the organization and the way of thinking of our CEO, what we do is sometimes we get together and talk about how conservative and how unfair things are in our company; but we don't think it is possible to change our company" (Interview with first author, January 30, 2010).

In contrast, a senior Korean female manager at a Japanese financial firm in Seoul whom we interviewed stated, "There is no senior female manager at headquarters in Japan, but I think they are more open-minded with the overseas subsidiary because they know that Korea is different from Japan and they need the high-performance employee in a foreign market whenever they can find one. I received the highest evaluation from amongst my team, and I think that is why my boss trusts me" (Interview with first author, October 26, 2009). Our overall conclusion is that discrimination occurs based on a combination of beliefs about the efficiency of homogeneous male leadership teams and social expectations and obligations within male executive networks. When Japanese multinationals go to South Korea, most carry the beliefs with them, although as our quote suggests some are willing to see that Korea is different from Japan and may require different practices to be successful. But perhaps more importantly, the Japanese multinationals do not have the same male social network expectations and obligations when they are in South Korea, and this may open up opportunity to form alliances with women. So, in summary, our conclusion from the qualitative and quantitative data is that there is a bifurcation in which some Japanese multinationals continue to discriminate against women just as they do at headquarters but that others act in a markedly different way based importantly on strategic opportunity and not any form of charity or social preference.

The other multinationals across our KWDI and KLI samples are primarily from Western Europe or the United States, and they demonstrate signs of strategic behavior in their hiring and promotion decisions as well. We conducted a comprehensive seven-month-long effort to collect data on senior management demography across our combined KWDI and KLI samples by thoroughly examining all

sample company websites and available annual reports. We also found the Thomson One Banker, Capital IQ, Execucomp, and LexisNexis databases to be particularly useful sources of data on executive demography, with the Execucomp database being focused on large U.S. multinationals but the other databases having annual reports and/or direct listings of executive demography data on European and American multinationals. For completeness, we analyzed all multinationals that were surveyed by KLI or KWDI, even though some had incomplete information on our quantitative variables and thus did not make it onto the panel analyses. To be clear, we see substantively identical results on multinationals' strategic behavior with or without this inclusion rule. The results of this lengthy data collection effort are presented in Table 6. Among the European multinationals across our KWDI and KLI data sets, 35 of 36 from Year 2005 have available data on their home-market executive teams. Of these 35, nearly two-thirds (20) have not a single female executive at home. From year 2007, all 53 have data on their home-market executive teams during the sample time period. Of these 53, 33 do not have a single female executive. The American multinationals, while more frequently having at least one senior female executive, still often lack a significant representation of women in their senior executive teams. Among the American multinationals across our KWDI and KLI data sets, 48 of 50 have data for Year 2005 on their home-market executive team. Of those 48, 36 of them do not have a single woman represented among their CEO, Chairman, COO, CFO, head of HR, or chief legal officer. For Year 2007, 55 of 56 have data for Year 2007 on their home-market executive team. Of those 55, 38 do not have a single woman represented among their CEO, Chairman, COO, CFO, head of HR, or chief legal officer. Of those 38 that did not have a single woman represented among their senior-most executives, 17 do not have a single woman listed among even their other senior managers in their annual reports. We also proceed to test statistically whether the hiring and promotion of women in South Korea is merely being driven by hiring and promotion at headquarters. In fact, there is no statistically significant correlation among either European or American multinationals. This is consistent with our overall finding that neither hiring/promotion practices at headquarters nor universal global policies set at headquarters were dictating practice in South Korea. Instead, we find through our interviews that multinationals were making strategic choices on the

ground in South Korea.

As a further note for this section, some readers have asked whether home-country laws require that multinationals not discriminate against Korean women. Interestingly enough, the U.S. Congress, in putting antidiscrimination laws into effect, explicitly stated that foreign citizens employed abroad enjoy none of the law's protections (Equal Employment Opportunity Commission, 2003; Gentry, Locke, Rakes, and Moore, 2006). We are not aware of any extraterritoriality of Western European countries' laws that extends legal antidiscrimination statutes to the employment of foreign citizens in foreign subsidiaries.

FEMALE MANAGERS' EFFECT COMES THROUGH HIGHER PRODUCTIVITY

A related question before we conclude our description of the results is about how female managers impact performance. Broadly speaking, there are two possible causes: either females managers get paid less, or otherwise females contribute in unique ways to organizational productivity (through a combination of their being individually more productivity; their serving as catalysts for an organize-wide shift away from command and control organizing towards debate-oriented, deliberative management; and their leveraging their differential life experience to come up with novel approaches to the product market and to otherwise organizing production). For this study, we do not have access to confidential South Korean government data on a large sample of individuals' pay, but through extensive interviews with female and male HR executives, we confirmed that discrimination overwhelmingly occurs in terms of freezing women out of jobs—whereas salaries are largely determined by job and those females reaching the higher managerial positions are typically not being shortchanged by even a single won. This is corroborated by our separate prior study of female pay in Japan, where we do have shared access to a large sample of individuals' pay data. There we found, in a society with quite comparable levels of overall gender discrimination, that the average market “discount” for female managers, controlling for all observable characteristics of age, tenure, education, and geographic location, was only 2 percent (First author with other coauthors, 2013). Clearly an organizational increase of 1-1.5% ROA is not explained by something in the magnitude of two percent cost savings of the elite set of managers. The ROA

improvement is in fact thus more than an order of magnitude larger than the potential cost savings from those female managers near the top of the organization. In fact, in the Korean data, what we could access was the productivity of the manufacturing companies within our core WPS sample (the service sector companies do not have to report their purchased inputs, which is necessary for running sophisticated productivity regressions; and the KWDI data provider had a restriction that does not enable one to know the productivity data for the domestic companies). Within the core WPS sample, we find that there is a large productivity increase coming from the hiring and promotion of female managers, as seen in Appendix Table 5. In fact, we calculate that the overwhelming percentage of the profitability increase comes via a productivity effect. The productivity effect, as we learned over parts of four years of fieldwork, is largely through two causes: (a) women, through their differential life experience (based in part on the society exposed women and men to different formative experiences in education and military and family life), are not exposed to command and control organizing at an early age like the males are, and this makes them more open to being catalysts for a shift from command and control organizing to debate-oriented, deliberative management; and (b) women, through their differential life experience, are more like to come up with different ideas about the market, leading to novel product market strategies for both consumer-oriented and business-to-business firms.

While we think the further exploration of these mechanisms merits an entirely new multi-year study and new forms of multi-year data collection, we see in this study that both the quantitative and qualitative data we have collected lead us to make these statements. The quantitative data clearly show that there is a productivity effect that is quite large and is in fact large enough to explain the overwhelming portion of the profitability result. The qualitative data show that in interview after interview over four years, both male and female respondents pointed to the higher organizational-wide productivity that came as a result of increased female managerial representation. Primarily, there is the fact that female managers often serve as catalysts for a shift away from command and control organizing towards debate-oriented, deliberative management. This shift away from command and control organizing leads to more bottom-up discussion, an increased opportunity for debate and the revelation of

contrarian thinking, and more certainty on how to implement the agreed-up solution. This phenomenon is perhaps best illustrated by an interview conducted with Sang Hee Han, a female senior manager at Microsoft Korea who has worked in both finance and sales, who noted:

When my first boss asked a group of us to take on a new project, I always asked what the purpose of the project is, or why you need it. But in Korea there is no such question. If the boss asks for a certain thing, they (the employees) just do it without knowing the clear reasons. If I don't know the purpose, we'll just redo it again and again to meet expectations. But, when I ask what is the purpose of the task, then he can explain to all (males and females) in a detailed way, so even those who never ask a question will understand the task better. He tried to change that by himself, but it didn't really work. I said "Hey, I don't know what the purpose is." and that way he appreciates the different kind of opinions and questions I bring to the table. It's the same thing with my current boss; I ask what the purpose is and everybody actually is shocked – they are all male and I just joined the team and am new and female. How could they ask my boss directly in such a way? In a society like this that is male-driven, it's always the norm to obey. In our team, everybody is now willing to ask about everything..." (Interview with first author, May 13, 2013)

DISCUSSION AND CONCLUSION

Our results indicate that multinationals in the representative emerging economy of South Korea enjoy a competitive weapon from their active hiring and promotion of the excluded group in the labor market. The size of the profit benefit is large but realistic. The market is moving towards a new equilibrium that is free of discrimination, but only at a very slow rate. Thus, the profits are not being quickly competed away.

We have found that all firms, both foreign-owned and domestically-owned, were able to enjoy a performance benefit through increased hiring of women, especially at the senior management level. We see support for that even in the KWDI panel sample, which is particularly interesting given that the KWDI sample design meant that the companies in the sample had more female managers on average than the Korean firm-level population as a whole. Thus, even for a sample with somewhat higher-than-typical female representation, the increased hiring of women, particularly at senior management levels, is associated with an increase in profitability. It is important to note that all of our profitability models make use of firm-level fixed effects and therefore automatically control for industry affiliation and all other fixed characteristics of each individual company. Interestingly, although all types of firms can

derive a benefit from increased hiring of women, the foreign firms in the KWDI sample apparently take greater advantage of this competitive opportunity than do the domestically-owned firms. Finally, it is interesting that this KWDI sample shows that women can have a positive effect on performance especially when they get to yet higher levels of management than in prior surveys. This is notable, given that other surveys capture the hiring of female managers at an earlier stage. It is notable that firms that are further along in their hiring and promotion of female senior managers derive yet further performance benefits from doing so.

Taking our results seriously means rethinking the liability of foreignness and the prior organizational theory literature's focus on the immense difficulty for the multinational of being pushed in multiple directions by oftentimes conflicting institutions, norms, and pressures across the markets in which the multinational operates. While the difficulty is real, one of the coauthors has shown through a natural experiment in prior research that a representative large U.S. multinational used flexible intermediate adaption to overcome the overwhelming percentage (over 75 percent) of the institutional distance (Siegel and Larson, 2009). Managerial creativity and learning through error and self-experience is likely essential for overcoming the institutional distance. In the case of Lincoln Electric, it took some years for several of the subsidiaries to land on the most efficient combination of practices for each unique labor market.

Multinationals can in this study be viewed as social deviants, since they actively break still-often-dominant local norms holding that men are more appropriately suited for corporate management roles and that male homogeneity in leadership teams is socially preferred. The deviance literature cannot agree on a definition of deviance (see the literature survey in Clinard and Meier, 2008: 2), but one definition states that deviance is about breaking the dominant group's norms (Pfohl, 1994). Also, one textbook states that hiring women for jobs previously considered to be the province of men is a form of social deviance (Anleu, 1991: 1). As seen in our study, many multinationals are actively, even aggressively, breaking the dominant group's norms regarding female leadership. Usually one thinks of NGOs and ad hoc consumer groups as market rebels challenging dominant local norms, but in our study it is the foreign multinationals

who are the “rebels” (Rao, 2009). Through social deviance, multinationals are themselves becoming instruments of social change and increased opportunity for the excluded group, namely women.

This study goes yet further in showing that sometimes being an alien to the local social networks can be an advantage. There is an extraordinary opportunity that comes from being able to start fresh, free from bias and prior commitment to competing interests, and being able to in effect form a new coalition that leverages the underutilized talent pool among the excluded social group.

This is much like in democracy, where rising parties in democratization processes often appeal to the excluded group to join their coalition and fight for expanded political rights. From Brazil (Martínez-Fritscher, Musacchio, and Viarengo, 2010) to Japan (Ramseyer and Rosenbluth, 1995), fissures among elites often led to a breakdown of the political or economic cartel and the expansion of opportunities for the then-excluded group. In Brazil during 1889–1930, an oligarchic political structure became more democratic as competition within the oligarchy led some entrepreneurial politicians to expand educational opportunity in their states. Since voting rights were based at that time in Brazil on proven literacy, these entrepreneurial politicians predicted correctly that the newly literate citizens would demonstrate some gratitude for their newfound opportunity and vote the entrepreneurial politicians into power (Martínez-Fritscher, Musacchio, and Viarengo, 2010). In Japan during 1868–1881, the cartel among the oligarchs broke down when they failed to collude and divide up power without infighting. As a result, some oligarchs sought to expand political rights to the excluded so as to defeat their own elite adversaries. As Ramseyer and Rosenbluth (1995: 15) argue, “It was this jockeying for power among themselves and bringing in support from outside the circle that destroyed the oligarchy’s exclusive control of Japan’s political system.”

The critical condition for the elite cartel to unravel seems to be that there are at least some rival networks and rival identities within the elite structure, such they don’t all trust each other to preserve agreements and/or that one network seeks to be wealthier *in relative terms* when compared to another network. When such social fissures exist among the male elites, as they clearly do in South Korea (Siegel, 2007), the cartel will not endure as soon as it becomes easier to form initial coalitions by hiring

one or a few members of the excluded group without much public attention (as has occurred more often in recent years in South Korea), and/or as soon as the excluded group has more education and other popular legitimacy to offer to the male elites offering them a coalition partnership, and as soon as it becomes socially and economically damaging to firms and the male elites that control them to be publicly seen as bigots punishing those who provide opportunities to women.

While the South Korean market is converging towards a new equilibrium of reduced discrimination in the managerial labor market, the convergence is quite slow in its progress. While one could argue that this study shows the victory of markets for reducing discrimination, we are more likely to see the glass half empty. Because the ideology around the efficiency benefits of homogeneity is so widely taught and so widely accepted by the society, only a small percentage of firms have experimented with hiring the excluded group. While multinational entrants have speeded the process along, there are simply too few of them in relation to the national population of organizations to have a rapid impact on the economy as a whole. This slow convergence, ironically enough, is what is giving the foreign multinationals a key opportunity for gaining competitive advantage in the Korean market over the long term. So one is left with a slowly emerging equilibrium in which foreign multinationals gain competitive advantage but the economy is still sufficiently divorced from the competitive effect for there to be massive societal changes. Perhaps the revealed facts from this study on the competitive advantage being ceded to foreigners will have some societal effect, although we would not make a particularly large financial bet on that side of the ledger given the persistent influence of the reigning ideology of male supremacy among a nontrivial percentage of senior elites.

The limitation of our study of course is that it is based in a single focal labor market (although it compares actions of the same actors in their home markets to their actions in the focal labor market), but we would nevertheless predict the following logical necessary conditions and boundary conditions for our results. In terms of necessary conditions, we think there is one: the education system has to be more open to the excluded group than the labor market. Of course, if the excluded group does not even have access to education, then hiring the excluded group into positions of management is not likely going to aid

performance. We, however, do not see this as a highly restrictive condition, since most states and even most emerging economies have made enormous progress in at least opening up their educational system to the excluded group in the labor market (Ramirez, 1987; Bradley and Ramirez, 1996; Meyer et al., 1997). In the case of South Korea, there was a critical mass of female talent by the early 1990s, as depicted in Figures 1-2. In terms of boundary conditions, we think the performance benefits may be restricted to countries where only a small percentage of firms have more than a tokenistic representation of female managers. Here too, our predicted boundary condition would still leave most emerging economies in the possible set for competitive advantage, but it may potentially exclude a limited set of countries such as the U.S. where women at least more often play a senior management role (while not a top-five executive role) in a large percentage of firms. The point is not that women don't face inequity in the U.S., as they clearly do; the point instead is that competitive differentiation occurs primarily when the majority of firms lack even a single female senior manager and the differentiators are able to fill their senior management ranks with a number of underutilized, talented women. Future work will of course be needed to test these predictions.

This study has been about identifying the existence of a net benefit to the employment of female management despite the tradeoff of an uncertain negative counter-reaction from many regulators, customers, business partners, and/or male employees. We believe in considerably causality, since the primary forms of unobserved heterogeneity and endogeneity—the public relations counterhypothesis and the law-enforcement-is-tougher-on-more-profitable-firms counterhypothesis—simply do not apply to South Korea. This is a situation of uncertainty in which a likely benefit of moderately uncertain size empirically outweighs a pushback of highly uncertain size. As Goodrick and Salancik (1996) point out, it is precisely in a situation of moderate uncertainty that there is room for managerial discretion to experiment.

That is indeed what we see in the data. There is experimentation being done that leads to learning that there is a positive net effect, which in turn leads to more employment of female managers. Because of the crucial role of historical beliefs and of uncertainty about current-period changes in the

social backlash to female leaders, the choice to employ female managers is highly exogenous and a form of early-stage experimentation in the sample. We do therefore believe that employing more and more female manager led to higher profitability in the sample.

We, however, at the same time believe in some real limits to the causality, in a way that is analogous to the work of Ichniowski and Shaw (2003) on human resource practices in U.S. steel plants. Specifically, it is quite possible that some firms not employing female managers would potentially face such high transition costs in the form of male employees staging a kind of counter-insurgency or pushback from regulators, customers, and/or business associates that the perceived adjustment costs do rationally prevent some from increasing their representation of women. Yet for a significant percentage of such firms, the perceived transition costs may be based more on collective and broadly held beliefs about what might happen rather than the result of evidentiary-based experimentation. We do think there would likely be a significant percentage of firms who could benefit from increased female representation if only they would engage in such evidentiary-based experimentation within their own firms. Of course, such experimentation and its ultimate outcome are an empirical question. Yet what we do know is that the Korean economy as a whole appears to be losing significant amounts of economic advantage to foreign multinationals as the overwhelming majority of Korean firms continue to exclude women entirely from management. Also, it is important to note that showing a net benefit to the employment of female management shows that the benefits outweigh the clear drawbacks on average, but it does not intend to, and is not able to with the current data, decompose the possibly multiple parts of the benefits part of the equation. That is something we hope to do in a future study if we can collect the necessary data to do such a decomposition of the benefits.

In conclusion, we have presented evidence for the existence of a competitive advantage based on foreigners exploiting the social divide in the host market. This competitive advantage, while not unique to foreigners, is more likely to be perceived by foreigners who are alien to the local social network, can easily perceive the most major and significant social schisms, and can exploit the market failure where the excluded group is talented but underutilized. This competitive advantage is shown to be associated with a

significant profit benefit, and one that is only very slowly being competed away through imitation. Two decades ago, Castanias and Helfat (1991) called for research on how managerial resources can lead to inimitable competitive advantage. This study also attempts to answer that call for how firms can build sustainable competitive advantage through their actions in the labor market.

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Table 1. Summary Statistics and Pairwise Correlations Using the WPS Data

Variable	Mean	Std Dev	Median	Min	Max	Obs
[1] ROA (equal to Operating Profit/Total Assets and winsorized at the 1 and 99 percentiles)	0.053	0.078	0.049	-0.479	0.333	934
[2] Female Chajang Percent	2.576	8.045	0.000	0.000	77.778	934
[3] Female Gwajang Percent	5.023	10.243	0.000	0.000	71.429	934
[4] At Least One Female Chajang	0.225	0.418	0.000	0.000	1.000	934
[5] At Least One Female Gwajang	0.392	0.488	0.000	0.000	1.000	934
[6] Size	11.821	1.741	11.577	4.060	17.233	934
[7] Leverage	1.122	14.593	0.527	0.001	431.724	934
[8] Year is 2005	0.500	0.500	0.500	0.000	1.000	934
[9] R&D Intensity	0.007	0.017	5.22E-05	0.000	0.172	934
[10] Advertising Intensity	0.011	0.039	0.001	0.000	0.950	934
[11] Export Intensity	0.091	0.224	0.000	0.000	1.000	934
[12] Active Union in the Workplace	0.462	0.488	0.000	0.000	1.000	934
[13] Percent of Newly Recruited Workers	18.756	19.340	13.436	0.000	163.964	934
[14] Percent of Fixed Term Contract Workers	4.803	10.990	0.419	0.000	100.000	934
[15] Support for Healthcare Expenses Provided	0.818	0.382	1.000	0.000	1.000	934
[16] Support for Cultural, Sports, and Recreation Expenses Provided	0.663	0.465	1.000	0.000	1.000	934
[17] Work Leisure Provided	0.619	0.481	1.000	0.000	1.000	934
[18] Support for Commuting Expenses Provided	0.682	0.458	1.000	0.000	1.000	934
[19] Total Female Percent of Employees	22.083	19.991	14.977	0.000	93.789	934

Notes: Sample is based on Model 4 of Table 3.

Table 1 continued

Variable	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
[1] ROA (equal to Operating Profit/Total Assets and winsorized at the 1 and 99 percentiles)	1																	
[2] Female Chajang Percent	0.074***	1																
[3] Female Gwajang Percent	0.084**	0.522***	1															
[4] At Least One Female Chajang	0.030	0.595***	0.372***	1														
[5] At Least One Female Gwajang	0.058*	0.273***	0.611***	0.466***	1													
[6] Size	0.067**	-0.130***	-0.162***	0.067**	0.078**	1												
[7] Leverage	-0.189***	0.053	0.002	0.054	0.032	-0.166***	1											
[8] Year is 2005	0.045	-0.024	-0.074**	-0.072**	-0.053	-0.039	0.040	1										
[9] R&D Intensity	0.009	-0.017	0.006	0.118***	0.082**	0.014	0.003	-0.006	1									
[10] Advertising Intensity	-0.034	0.137***	0.155***	0.093***	0.131***	0.078**	0.002	0.034	0.026	1								
[11] Export Intensity	-0.023	-0.086***	-0.115***	-0.043	-0.087***	0.217***	0.015	-0.015	0.094***	-0.087***	1							
[12] Active Union in the Workplace	-0.086***	-0.131***	-0.197***	-0.065**	-0.137***	0.378***	-0.021	0.007	-0.137***	-0.014	0.029	1						
[13] Percent of Newly Recruited Workers	0.031	0.183***	0.208***	0.041	0.092***	-0.299***	-0.009	0.050	0.039	0.014	-0.021	-0.379***	1					
[14] Percent of Fixed Term Contract Workers	-0.001	0.024	0.058*	0.022	0.063*	-0.002	-0.018	0.003	-0.120***	0.027	-0.081**	-0.019	0.180***	1				
[15] Support for Healthcare Expenses Provided	0.039	0.031	-0.012	0.081**	0.101***	0.245***	0.019	0.020	-0.004	0.003	0.054	0.122***	-0.139***	0.032	1			
[16] Support for Cultural, Sports, and Recreation Expenses Provided	0.012	-0.117***	-0.106***	-0.003	-0.028	0.280***	0.028	0.078**	0.039	0.015	0.202***	0.237***	-0.205***	-0.022	0.274***	1		
[17] Work Leisure Provided	0.036	-0.050	-0.035	0.087***	0.112***	0.375***	-0.036	-0.006	0.010	0.042	0.103***	0.136***	-0.191***	0.008	0.285***	0.311***	1	
[18] Support for Commuting Expenses Provided	0.004	-0.151***	-0.222***	-0.120***	-0.130***	0.138***	0.029	0.039	0.024	-0.032	0.171***	0.138***	-0.117***	-0.177***	0.039	0.270***	-0.099***	1
[19] Total Female Percent of Employees	0.026	0.336***	0.388***	0.166***	0.197***	-0.204***	0.020	0.024	-0.002	0.183***	-0.035	-0.200***	0.324***	0.122***	-0.023	-0.157***	-0.092***	-0.091***

Notes: Sample is based on Model 4 of Table 3. *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level

Table 2. Using WPS Data: Foreign-Owned Firms Are More Likely To Hire Women as Senior Managers

The following table uses the WPS data file and shows the results of cross-sectional regressions in which demographic outcomes and business practices and employee benefits are the dependent variables. Instead of the coefficient, we report the more meaningful marginal change in the dependent variable for the categorical change for 0 to 1 in the independent variable of interest. Next to the number for the marginal change in the dependent variable is the level of statistical significance as marked immediately to the right, and below the number for the marginal change is the robust standard error in parenthesis.

Independent Variable:	At Least One Female Chajang in 2007	At Least One Female Chajang in 2007	At Least One Female Chajang in 2007	At Least One Female Chajang in 2007	At Least One Female Bujang in 2007	Workplace Childcare Facility Implemented as of 2007	Support for Childcare Costs Implemented as of 2007	Childcare Support Provided as of 2007
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 7	Model 8	Model 9
Majority-Owned MNC Affiliate	0.161*** (0.067)			0.173*** (0.068)	0.110** (0.058)	0.053** (0.032)	0.093** (0.054)	0.116** (0.061)
Majority Owned by Foreign Shareholders but No MNC Management		0.022** (0.009)						
Korean multinational with experience in Western countries			0.011 (0.048)					
controlling for R&D Intensity, log(Assets), Leverage, Export Intensity, and Advertising Intensity	Yes	Yes	Yes	with a robustness check using number of employees instead of log(Assets)	Yes	Yes	Yes	Yes

Note: *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level

Table 3. Explaining Profitability Using the WPS Data

The following table uses the WPS data and shows the results of fixed effects regressions in which ROA is the main dependent variable. Robust standard errors corrected for clustering at the firm appear below the coefficients in parenthesis.

DV: ROA (equal to Operating Profit/Total Assets) and winsorized at the 1 and 99 percentiles

Independent Variable:					Temporarily restricted to companies with at least three executives	Temporarily restricted to companies with at least three executives	Temporarily restricted to companies with at least three executives	Temporarily restricted to companies with at least three executives
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Female Chajang Percent		0.001** (5.992e-04)		0.001** (5.943e-04)		0.001** (6.233e-04)		0.001** (6.245e-04)
Female Gwajang Percent		4.109e-04 (4.972e04)		4.578e-04 (0.001)		0.001 (0.001)		
At Least One Female Chajang		-0.012 (0.009)		-0.011 (0.009)				
At Least One Female Gwajang		-0.003 (0.008)		-0.006 (0.007)				
Size	-0.017** (0.008)	-0.018** (0.008)	-0.017** (0.008)	-0.017** (0.008)	-0.012 (0.007)	-0.012 (0.007)	-0.012 (0.007)	-0.011 (0.007)
Leverage	-0.001*** (2.23e-04)	-0.001*** (2.231e-04)	-0.001*** (2.098e-04)	-0.001*** (2.096e-04)	-0.001*** (1.207e-04)	-0.001*** (1.2e-04)	-0.001*** (1.203e-04)	-0.001*** (1.2e-04)
Year is 2005	0.007* (0.003)	0.007** (0.003)	0.005 (0.003)	0.005 (0.003)	0.008** (0.004)	0.009** (0.004)	0.008** (0.004)	0.008** (0.004)
R&D Intensity	1.169 (0.908)	1.153 (0.917)	1.226 (0.902)	1.208 (0.911)	0.110 (0.422)	-0.002 (0.395)	0.108 (0.421)	0.063 (0.412)

Advertising Intensity	-0.113**	-0.116**	-0.113**	-0.115**	-0.101**	-0.092**	-0.101**	-0.093**
	(0.051)	(0.045)	(0.057)	(0.050)	(0.049)	(0.041)	(0.050)	(0.045)
Export Intensity	0.005	0.007	0.001	0.003	0.006	0.007	0.006	0.006
	(0.036)	(0.036)	(0.033)	(0.033)	(0.035)	(0.035)	(0.035)	(0.035)
Active Union in the Workplace	-0.023	-0.024	-0.028*	-0.028*	-0.018	-0.018	-0.018	-0.018
	(0.016)	(0.016)	(0.016)	(0.016)	(0.019)	(0.019)	(0.019)	(0.019)
Percent of Newly Recruited Workers	1.183e-04	8.47e-05	1.113e-04	7.94e-05	8.35e-05	3.71e-05	8.4e-05	5.69e-05
	(2.348e-04)	(2.35e-04)	(2.2e-04)	(2.206e-04)	(2.483e-04)	(2.493e-04)	(2.479e-04)	(2.484e-04)
Percent of Fixed Term Contract Workers	3.951e-04	4.322e-04	4.374e-04	4.69e-04	-2.71e-06	3.43e-05	3.01e-06	1.95e-05
	(3.095e-04)	(3.188e-04)	(3.043e-04)	(3.142e-04)	(3.273e-04)	(3.358e-04)	(3.221e-04)	(3.242e-04)
Support for Healthcare Expenses Provided			0.011	0.010	0.011	0.011	0.011	0.011
			(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Support for Cultural, Sports, and Recreation Expenses Provided			0.012	0.012	0.009	0.009	0.009	0.010
			(0.007)	(0.007)	(0.009)	(0.009)	(0.008)	(0.008)
Work Leisure Provided			0.007	0.009	0.002	0.004	0.002	0.004
			(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)0.018
Support for Commuting Expenses Provided			0.022**	0.021**	0.019*	0.018*	0.018*	0.018*
			(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Total Female Percent of Employees			4.971e-04	4.446e-04	0.001	0.001	0.001	0.001
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Company Fixed Effects Are Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	934	934	934	934	670	670	676	676
p value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R-squared	0.128	0.136	0.166	0.174	0.188	0.203	0.188	0.198

Note: *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level; there were three firms with demographic data available on chajangs but not on gwajangs, and this explains the small sample size difference between Models 5-6 and Models 7-8.

Table 4. Summary Statistics and Pairwise Correlations Using the KWDI Data

Variable	Mean	Std Dev	Median	Min	Max	Obs	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
[1] ROA (equal to Operating Profit/Total Assets and winsorized at the 1 and 99 percentiles)	0.067	0.090	0.053	-0.242	0.404	370	1								
[2] Female Core Employee Ratio	0.145	0.185	0.053	0.000	1.000	370	0.084	1							
[3] Family Nursing Holiday Implemented	0.151	0.359	0.000	0.000	1.000	370	-0.021	0.057	1						
[4] Female Ratio of Sawon New Recruits	0.371	0.232	0.357	0.000	1.000	370	0.026	0.276***	0.057	1					
[5] Female Ratio of Bujangs	0.060	0.144	0.000	0.000	1.000	370	0.194***	0.129**	-0.003	0.202***	1				
[6] R&D Intensity	0.010	0.026	2.06E-05	0.000	0.266	370	-0.060	0.034	-0.039	-0.123**	-0.010	1			
[7] Log(Assets)	18.555	1.946	18.095	15.421	25.998	370	-0.170***	-0.012	0.318***	0.035	-0.103**	-0.126**	1		
[8] Leverage	0.542	0.244	0.545	0.063	1.219	370	-0.255***	0.125***	0.215***	0.169***	-0.008	-0.208***	0.348***	1	
[9] Export Intensity	0.034	0.140	0.000	0.000	0.960	370	-0.059	-0.041	-0.080	-0.138***	-0.100**	0.093*	0.073	0.022	1
[10] Advertising Intensity	0.013	0.032	0.001	0.000	0.200	370	0.086*	0.068	-0.089*	0.167***	0.315***	0.142***	-0.077	-0.247***	-0.056

Note: *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level

Table 5. Explaining Profitability Using the KWDI Data

The following table shows the results of fixed effects regressions in which ROA is the dependent variable. Robust standard errors corrected for clustering at the firm appear below the coefficients in parenthesis.

Independent Variable:	DV: ROA (equal to Operating Profit/Total Assets) and winsorized at the 1 and 99 percentiles					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Female Ratio of Bujangs			0.167*** (0.054)	0.166*** (0.057)	0.164*** (0.056)	0.196*** (0.068)
Female Core Employee Ratio					0.017 (0.028)	0.009 (0.033)
Family Nursing Holiday Implemented					-0.018* (0.010)	-0.022** (0.010)
Female Ratio of Sawon New Recruits		0.035** (0.018)		0.035* (0.018)	0.036** (0.018)	0.038* (0.021)
Foreign-Owned Company * Female Core Employee Ratio						0.037 (0.036)
Foreign-Owned Company * Family Nursing Holiday Implemented						0.043** (0.017)
Foreign-Owned Company * Female Ratio of Sawon New Recruits						-0.028 (0.036)
Foreign-Owned Company * Female Ratio of Bujangs						-0.172* (0.094)
R&D Intensity	-0.359 (0.606)	-0.398 (0.596)	-0.418 (0.584)	-0.456 (0.572)	-0.407 (0.569)	-0.387 (0.567)
Log(Assets)	0.027 (0.024)	0.022 (0.024)	0.019 (0.023)	0.014 (0.022)	0.013 (0.023)	0.008 (0.024)
Leverage	-0.175*** (0.067)	-0.177*** (0.066)	-0.165** (0.065)	-0.167*** (0.064)	-0.173*** (0.064)	-0.170*** (0.065)
Export Intensity	0.010 (0.042)	0.005 (0.041)	0.012 (0.042)	0.007 (0.041)	0.007 (0.040)	0.011 (0.041)
Advertising Intensity	-0.222 (0.924)	-0.257 (0.956)	-0.520 (0.560)	-0.553 (0.591)	-0.484 (0.593)	-0.506 (0.546)
Survey Year Is 2007	0.008 (0.005)	0.008 (0.005)	0.006 (0.005)	0.006 (0.005)	0.004 (0.006)	0.003 (0.006)
Company Fixed Effects Are Included	Yes	Yes	Yes	Yes	Yes	Yes
Obs	370	370	370	370	370	370
p value	0.163	0.048	0.000	0.000	0.000	0.000
R-squared	0.077	0.094	0.132	0.148	0.160	0.177

Note: *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level

Table 6. Home-Market Managerial Demographics of Multinationals in the Combined KLI/KWDI Samples

The following table shows the home-market demographic characteristics of multinationals in the combined KLI/KWDI samples.

European Only

Of total number with data for year 2005	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with other non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available
35	0	0	0	0	0	35	2	1	12	20	1

Of total number with data for year 2007	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with other non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available
53	1	0	0	1	0	52	5	6	10	33	0

American

Of total number with data for year 2005	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with at least one non-previously-listed female executive	Number of companies with no female executives of any type	Number with no data available	Number with not a single woman among their CEO/Chair/President/COO/CFO/General Counsel/ HeadOfHR
48	2	0	1	2	0	44	4	4	31	11	2	36

Of total number with data for year 2007	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with at least one non-previously-listed female executive	Number of companies with no female executives of any type	Number with no data available	Number with not a single woman among their CEO/Chair/President/COO/CFO/General Counsel/ HeadOfHR
55	1	1	0	6	0	47	7	6	28	17	1	38

Japanese

Of total number with data for year 2005	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available	Average Female Managerial Percentage from Shikihou
35	0	0	0	0	0	35	0	0	1	34	12	2.26%

Of total number with data for year 2007	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available	Average Female Managerial Percentage from Shikihou
37	0	0	0	0	0	37	0	0	1	36	7	3.8% (2.40% aside from one outlier that had 29.0%)

Non-European/Non-U.S./Non-Japanese

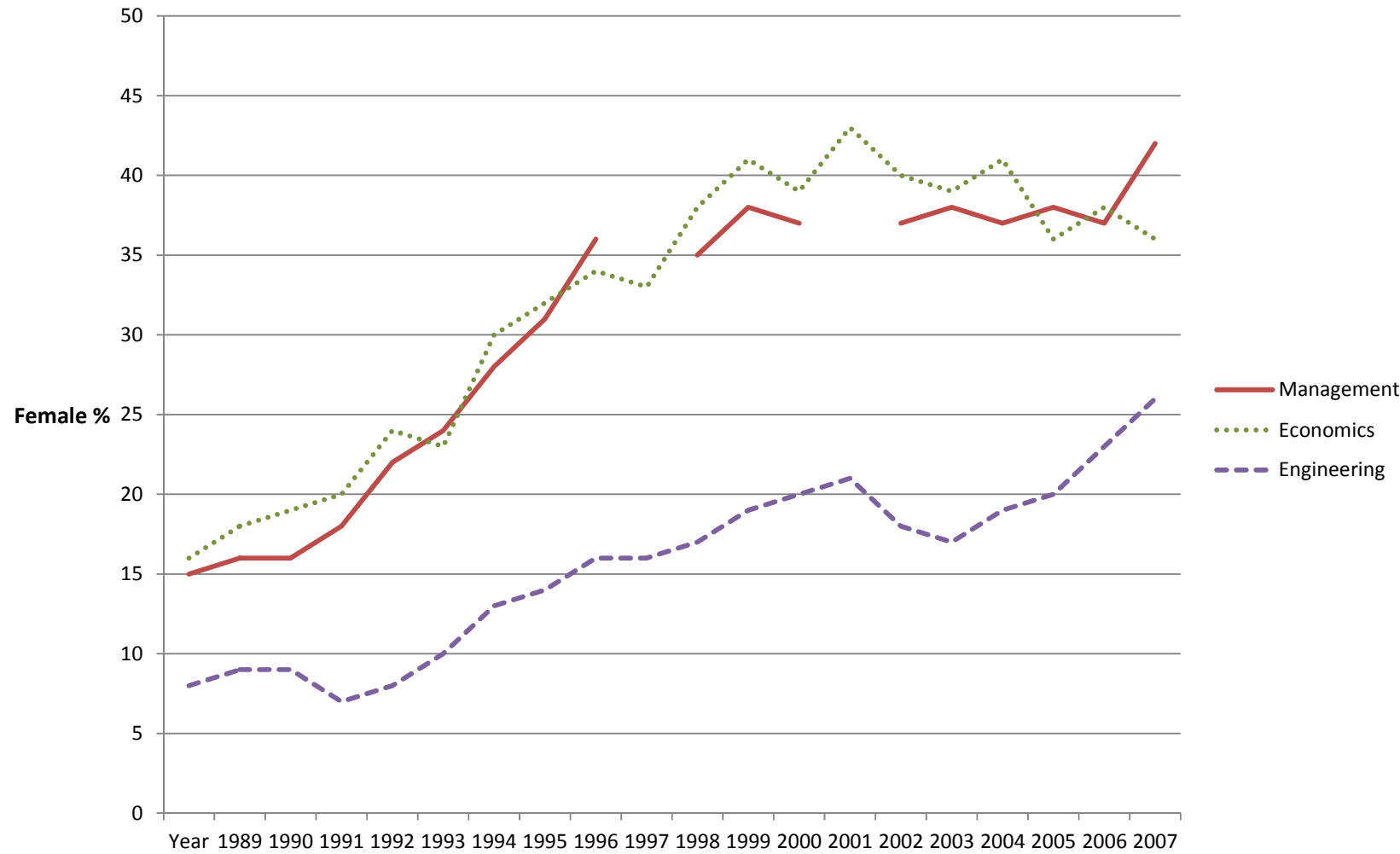
Of total number with data for year 2005	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available
10	0	0	0	0	0	10	0	0	0	10	6

Of total number with data for year 2007	Number with female CEO	Number with female chairman	Number with female president	Number with female CFO	Number with female COO	Number with no female CEO/Chairman/President/COO/CFO	Number with female head of HR	Number with female general counsel/legal head	Number with non-previously listed female executive	Number of companies with no female execs of any type	Number with no data available
9	0	0	0	0	0	9	0	0	2	7	5

Sources: company websites, company annual reports, Capital IQ, Thomson One Banker, LexisNexis, Execucomp (for American companies), and Shikihou (for Japanese companies).

Figure 1. Annual Enrollment by Major, College

*As of April 1st each year

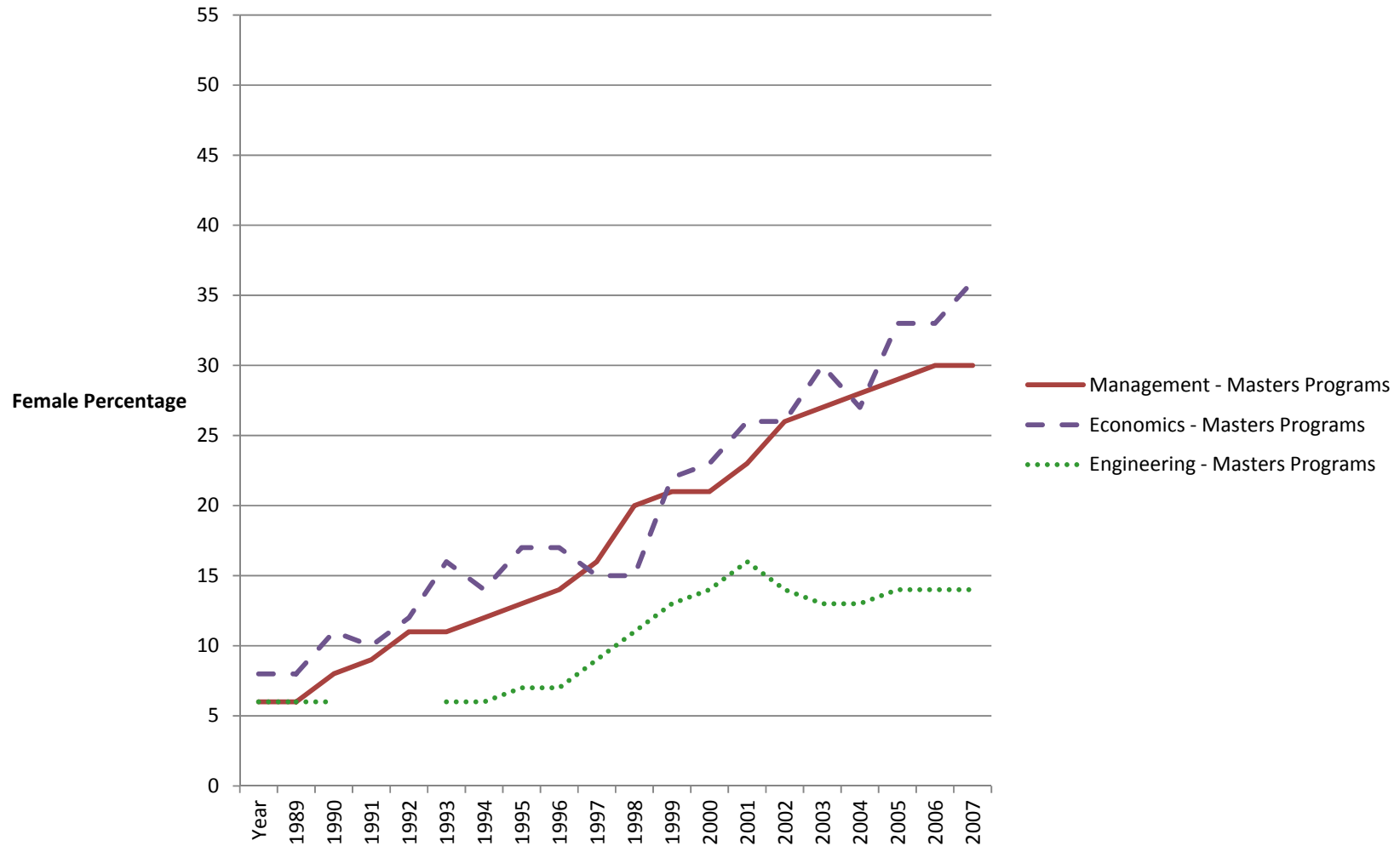


Source: Korea National Center for Education Statistics & Information DB

Note: The few gaps in the graph are for years in which there was no strictly comparable data available.

Figure 2. Annual Enrollment by Major, Graduate Schools

*As of April 1st each year



Source: Korea National Center for Education Statistics & Information DB

Note: The one gap in the graph is for years in which there was no strictly comparable data available.

Appendix Table 1. Robustness Check Looking at Industry

The following table uses the WPS data and takes the final model of Table 3 and then looks at a robustness check to see if there are meaningful industry effects. We find here that there are not any economically. Sector G (wholesale and retail trade) is the omitted category on account of it having the second most firms in the sample. The table shows the results of fixed effects regressions in which ROA is the main dependent variable. Robust standard errors corrected for clustering at the firm appear below the coefficients in brackets.

	DV: ROA (equal to Operating Profit/Total Assets) and winsorized at the 1 and 99 percentiles		
	panel fixed effects regression	cross-sectional regression for Year 2005	cross-sectional regression for Year 2007
Independent Variable:	Model 1	Model 2	Model 3
Female Chajang Percent in Sector C (Manufacturing) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	3.883e-04 (4.981e-04)	1.819e-04 (0.001)	0.001 (0.001)
Female Chajang Percent in Sector F (Construction) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	-0.001*** (3.139e-04)	-0.003*** (0.001)	0.001*** (3.074e-04)
Female Chajang Percent in Sector H (Transportation) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	-0.001** (0.001)		-4.277e-04 (0.001)
Female Chajang Percent in Sector J (Information and Communications) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	0.002 (0.002)	0.002 (0.001)	0.001 (0.002)
Female Chajang Percent in Sector L (Real Estate) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	0.009*** (0.001)	0.008*** (0.001)	0.017*** (0.006)
Female Chajang Percent in Sector M (Professional, Scientific, and Technical) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	9.1e-05 (0.002)	-0.003 (0.002)	0.002 (0.001)
Female Chajang Percent in Sector N (Business Facilities Management and Business Support Services) relative to the baseline of Female Chajang Percent in Sector G (Wholesale and retail trade)	0.002** (0.001)	0.002*** (4.946e-04)	0.002*** (0.001)
Size	0.007*** (0.003)	0.009** (0.003)	0.004* (0.003)
Leverage	-0.001***	-0.001***	-0.074***

	(4.87e-05)	(5.91e-05)	(0.021)
Year is 2005	0.012***		
	(0.004)		
R&D Intensity	-0.171	-0.337	-0.106
	(0.232)	(0.257)	(0.235)
Advertising Intensity	-0.091	-0.179	0.359**
	(0.186)	(0.136)	(0.176)
Export Intensity	-0.016	-0.007	-0.022
	(0.014)	(0.015)	(0.016)
Active Union in the Workplace	-0.024***	-0.040***	-0.006
	(0.009)	(0.011)	(0.009)
Percent of Newly Recruited Workers	-5.28e-05	-6.99e-05	2.78e-05
	(2.056e-04)	(2.583e-04)	(2.767e-04)
Percent of Fixed Term Contract Workers	-1.764e-04	-1.699e-04	-1.506e-04
	(3.839e-04)	(5.338e-04)	(0.001)
Company Fixed Effects Are Included	Yes	No	No
Obs	670	335	335
p value	0.000	0.000	0.000
R-squared	0.122	0.211	0.110

Note: *** means significance at the .01 level, ** means significance at the .05 level, and * means significance at the .10 level

Note: In 2005, there is not enough variation for STATA to estimate the cross-sectional coefficient for Sector H. Also, for the two cross-sectional regressions, the year dummy of course is not included.

Appendix Table 2. Further Robustness Check Looking at Industry

The following table uses the WPS data and takes the sample from the final model of Table 3 and then looks at a robustness check to see if there are meaningful industry effects that predict having at least one female chajang. The table shows the results of a cross-sectional dprobit regression for Year 2007 in which having at least one female chajang is the main dependent variable. The number for the marginal effect on the dependent variable for each industry is presented with robust standard errors below in parenthesis. Agricultural firms are the omitted industry category.

Independent Variable:	DV: At Least One Female Chajang cross-sectional regression for Year 2007 Model 1
Controlling for size, leverage, export intensity, advertising intensity and R&D intensity	Yes
KSIC_C10 (Manufacture of Food Products)	0.131 (0.311)
KSIC_C11 (Manufacture of Beverages)	-0.071 (0.382)
KSIC_C14 (Manufacture of Wearing Apparel)	0.564* (0.206)
KSIC_C15 (Tanning and Dressing of Leather)	0.426 (0.343)
KSIC_C17 (Manufacture of Pulp, Paper, and Paper Products)	0.015 (0.296)
KSIC_C20 (Manufacture of Chemicals and Chemical Products Except Pharmaceuticals and Medicinal Chemicals)	0.237 (0.294)
KSIC_C21 (Manufacture of Pharmaceuticals, Medicinal Chemicals, and Botanical Products)	0.061 (0.320)
KSIC_C24 (Manufacture of Basic Metal Products)	-0.177 (0.179)
KSIC_C26 (Manufacture of Electronic Components, Computer, Radio, Television and Communication Equipment and Apparatuses)	0.289 (0.265)
KSIC_C27 (Manufacture of Medical, Precision and Optical Instruments, Watches and Clocks)	0.132 (0.380)
KSIC_C28 (Manufacture of Electrical Equipment)	0.218 (0.321)
KSIC_C29 (Manufacture of Other Machinery and Equipment)	-0.091 (0.243)
KSIC_C30 (Manufacture of Motor Vehicles, Trailers and Semitrailers)	0.189 (0.278)
KSIC_C31 (Manufacture of Other Transport Equipment)	-0.001 (0.337)
KSIC_F41 (General Construction)	0.064 (0.274)
KSIC_F42 (Special Trade Construction)	0.363 (0.312)

KSIC_G46 (Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles)	0.443 (0.249)
KSIC_G47 (Retail Trade, Except Motor Vehicles and Motorcycles)	-0.301* (0.051)
KSIC_H49 (Land Transport ; Transport Via Pipelines)	0.244 (0.354)
KSIC_J58 (Publishing Activities)	0.648*** (0.129)
KSIC_J61 (Telecommunications)	0.359 (0.321)
KSIC_J63 (Information Service Activities)	0.555 (0.244)
KSIC_L68 (Real Estate Activities)	0.295 (0.375)
KSIC_M71 (Professional Services)	0.514* (0.239)
KSIC_M72 (Architectural, Engineering and Other Scientific Technical Services)	0.672*** (0.099)
KSIC_N75 (Business Support Services)	0.565* (0.199)
KSIC_R91 (Sports Activities and Amusement Activities)	0.624 (0.207)
Obs	285
p value	0.000
R-squared	0.237

Note: *** means significance at the .01 level, ** means significance at the .05 level, * means significance at the .10 level

Note: The sample size is reduced slightly to 285 because there are some industries with too few observations and/or insufficient variation in the dependent variable for them to be estimated separately in a dprobit model as an industry.

Appendix Table 3. Using the KWDI Data: Foreign-Owned Firms Are More Likely to Hire Women as Senior Managers

The following table shows the results of cross-sectional regressions in which having at least one female bujang in 2006, and then the female ratio of bujangs in 2007, are the respective dependent variables. In the first regression, the number for the marginal change in the likelihood of having at least one female bujang is reported with the robust standard error below it in parenthesis. In the second regression, the OLS coefficient is reported with the robust standard error below in parenthesis.

	DV: At Least One Female Bujang in Fiscal Year 2006	DV: Female Ratio of Bujangs in Fiscal Year 2007
<u>Independent Variable:</u>	<u>Model 1</u>	<u>Model 2</u>
Foreign-Owned Company	0.375*** (0.130)	0.135** (0.056)
in both models controlling for R&D Intensity, log(Assets), Leverage, Export Intensity, and Advertising Intensity	Yes	Yes

Note: * means significance at the .01 level, ** means significance at the .05 level, • means significance at the .10 level**

Appendix Table 4. Using KWDI Data: Foreign-Owned Firms May Benefit As Much Or More From These Gender Policies and Gender Hiring

The following table shows the results of summing the effect of the gender-related variables in Model 5 of Table 6 multiplied by the foreign-owned and non-foreign-owned subsamples at their means.

	Net Effect on ROA
Foreign-Owned Company	0.041 positive ROA points (equal to 4.1% nominal ROA as expressed in percentage terms)
Non-Foreign-Owned Companies	0.021 positive ROA points (equal to 2.1% nominal ROA as expressed in percentage terms)

Appendix Table 5. Robustness Check Looking at Productivity

The following table uses the WPS data and takes the final model of Table 3 and then looks at the firms with available productivity data (which are manufacturing sector firms). We complete a robustness check to see if the mechanism by which female managers lead to higher profitability is through higher productivity. We find that, indeed, the profit occurs through a boost in productivity. As noted in the text, interviews and detailed case studies show that the productivity boost occurs through new product ideas that raise revenues relative to inputs and a shift away from command-and-control management that also leads to the discovery through open debate of better product-market approaches. The table shows the results of fixed effects regressions in which log(Sales) is the main dependent variable. Robust standard errors corrected for clustering at the firm appear below the coefficients in brackets.

Independent Variable:	DV: log(Sales)	DV: log(Sales)	DV: log(Sales)
	panel fixed effects regression	panel fixed effects regression	panel fixed effects regression
	Model 1	Model 2	Model 3
log(Purchased Inputs)	0.587** (0.237)	0.579** (0.217)	0.587** (0.238)
log(Operating Expenditure)	0.187 (0.133)	0.193 (0.135)	0.187 (0.133)
Number of Female Chajangs	0.147** (0.067)		0.147** (0.066)
Number of Male Chajangs	0.001 (0.002)		0.001 (0.002)
Number of Female Bujangs	0.163 (0.109)		0.163 (0.109)
Number of Male Bujangs	-0.002 (0.002)		-0.002 (0.002)
At Least One Female Gwajang		0.313** (0.158)	
Female Percent Gwajangs		-0.008 (0.008)	
At Least One Female Chajang		0.385* (0.212)	
Female Percent Chajangs		-0.004 (0.008)	
Female Employee Percentage		2.751e-04 (0.005)	-4.911e-04 (0.006)
Size	-0.832 (0.622)	-0.740 (0.606)	-0.831 (0.623)
Leverage	-0.015 (0.010)	-0.013 (0.010)	-0.015 (0.010)
Year is 2005	-0.339** (0.108)	-0.334*** (0.107)	-0.338*** (0.111)
R&D Intensity	-7.549 (5.161)	-7.699 (5.024)	-7.576 (5.167)
Advertising Intensity	7.231 (13.238)	0.277 (15.133)	7.143 (13.437)
Export Intensity	0.223 (0.440)	0.140 (0.420)	0.223 (0.441)
Active Union in the Workplace	-0.037 (0.188)	0.096 (0.144)	-0.039 (0.193)

Percent of Newly Recruited Workers	-0.001 (0.002)	-3.86e-04 (0.002)	-0.001 (0.002)
Percent of Fixed Term Contract Workers	0.005 (0.005)	0.003 (0.004)	0.005 (0.005)
Company Fixed Effects Are Included	Yes	Yes	Yes
Obs	319	317	319
p value	0.000	0.000	0.000
R-squared	0.272	0.261	0.272

Note: *** means significance at the .01 level, ** means significance at the .05 level, * means significance at the .10 level