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Linguistic gender marking gap and female staffing at MNC's

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Abstract

This paper presents the impact of the linguistic gender marking gap on expatriate female staffing decisions in a multinational company. Transaction cost theory postulates that due to cultural differences, integration between parent and subsidiary companies becomes complex and costly. However, staffing from parent organisations could be helpful to minimise the cultural conflict by establishing better control and hence reducing the transaction cost. Language is considered one of the major components that shapes culture, and linguistic gender marking gap could cause a difference in attitude towards male and female staff members from parent companies. Due to the nature of linguistic structures, which are embedded in ancestral culture and have a cognitive effect on speakers, the gap has two levels. The first is the gap between home and host countries' languages. The second is between the official and informal languages used by the headquarters and the subsidiary. The analytical model, using an innovative gender gap variable, supports two carefully developed propositions, that the success of expatriate staffing at managerial level depends on the linguistic gender marking gap between home and host country, and that use of organisational language in subsidiaries reduces the linguistic gender marking gap between them.

Introduction

With the rapid globalisation of business activities around the world, multinational companies (MNC) are becoming increasingly important both for providing and shaping services to the greater community, and for contributing to overall economic development (Dunning, 1993). In recent decades, MNCs have increasingly expanded through international joint ventures (IJV), and mergers and acquisitions (M&A) in developing markets (Chen & Young, 2010; Gomes, Weber, Brown, & Tarba, 2011) and developed markets alike. The surge in this type of “sophisticated” subsidiary has increased the complexity of subsidiary operation and control by the HQ. More specifically, these operational complexities are more prominent at the post investment stage when integration between HQ and subsidiaries is necessary for smooth operation and value creation (Weber & Fried 2011a, 2011b).

One of the major complexities that emerge from the “sophisticated” subsidiary is asymmetric information due to distances between home and host countries such as geographical, institutional and cultural distance (Colakoglu & Caligiuri, 2008). Of these, cultural distance has a major impact because it is “the collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede, 2001, p. 9). Culture is the mind-set or mental framework resulting from shared values, beliefs, symbols, and social ideals (Triandis, 1980). This programming typically happens early in life (Hofstede, 1980a; Barnouw, 1979) and leads to behavioural patterns which continue over time, shaping the institutional environment (Hofstede, 1980a; Mueller & Thomas, 2001). In a multinational setting, complexities arise after the establishment of subsidiaries because the mind-set or mental framework of the management in parent and subsidiary companies may be different, which can lead to difficulty in integrating their activities. The effect of cultural distance on integration between parent and subsidiary firms has been widely documented by several authors, prominent among them are Gomes, Angwin,

Weber, and Tarba (2013); Weber, Tarba, and Oberg (2014); Weber, Drori, and Tarba (2013); and Weber, Tarba, and Reichel (2009, 2011).

The cultural distance created by the different mind sets of the HQ and subsidiary countries makes it difficult for parent companies to obtain accurate information, thereby making it harder to monitor subsidiary performance (Gong, 2003). In addition to cultural distance on the national level, organisational culture has also been identified as a major cause for information asymmetry between HQ and subsidiary. For example, Ahammad, Tarba, Liu, and Glaister (2014) pointed out that difference in organisational culture may contribute to complexity in the post- merger integration process, and hence raises the probability of MNC failure. Similar views have been observed by Zhang, Ahammad, Tarba, & Cooper (2015) and Weber and Tarba (2010). Cultural distance also increases the transaction costs within MNCs because it has impact on risk and information asymmetry (Buckley & Casson, 1976; Coase, 1937). Emphasising the importance of cultural control for minimising the danger of cultural distance, Boyacigiller (1990) and Harzing (1995) both suggested using more expatriates at host subsidiaries. The literature of culture distance and expatriates assignment is well developed (e. g. Brock, Shenkar, Shoham, & Siscovick, 2008). Sarala, Junni, Cooper, and Tarba (2014) also pointed out that cultural distance may be minimised by knowledge transfer through deployment of parent employees to subsidiaries. Language is a major part of culture and cultural distance (Chaudenson & de Robillard, 1990). Falck, Heblich, Lameli, and Suedekum (2010) hold that language is probably the best measurable indicator of cultural differences, and provide empirical evidence that dialects portray culture in a way that is persistent over time, and has a causal effect on economic behaviour. Arcand (1996) pointed out that language may influence economic growth by reducing transaction costs among people who share a common language. Furthermore, a common language facilitates contractual relationships and network externalities in the form of easier trade or faster

adoption of technologies. Arcand's (1996) arguments about the role of language in economic growth clearly pointed out the importance of a common language in bringing the various stakeholders of MNCs together.

Charles Darwin is among those enlisted to bolster the view that language is a form of memory that stores information in a genome-like mode, "If we possessed a perfect pedigree of mankind, a genealogical arrangement of the races of man would afford the best classification of the languages now spoken around the world; and if all extinct languages, and all intermediate and slowly changing dialect, were to be included, such an arrangement would be the only possible one" (Darwin, 1859, p. 422). Sampson, Gill, and Trudgill (2009) identify a new group of linguists who view languages as institutions that developed as part of a society's cultural heritage and hence differing and evolving in their levels of complexity, just as other cultural institutions do. Furthermore, as early as 1956, Whorf claimed that language shapes thought. Cognitive psychology suggests that grammar does influence speakers' perceptions and mental representation of the world (Boroditsky & Gaby, 2010). To conclude, language potentially influences socio-economic outcomes through two channels. First, it may shape the cognitive framework of its speakers. Second, it may reflect the cultural values inherited from the past.

Generally and specifically in the field of international human resources, there is a very large body of literature dealing with the impact of different languages on organizations and their managerial outcome in terms of human resource management (Piekkari, Welch, & Welch, 1999; Selmer & Luring, 2015; Piekkari, Vaara, Tienari, & Santti, 2005), with emphasis on expatriates' assignments. Ronen (1989) pointed out that language proficiency is one of five important attributes that MNCs consider when making expatriate staffing decisions.

In recent years there is a new type of scholarly approach to language that quantifies the grammatical structure of languages (e. g., Chen, 2013; Givati & Troiano, 2012). The four structures related to gender are among the grammatical structures that can be quantified (Gay Santacreu-Vasut, & Shoham, 2013). The gender of expatriates at the executive level in a host-country is a major issue for the MNC staffing policy, and is also effected by cultural differences. There is a growing body of literature on expatriate women managers, especially the recruitment of women by parent organisations for deployment in subsidiaries (see Caligiuri & Lazarova, 2002; Culpan & Wright, 2002; Tung, 2008). Other papers have identified barriers to undertaking international assignments in terms of work-family conflict (Linehan & Walsh, 2000) and cross-cultural adjustments (Culpan & Wright, 2002). Santacreu-Vasut, Shenkar, and Shoham (2014) show that international staffing at a subsidiary is impacted by the grammatical gender marking of the HQ's home language. However, the grammatical gender marking gap is extremely under-researched, even though it has substantial bearing on female participation in MNCs' expatriate staffing.

Based on the above, this paper presents a novel approach to the linguistic gap between HQ and subsidiaries of multinational companies, based on the grammatical gender marking of languages. We argue that there are two linguistic gaps in an MNC. The first is the gap between the grammatical gender marking in the languages of the home and host countries. The second is between gender marking in the languages spoken, both officially and informally, in the corporate HQ and the subsidiary; its effect may stem from the cognitive effect that language has on speakers. We derive two propositions from these arguments, and the extensive literature supporting them, and our analytical model. First, to increase control and reduce tension, placing managerial expatriates on the subsidiary level should depend on the linguistic gender marking gap between home country and host country. Second, using the

language of the organization in a newly integrated subsidiary could reduce the linguistic gender marking gap between the HQ and subsidiary due to cognitive effects.

To summarize, the logic of this paper is that transaction costs should be reduced through greater control and that this control might be achieved by assigning expatriate staff. The gender of the expatriates interacts with cultural differences and has a major impact on the effectiveness of a female expatriate. Attention to the gap in linguistic gender marking could result in making different expat staff assignments (as regards gender) when acknowledging the effects of cultural and cognition that are embedded in language.

The remainder of this paper is organized as follows: the literature review supports our propositions. It is followed by the descriptions of the gender intensity index and conceptual framework, the discussion and conclusions.

Literature review and propositions

The essential elements for the development and success of MNCs, as pointed out by Teece (1986), include strategic advantage factors, location advantage factors and the transaction cost factor. It is important that MNCs constantly strive to minimise transaction costs. Hennart (1982) suggested that the transaction costs that MNCs should consider might include those in the market and those internal to the organisation. It has been advised that MNCs can ensure success even in case of market failure simply by minimising their internal organisational costs. Coase (1937) and Williamson (1979) suggested that minimisation of transaction cost between two parties could be critical to organisational success. Relevant transaction costs among parents and subsidiaries may include searching for relevant information, enforcing the subsidiary employee performance, and monitoring subsidiary operations (Rugman & Verbeke 2003). Ghoshal and Bartlett (1990) suggested that because MNCs are located in different geographic locations, controlling subsidiaries' operations so they are consistent with the

parent companies' objectives is essential for minimising transaction costs for the MNC to progress towards success.

Although transaction costs have external and internal elements, firms should be more concerned with controlling internal elements, because this should be easier and less complicated than focusing on external elements (Williamson, 1981). From this perspective, control is a process by which an organization induces its members and subunits to behave in ways that are consistent with attaining organizational objectives (Arrow, 1974; Flamholtz, Das, & Tsui, 1985; Ouchi, 1977). Organizations seek a measure of control over their units to promote and uphold strategic objectives, preserve consistency of norms, implement headquarters-devised policies, as well as to reduce risk, maximize profits and prevent costly duplication and misalignment (Cardinal, Sitkin, & Long, 2004). Control is especially important in MNCs because of the challenges involved in supervising and coordinating far-flung subsidiaries situated in diverse cultural and institutional environments.

The flexibility, agility and complexity of this network of international subsidiaries underpin the competitive advantage of the MNC as suggested by Junni, Sarala, Tarba, and Weber (2015), but leveraging them requires effective control (Brock et al., 2008) by means of ownership, managerial oversight, direct monitoring, accounting information systems, reward or incentive systems, behavioural control (Heimerik, Schijven, & Gates, 2012; Hoskisson & Hitt, 1988; Snell, 1992), or the assignment of expatriate staff (Brock et al., 2008; Martinez & Jarillo, 1989). Minimising internal organisational costs emphasises the role of organisational control when the parent company transmits relevant directives for subsidiaries to follow in order to achieve combined organisational goals. Top managers from the parent company generally expect that managers of subsidiaries will cooperate, and abide by the directives they issue for ensuring greater contributions from subsidiaries (Prahalad & Doz, 1981; Weber & Tarba, 2011). In case of MNCs, parent companies strive to organise and control the

subsidiaries' activities so that the transaction costs can be minimised (Buckley & Casson, 1976). That better monitoring of subsidiaries by the parents ensures better success for MNCs has been pointed out by other authors including Nobel and Birkinshaw (1998), Borkowski (1999), Taylor (1999), Ferner (2000), and Weber and Tarba (2010). Simultaneously, the distance and complexity of operations makes control essential to an MNC's success (Chen, Park, & Newbury, 2009) by protecting specific assets and reducing uncertainty in intra-firm interactions (Speklé, 2001). Most corporate investors or acquirers prefer maintaining effective controls of their foreign operations to mitigating problems caused by partner opportunism and managerial complexities, and strive to obtain flexibility for deploying their competitive advantages in full. Control is fundamental for general organizational success (Cyert & March, 1963; Johnson, Cullen, Sakano, & Bronson, 2001; Kumar & Seth, 1998), and is a particularly important issue for MNCs given the complexity of their operations (Beamish & Banks 1987; Dunning 1979; Hennart 1982; McManus 1972), and the challenge of maintaining strategic control over foreign subsidiaries (Gatignon & Anderson, 1988; Liu, Vredenburg, & Steel, 2014). Control is needed to exert influence over local boards (Zajac & Westphal, 1994), obtain or access information, monitor managerial performance, and undertake strategic reforms in corporate organization or operations. Control can minimize the likelihood of a partner's opportunistic behaviour, and can mitigate the consequences of such behaviour by preserving an administrative fiat (White & Lui, 2005; Williamson, 1985).

In the context of MNCs, the geographic, cultural and institutional distance between host and home countries is often used as a measure of the costs of control and coordination necessary for international operations. In some cases, MNCs face difficulty promoting organisational monitoring and control due to cultural differences either between host and home country, or between parent company and subsidiary. Hennart (1982) pointed out that managing employees becomes more costly due to the cultural difference between home and

host countries. Johanson and Vahlne (1977) also raised concern about the possible negative role of cultural distance on the effectiveness of organisational control. In a comprehensive survey, Halebian et al. (2009) pointed out that both national and organisational cultural difference impede value creation. Weber and Tarba (2013) also concluded that cultural distance is one of the major cause for value destruction in M&As. Balgia and Jaeger (1984) suggested that cultural control is an effective way for a parent firm to control a subsidiary. Transaction cost theory emphasises the role of cultural control in minimising uncertainty, risk and information asymmetry between parent and subsidiary (Buckley & Casson, 1976).

While cultural difference may have a negative impact on organisational control, Sathe (1983) has pointed out that the difference may be controlled through recruitment process. In case of MNCs, one of the most common methods of establishing control over overseas expansion is to manage subsidiary staffing (Konopaske, Werner, & Neupert, 2002). Weber, Rachman-Moore, and Tarba (2012) pointed out that a sustainable competitive advantage might be attained through reducing conflicts with the help of transferring skilled manpower from parent firms to subsidiaries. From a managerial perspective, there is an internal principal-agent conflict, with headquarters viewed as the principal and the subsidiary in the role of the agent (O'Donnell, 2000; Yan, Zhu & Hall, 2002). In the context of an MNC, this raises a control problem for a parent firm that wants to ensure that a subsidiary's managers and board members act in the interest of the broader corporate enterprise (O'Donnell, 2000). Additional evidence from the expatriate literature corroborates the importance of global management control. According to Edström and Galbraith (1977), MNCs send executives on international assignments for the purpose of socialisation-based control, while Jaeger (1983) identifies expatriate assignment as a tool for bringing about behavioural control. While recruiting staff for subsidiaries, MNCs may use expatriates from the home country or a third country, and staff from the host country (Scullion & Collings, 2006; Torbiorn, 1997). Of

these three types of potential staff members, MNCs can obtain maximum benefit by recruiting employees who are nationals of the parent company's home country because their leadership qualities and knowledge are transferred to the subsidiary, and have the potential to span the boundary between the parent company and subsidiary (Edström & Galbraith, 1977; Harvey, Speier, & Novicevic, 2001). Using a transaction cost framework, Tan and Maloney (2006) suggested that recruiting expatriate staff for subsidiaries would be more effective way to minimise transaction costs than recruiting staff from the host country. Benito, Tomassen, Bonache-Perez, and Pla-Barber (2005) pointed out that it would be a good choice for MNCs to deploy expatriates at subsidiaries because it could lower the transaction cost by controlling the expectation gap arising from cultural differences, and also minimise monitoring and bonding costs. Brock et al. (2008) show that placing expatriates in top managerial positions at the subsidiary level is impacted by the national culture of the home country.

Ossorio (2001) reported that out of total US expatriates, only 13% are women despite the fact that female expatriates are sometimes more successful than their male counterparts (Adler, 1987). The underrepresentation of female expatriates has been investigated by a number of researchers from several perspectives, and culture has been identified as one of the main reasons that hinders women expatriates from being deployed in foreign countries. For example, Caligiuri and Cascio (1998) mentioned that, unlike male expatriates, female expatriates may be negatively stereotyped by host nationals in places where people do not value women as professionals. A desire to avoid the potential cultural uncertainties surrounding the deployment of women in countries that are too culturally biased in favour of men, may affect the recruitment of women for expatriate positions. Adler (1987) also raised similar concerns regarding the reluctance of some host country nationals to do business with western female expatriate managers. Izraeli, Banai, and Zeira (1980) and Stone (1991) also

found evidence of possible discrimination against expatriate women working in some host countries.

Language in general and grammar in particular are embedded in a society's culture. This is especially true of grammatical gender marking. Christiansen and Kirby (2003) review the research on the origins and evolution of human language, and argue that while one theoretical line argues that grammatical structure is the product of biological adaptation, others argue that it emerges through cultural transmission of language across hundreds (or perhaps thousands) of generations of learners. The origins of linguistic structures have both a distant past and a shared history with other cultural developments, raising the possibility that salient aspects of society may have become embedded in language. Scholars theorize that sex-based linguistic distinctions originally arose from evolutionary pressures concerning specialization, reproduction, and the division of labour, which suggests that grammatical gender may act as a cultural marker, reflecting historically determined gender norms in a society (Johansson, 2005).

It is argued that the presence of gender distinctions in grammar is strongly associated with inferior socioeconomic outcomes for women. Santacreu-Vasut, Shoham, and Gay (2013) use grammatical gender structures to investigate women's participation in the political arena. They use a cross country sample, and find a strong relationship between gender marking and female representation in parliaments by quotas. Similarly, Santacreu-Vasut, et al. (2014) demonstrate that grammatical gender marking has a negative effect on the participation of females on corporate boards of directors and in the management of large teams. They also show that the staffing of subsidiaries' boards in multinational companies is influenced by grammatical gender marking in the language of the home country.

Givati and Troiano (2012) found that the number of gender differentiated personal pronouns in a nation's dominant language has a negative effect on the length of maternity

leave. They conclude that this method could be used as a proxy for attitudes leading to gender-based discrimination.

Gay, Santacreu-Vasut, and Shoham (2013) show that more marking of gender in the grammatical structure of a national language has significant negative impact on females' labour participation, and their access to land and credit. They also show an impact on the adoption of political quotas for females, and the occupations of females. Hicks, Santacreu-Vasut and Shoham (2015) studied immigrants to the United States who speak a variety of languages with diverse intensities of gender marking. They find that females who speak languages with a higher level of gender marking do many more household chores than those who speak languages with lower levels of gender marking. This result is so strong that it is even significant in single-person households.

Moreover, gender distinctions in the grammar of language outperform the traditional survey-based measures of culture. The mainstream of qualitative culture is captured by using surveys of individuals from different countries and societies, Hofstede's (1980a, 1983) original work includes a masculinity (MAS) dimension, as does his newer set of cultural dimensions (Hofstede, Hofstede, & Minkov, 2010). The GLOBE study includes a gender equality (GE) dimension (House et al., 2004). The World Value Survey includes questions intended to capture directly the attitudes regarding gender equality like "When jobs are scarce, men should have more right to a job than women? Agree/ Disagree."

The surveys measure cultural variables in general and gender role intensity specifically by asking individuals direct questions. This causes a severe endogeneity problem (Santacreu-Vasut et al., 2014), meaning that non-cultural effects are also imbedded in answers that are supposed capture only culture, because current economic, social and environment conditions impact individual answers. Using languages' grammatical structures, stable features that have

not changed for millennia, can overcome this endogeneity problem because these structures capture the collective mind-set that a society inherits from ancestors in the distant past.

Santacreu-Vasut et al. (2014) also show that grammatical marking measures provide better empirical results than the Hofstede and GLOBE gender dimensions. Their proposed explanation for this result is the very stable nature of language-based gender distinctions that are inherited from the distant past, and the direct influence of language on cognition via the shaping of the mental representation. Based on the above we can postulate:

Proposition 1. To increase control and reduce tension, placing managerial expatriates on the subsidiary level should depend on the linguistic gender marking gap between home country and host country.

Paauwe and Dewe (1995) emphasised the role of organisational culture in making organisational control more effective. They have pointed out that a stronger, closer organisational culture may be effective for promoting organisational control even in the presence of national cultural difference. Based on the cognition effect of language, we can argue that using the same language in the organization will narrow differences in national culture. Following Whorf (1956) who claims that language shapes thought, cognitive scientists and psychologists are currently testing this hypothesis in experimental settings. Boroditsky and Gaby (2010) and Boroditsky, Schmidt, and Phillips (2003), followers of neo-Whorfianism, have tested the cognitive impact of grammatical differences. For instance, Boroditsky et al. (2003) examined how grammatical gender influences the way speakers of different languages think about inanimate objects, and find that individuals are more likely to assign feminine or masculine features to inanimate objects on the basis of their established grammatical gender. Baronchelli, Loreto, and Puglisi (2014) point to the interplay between cognitive biases and cultural forces as the forces that shape language. They use experimental evidence and computational models to show the potential for historical accidents and cultural

forces to account for cross-linguistic variations. Culture may therefore exert selective pressure on speakers via communication needs. Indeed, the languages' grammar forces speakers to encode certain information, while neglecting others.

Chen (2013) shows the presence of references to future time in a language is associated with more forward looking decision-making, such as higher levels of saving and healthier behaviour. He claims that this impact is due to the effect of language on cognition. Vitevitch, Sereno, Jongman, and Goldstein (2013) question the assumption that the processing of grammar is independent of its social meaning. More concretely, they show that the cognitive processing of grammatical gender varies as function of the gender of the speaker. Givati and Troiano's (2012) research provides additional support for the impact of grammar and gender marking on national gender outcomes. Moreover, Santacreu-Vasut et al. (2014) claim that the HQ national language of the MNC has an impact on the employment of top executives at the overseas subsidiary. From the above literature, we can conclude that:

Proposition 2. Using the language of the organization in a newly-integrated subsidiary could reduce the linguistic gender marking gap between HQ and subsidiary due to cognitive effects.

Gender intensity index gap

In the current literature, cultural distance is measured by using survey-based measures of cultural dimensions in general and cultural gender outcomes in particular. The main survey-based measures of culture are Hofstede (1980b,1983), Hofstede, Hofstede, and Minkov (2010), House, Hanges, Javidan, Dorfman, and Gupta (2004) GLOBE study, Schwartz (1994), and the World Value Survey. Using the grammatical structure of gender marking for measuring distance, based on the linguistic gender marking gap has several advantages over survey-based methods. The surveys measure attitudes and beliefs directly, but are susceptible to severe endogeneity problems. Moreover, it is impossible to gauge causality. These

problems can be surmounted by using a grammatical feature exogenous to current economic and social outcomes. Santacreu-Vasut et al. (2014) established empirically that grammatical gender marking outperforms the survey-based gender dimension of Hofstede and GLOBE. Furthermore, using linguistic gender marking allows us to access national, organizational, and individual cultures using the same tool. The survey-based measures attribute the same national culture to all the players in the same society. Using the linguistic gender marking gap in this study allowed us to present a different proposition, about organizations, rather than a national proposition.

The linguistic gender marking gap is calculated based on the Gender Intensity Index (GII) presented at length by Santacreu-Vasut et al. (2013) and Santacreu-Vasut et al. (2014). Here, we provide a short description of the GII; a more detailed explanation, quoted from Gay et al. (2013) may be found in Appendix 1. Languages have four gender-related grammatical structures, as classified by linguists in the World Atlas of Language Structure. For example, a language's gender system may or may not be linked to biological sex. A non-sex-based gender system may be based on the distinction between humans and nonhumans (as in Danish) or between animate beings and inanimate objects. The GII process creates a dummy variable equalling “1” for languages with a sex-based gender system, and “0” for others. In the same manner, dummy variables are created for the other three gender-related grammatical structures. Thus, the GII can be any number between zero and four. Zero represents a language with no gender marking and four represents languages with the highest gender marking. The difference between GIIs represents the linguistic gender marking gap, and can be calculated as $GII(\text{home country}) - GII(\text{host country})$.

Analytical framework

Based on the preceding theory and propositions, we developed a conceptual framework, following Malul and Luski (2009), and Malul (2009). The model provides additional support

for the propositions presented above. The full analytical model is presented in Appendix 2. Additional support for the use of analytical models in HRM research was presented by Ahammad, Sangmook, Malul, and Shoham (2015).

The analytical model illustrates the decisions made by an MNC about expanding its activities overseas, assuming the objective of the MNC is to maximize profits,¹ which is a positive function of control. The firm's profit is the gap between its operating profits and the cost of achieving control over the new activity. On one hand, investing more resources in control increases the operating profits while on the other hand the marginal cost of achieving that level of control increases. In table 1 we present a simple schematic representation of the model which summarizes the main results of the paper.

The cost of achieving control depends on the level of control that the firm wants to achieve and the ability of the manager it deploys to achieve it. The more able the manager, the lower the cost of achieving the same level of control. Using the basic model presented in appendix 2 and assuming no gender marking gap between home and host countries, table 1 shows that when abilities are above threshold, the gender of the manager allocated to the host country does not matter. But when there is a gap, and the gender marking in the host country is higher than in the home country, gender might be a factor in the decision when allocating a manager to the subsidiary. Indeed, in this case, a female has to compensate for the gender marking gap in the host country by having higher abilities. If female and male potential managers have equal ability and there is a gender marking gap between home and host countries, the male manager will be chosen. This outcome of the model supports proposition 1 (Q. E. D.).

¹ Although there are a number of accounting-based, stock market-based and strategic measures of performance suggested by Papadakis and Thanos (2010), this paper uses operating profit as a measure of performance for the sake of simplicity.

++Table 1 about here++

Table 1 summarizes a firm's decision about the gender of the manager in the host country. We can see that when the manager's ability is relatively low and there is a gender marking gap between the home and host countries, with the gender marking gap higher in the host country, the firm can only operate the subsidiary by allocating a male manager. However, when the manager has a medium level of ability, a female manager can be allocated to the subsidiary, but only when the gender marking gap between home and host countries is relatively low. Females with higher ability can overcome the gender marking gap when the gap is not large. Finally, when a subsidiary uses a language in which the gender marking gap is closer to that in the home country, the negative effect of the gender marking gap between the home and host countries (through cognition) may be weakened. In that case (shown in table 1 in parenthesis), a female with medium ability can be allocated to the subsidiary, if the gender marking gap between home and host countries is medium. A female with high ability could be allocated to the host country even when the gender marking gap between the countries is high. This outcome of the model supports proposition 2 (Q. E. D.).

Our model allow us to identify the premium that a female expatriate manager must to "pay," compared to her male counterparts, when a firm decides to establish a subsidiary in a country with relatively high gender marking gap.

Discussion and conclusions

According to the transaction cost perspective presented in the literature review, expatriate assignment exerts a form of top-down control of headquarters over its foreign subsidiaries. Child (1984) has strongly advocated recognising culture as a form of organisational control. Guest (1989) and Ohmae (1994) acknowledged organisational culture as a condition that brings organisations together. Prior research (e. g., Gatignon & Anderson, 1988) identified the cultural distance between the home and host countries as a major predictor of subsidiary

control and/or expatriate deployment (Boyacigiller, 1990; Fenwick, DeCieri, & Welch, 1999; Kobrin, 1988; Richards, 2001). This paper presents an innovative gender gap variable based on difference in grammatical structures in languages related to gender, which contributes a better way of capturing the cultural gap than the survey based measure of culture.

In addition to the propositions presented above, understanding the GII and the linguistic gender marking gap can help diagnose the gender marking gap at the corporate level *ex ante*, which may involve both the official and informal languages spoken by executives in home and host units, and their distance in terms of gender marking. A large gap in company gender marking requires a period of language-sensitive training before introducing the home country's HR practices in the host country. A longer language-sensitive training in the host country will be needed before introducing the home country's HR practices if company linguistic gender marking gap is high. As Deal and Kennedy (1982) and Peters and Waterman (1982) have pointed out, a reasonably homogenous organizational culture is a likely contributor to organisational excellence.

Our results can be useful to the HR managers of MNCs operating in developing and emerging markets. Most traditional FDI comes from developed English-speaking nations, although there is now increasing FDI from developing nations like China. For example, MNCs from English-speaking countries that invest in Arabic-speaking countries will face the outcomes of a large gender marking gap. Based on Gay et. al (2013) the GII of English is 1 compared to GII of 4 (the highest GII) in Arabic. This means that female expats will increase tension if placed in Arabic-speaking countries. This will also result in higher asymmetric information due to lower cooperation, an outcome that will reduce the control needed by the headquarters. Proposition 2 provides a tool for reducing tension by implementing an official corporate language used by the subsidiary. In the above example, that language would be English, creating the cognitive effect of reducing the gender rules at the Arabic-speaking

subsidiary. Another important implication is training of the expats on gender rules in the host country, which is crucial when the gender marking gap is large. Hold this training before placing expats in a country with high GII gap might reduce tension.

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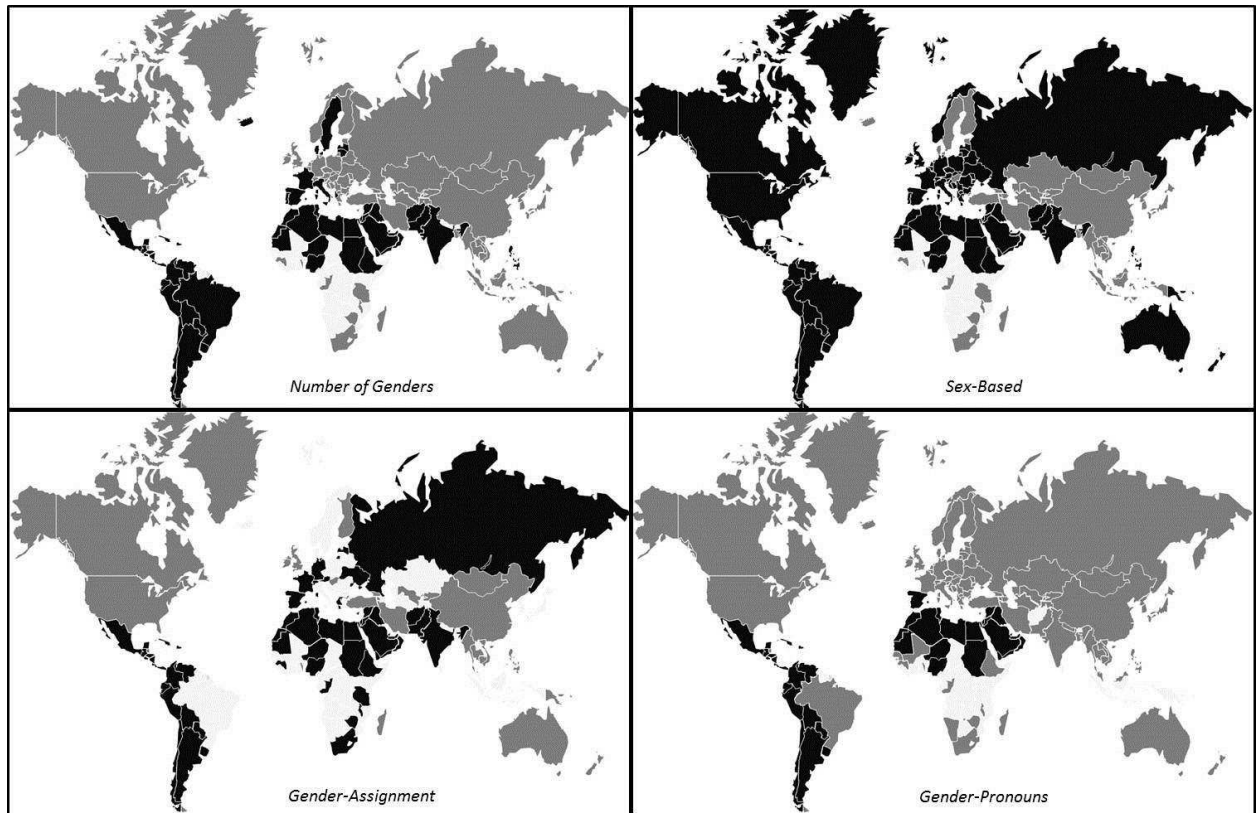
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Appendix 1

The source of this appendix is Gay at el. 2013. The maps in Figure 1 show the gender structure distribution for each country's dominant language.



Appendix 1 Figure 1: The four gender structure Intensity Black countries means Dummy equals 1.

Table 1 presents a dataset extract that includes the seven indices.

Appendix 1 Table 1: Dataset extract

Country	Language	NG	SB	GA	GP	GII
Argentina	Spanish	1	1	1	1	4
Armenia	Armenian	0	0	0	0	0
Australia	English	0	1	0	0	1
Austria	German	0	1	1	0	2
Azerbaijan	Azerbaijani	0	0	n/a	0	n/a

We use four individual variables and three indices since (a) they contain different and complementary information; e. g., only 34% of languages have SB=1 and GP=1; and (b)

because using different variables allows a bigger sample and different samples, as robustness checks.

Table 2 shows intensity indices across linguistic families and within the Indo-European subfamily. NC denotes the number of countries for which the dominant language belongs to the family and NL denotes the number of different languages in the family. Linguistic structures are shown to vary widely across and within families. Thus, grammatical gender structures capture more than geographical or historical forces.

Appendix 1 Table 2: Indices variation

Family	N ^C	N ^L	NG	SB	GA	GP
Indo-European	67	34	0.48	0.91	0.79	0.30
Afro-Asiatic	23	5	1	1	1	0.95
Niger-Congo	10	10	0	0	0.86	0
Altaic	7	7	0	0	0	0
Austronesian	7	7	0.20	0.20	0	0

Indo-European	N ^C	N ^L	NG	SB	GA	GP
Romance	25	5	0.92	1	1	0.79
Germanic	16	7	0.13	0.88	0.36	0
Slavic	12	10	0	1	1	0
Iranian	3	3	0.33	0.33	0.5	0

Appendix 2: The Model: Assumptions and Notation

When firm decides to expand its activity through IJV, MNCs and M&A, its objective is to maximize profits, which is a positive function of control. The firm's profit is the gap between its operating profits and the cost of achieving control over the new activity. On one hand, investing more resources in control increases the operating profits while the marginal cost of achieving certain level of control increases on the other hand. The cost of achieving a certain level of control depends on how much control the firm wants to achieve and the ability of the manager deployed to achieve it. The higher the ability of the manager, the lower the cost of achieving the same level of control.

Assume that there is a minimum level of profits that makes the new activity desirable. This minimum depends upon the alternative profits the firm can get in alternative option.

A firm seeks to maximize the following:

$$\max_{E_i, L} \pi_i = L(G\pi) + (1 - L)A\pi \quad (1)$$

Where:

π_i is the total profit of the firm.

$G\pi$ is the total profit the firm earns when operating abroad so that

$$G\pi = v\pi_i - \frac{E_i^\alpha}{\alpha\mu_i} \quad (2)$$

Where:

E_i is the level of control that the firm achieves in the new activity abroad.

$v\pi_i$ is the operating profit in the new activity abroad.

$v\pi_i$ is positively dependent on the level of control the firm gain in the new activity, assuming for simplicity's sake that $v\pi_i = E_i$.

μ_i is the manager's ability.

$\frac{E_i^\alpha}{\alpha\mu_i}$ is the cost of achieving a certain level of control E_i . $\alpha > 1$, meaning that the marginal cost of achieving a certain level of control increases. It can be also seen that as the manager's ability (μ_i) increases the cost of achieving certain level of control decreases.

$A\pi$ is the alternative profit that the firm can achieve.

L is dichotomous variable that receive the value '1' if the firm decides to establish new activity abroad, and '0' if it decides to have only the alternative profits.

Firm's decision regarding establishing new activity and its level of control

The value of the profits from the new activity abroad will be (L=1): $G\pi^* = \left(\frac{\alpha-1}{\alpha}\right)\mu_i^{\frac{1}{\alpha-1}}$; if

deciding to remain with the alternative investment (L = 0) the profits will be $A\pi$. Therefore, the firm can profit only if it deploys for this purpose a manager who has ability to satisfy the

following: $\mu_i > \mu^* = \left[v\pi\left(\frac{\alpha}{\alpha-1}\right)\right]^{\alpha-1}$. In this case, the optimal level of control for the firm is:

$$e_i = \mu_i^{\frac{1}{\alpha-1}}$$

Gender marking gap between countries and its effect on firm global strategy

In the above analysis, we assumed that only the ability of the manager matters. However based on to the literature, given male and female managers with identical ability, gender might be crucial factor in the profits a firm can achieve abroad, especially when there is a gap in the linguistic gender marking gap between the home and host countries.

Let us assume that τ_{BA} represents the gender marking gap between host country B and home country A. If there is a gap, and the gender marking is higher in the host country than in the home country, allocating a female manager for activity in the host country might harm the firm's ability to gain the maximum profit from the new activity. In that case the firm

profits will be:
$$\max_{E_i, L} \pi_i = L(v\pi_i - \frac{E_i^\alpha}{\alpha(1-\tau_{BA})\mu_i}) + (1-L)A\pi$$

The maximum profit the firm can gain abroad when deploying a female manager is:

$$G\pi^{**} = \left(\frac{\alpha-1}{\alpha}\right) \left[(1-\tau_{BA})\mu_i \right]^{\frac{1}{\alpha-1}}$$

It can be shown that the threshold ability for profitable activity abroad when the firm deploys a female manager in a host country where the gender marking gap is larger than the host country is higher than the threshold ability for a male manager

$$\mu_i > \mu_f^* = \frac{\left[v\pi \left(\frac{\alpha}{\alpha-1} \right) \right]^{\alpha-1}}{1-\tau_{BA}}$$

As can be seen in Figure 1, for $\mu^* < \mu_i < \mu_f^*$ (zone 2 + zone 3) deploying a female manager with similar ability to male manager yields a negative profit from the overseas investment, whereas the investment would be profitable if a male manager were deployed.

The effect of gender marking gap between HQ and subsidiary

It might be that the gender marking between the HQ and subsidiary is different than the gender marking gap between the home and host countries. For example, it could be that the language of the subsidiary is similar to the home country. Assume that the gender marking gap between HQ and subsidiary is τ_{BA}^* , and that the total gender marking gap (Γ) is a function of both the gender marking gaps between home and host countries' and between HQ and the subsidiary.

Let us consider the following cases:

If $\tau_{BA} = \tau_{BA}^*$ then $\Gamma = \psi\tau_{BA}$, $\psi = 1$, the gender marking between the HQ and subsidiary is similar to the gap between the home and host countries.

If $\tau_{BA} > \tau_{BA}^*$ then $\Gamma = \psi\tau_{BA}$, $0 < \psi < 1$, the gender marking between the HQ and subsidiary is lower than to the gap between the home and host countries.

If $\tau_{BA} < \tau_{BA}^*$ then $\Gamma = \psi\tau_{BA}$, $\psi > 1$, the gender marking between the HQ and subsidiary is higher than the gap between home and host countries.

The firm maximizes the following function:

$$\max_{E_i, L} \pi_i = L(v\pi_i - \frac{E_i^\alpha}{\alpha(1-\Gamma)\mu_i}) + (1-L)A\pi$$

The maximum profit the firm can gain abroad when deploying a female manager is:

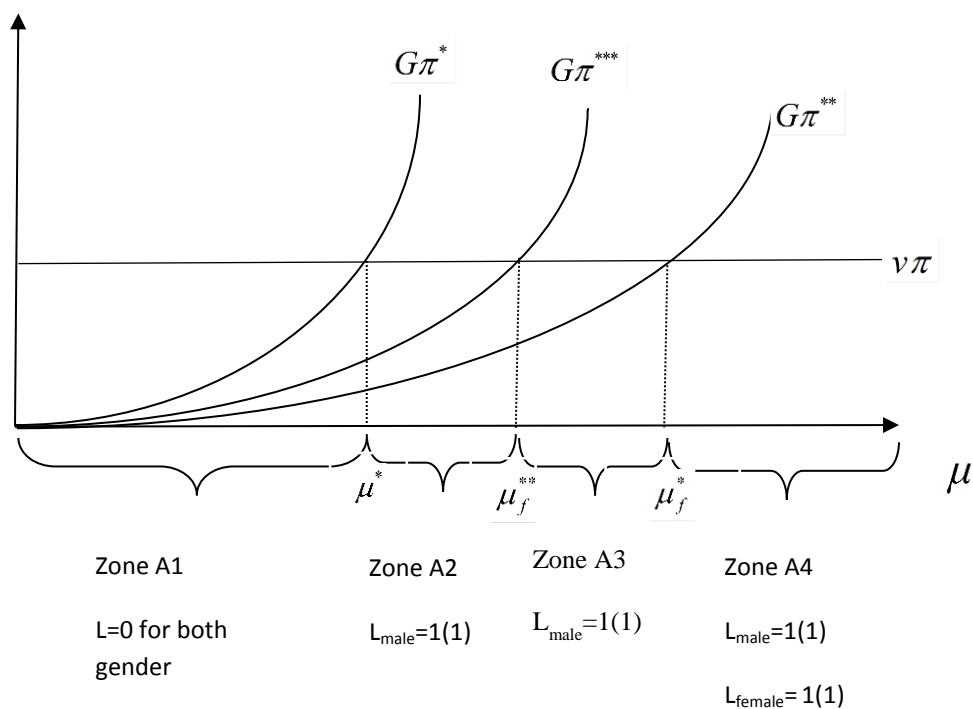
$$G\pi^{***} = \left(\frac{\alpha-1}{\alpha}\right) [(1-\Gamma)\mu_i]^{\frac{1}{\alpha-1}}$$

In that case, the threshold of ability of a female manager that will allow profit activity abroad is:

$$\mu_i > \mu_f^{**} = \frac{\left[v\pi \left(\frac{\alpha}{\alpha-1} \right) \right]^{\alpha-1}}{1-\Gamma}$$

If the gender marking gap between the subsidiary and HQ is lower than the gender marking gap between home and host countries, the result is $\mu^* < \mu_f^{**} < \mu_f^*$. It can be seen from Figure 1 that when $\mu_f^{**} < \mu_i < \mu_f^*$ having a female manager in the subsidiary allows the firm to make sufficient profits to justify its activity when the gender marking gap between the HQ and the subsidiary is lower than the gap between the home and host countries.

Figure 1: The Gender Marking Gap



This model allows us to measure how gender marking gaps between countries might affect a firm's considerations when allocating managers in subsidiaries located abroad. Moreover, the model might be useful for illustrating what strategy a firm could adopt in order to improve its profits in the global world, and better manage its human resources. We show that the gender-marking gap might, in some situations, affect the profitability of global activity when the firm deploys a female to manage them.

Table 1: Ability, Gender marking gap (GMG) and manager's gender

Ability/GMG	No GMG	Low	Medium	High
Below threshold				
Low	Male/Female	Male	Male	Male
Medium	Male/Female	Male/Female	Male (/Female)	Male
High	Male/Female	Male/Female	Male/Female	Male (/Female)