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Distance Advantages in IS Nearshoring: Do They Matter?

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ABSTRACT

This paper reviews and extends previous literature on information systems offshoring by providing a critical analysis of the advantages of shorter client-supplier distance in nearshoring projects (as compared to farshoring ones). Prior research indicated that nearshoring brings forth a number of critical distance advantages, e.g. real-time overlaps, cultural similarities, linguistic connections, as well as political/economical similarities, and that firms increasingly consider nearshoring as part of their sourcing strategies in order to benefit from the relative proximity of nearshore suppliers. The conceptual paper at hand develops six propositions challenging this simplified perspective by presenting emerging arguments which downplay frequently mentioned advantages resulting from proximity. Our results suggest that the advantages of nearshoring over farshoring in practice may not be as significant as previously assumed due to a number of factors including small size and availability of nearshore labor force, limited nearshore supplier experience, and increasing international awareness.

Keywords

IS offshoring, IS nearshoring, client-supplier distance, proximity.

MOTIVATION

Significant cost saving potentials and shortage in professionals urged firms to offshore information systems (IS) tasks to low-wage countries such as India or China. However, experiences with offshoring have been mixed, with many firms struggling to achieve the initially expected benefits. This was primarily traced back to significant management overhead and travel costs, misunderstandings grounded in linguistic or cultural differences, as well as loss of control, productivity, and trust, for all of which the distance between client and supplier was blamed. This has led to the birth of the term nearshoring which was regarded "as a reaction to the main offshore destination, India, which was viewed as 'farshore,' a very distant destination, many hours to travel, many time zones away, and a very different culture" (Carmel and Abbott, 2007: 40). Proximity between supplier and client was expected to generate a number of benefits, including real-time overlaps, cultural/historical similarities, linguistic connections, as well as political/economical similarities, which altogether make nearshoring relationships easier to manage than farshoring ones (Abbott and Jones, 2002; Carmel and Abbott, 2007; Rao, 2004). However, despite their relative proximity, nearshore relationships still face the common challenges of global distributed work including linguistic and culture-based misunderstandings or the risk of overriding management overhead. In addition, global trends such as international awareness and migration, the homogenization of markets, and web-based communication and collaboration are cited to help overcome linguistic, cultural, and time-zone differences. Therefore, in this paper, we would like to challenge the simplified view of distance advantages in nearshore projects by examining the following research question:

What factors mitigate distance advantages in IS nearshoring projects?

Nearshoring presents a unique opportunity to study distance-related effects in IS offshoring (Abbott, 2007) which has however remained widely unexplored. So far, only little research has investigated the effects of varying distance in IS offshoring (e.g, Carmel and Agarwal, 2001; Kumar and Willcocks, 1996). Furthermore, we do not know of any study challenging the frequently cited distance advantages of nearshoring. This provides the basis for our research which follows King and Torkzadeh's (2008) call for theoretical frameworks that account for the "perhaps-subtle differences" (p. 213) between distinct offshoring forms in an attempt to contribute to an overall theory of offshoring. We believe distance is a critical concept in understanding the notion of offshore location advantages.

The remainder of this conceptual paper is organized as follows. In the next section, we review the relevant literature on distance and outline the major distance dimensions from which specific benefits are expected to arise. We then offer a critical perspective on the concept of nearshoring in light of the distance dimensions and outline propositions which challenge frequently cited nearshore distance advantages. The concluding section discusses the results and outlines some directions for future research.

THEORETICAL BACKGROUND

In this section we summarize some important findings on the notion of distance as it is used in two separate fields of inquiry—international business studies and global distributed work.

Distance in international business studies

First suggested by Beckerman (1956), the concept of psychic distance became popular following the Uppsala internationalization model (Johanson and Wiedersheim-Paul, 1975) according to which the time order of international operations was related to the psychic distance between home and foreign countries. The concept of psychic distance refers to the sum of factors preventing the flow of information between firm and market, e.g. differences in language, culture, political systems, education, business practices, and industrial development (Johanson and Wiedersheim-Paul, 1975). Firm internationalization was conceptualized as an evolutionary process and foreign markets with low psychic distance were viewed as easier to internalize. Johanson and Wiedersheim-Paul (1975) recognized early on that while geographic distance is a constant, psychic distance is a dynamic concept which may evolve over time as the relations between USA and Cuba or England and Australia demonstrate.

The concept of psychic distance, albeit useful, has been plagued by two major issues. First, there is disagreement on its operationalization, with the majority of studies only measuring cultural distance using Hofstede's (1980) cultural dimensions or the composite index of Kogut and Singh (1988). Recent research has aimed at closing this gap by developing macro-level indicators, such as culture, language, religion, political and legal issues, economic conditions, and business practices, as well as micro-level indicators impacting the perceived psychic distance of the individual firm or decision maker, such as education, international experience, and age (e.g. Dow and Karunaratna, 2006; Sousa and Bradley, 2006). Second, research suggests that recent developments in communication and transportation channels, the homogenization of markets, and international awareness remove the psychic distance between countries (e.g. Bell, 1995).

Distance in global distributed work

Distance in global distributed work literature generally refers to cultural, geographic, time-zone and language differences among team members (e.g. Olson and Olson, 2000). Distance in distributed teams is assumed to impose difficulties on intra-team communication, coordination and control (Herbsleb, Mockus, Finholt and Grinter, 2001). To overcome those difficulties, the literature suggests the adoption of technology-enabled groupwork support (Kiesler and Cummings, 2002). Information and communication technologies (ICTs) allow the disembedding of social or work practices from particular geographical locations and the separation of space as area of social interaction from physical place as contextualized locale (Giddens, 1990; Abbott and Jones, 2007). Ohmae (1990) writes of the emergence of a borderless world in which knowledge work is central while Cairncross (1997) even refers to this trend as the death of distance and posits that in the future screen-based tasks can be distributed anywhere in the world. However, the literature also acknowledges that the emerging technologies are incapable of replicating the characteristics of face-to-face human interaction, such as space-time context (Olson and Olson, 2000). Physical proximity through brief interludes is hence suggested to help prevent the negative results from the friction of distance (Maznevski and Chudoba, 2000).

Distance has been traditionally viewed as an inhibitor of distributed work in general and of offshoring arrangements in particular (Carmel and Agarwal, 2001). Offshoring is perhaps the most important subcategory of globally distributed work. Several IS offshoring researchers (Abbott and Jones, 2007; Carmel and Abbott, 2007; Carmel and Agarwal, 2001; Dibbern, Winkler and Heinzl, 2008; Heeks, Krishna, Nicholson and Sahay, 2001; Krishna, Sahay and Walsham, 2004; Rao, 2004) have proposed various categorizations of the distance dimensions which can be integrated as follows: (1) *physical distance*, referring to the geographic proximity between client and supplier, (2) *temporal distance*, referring to time zone overlaps, (3) *linguistic distance*, referring to language similarities or the ability to adopt English as the language of business, (4) *cultural distance*, referring to the similarity of characteristics of national or organizational cultures, (5) *resource-based distance*, referring to infrastructure and people skills, and (6) *political/economic distance*, referring to political and economic stability, favorable policy, and investment friendliness. To counteract the negative impact of distance, the literature suggests firms to develop purposeful tactics (e.g. Carmel and Agarwal, 2001).

DEVELOPMENT OF CONCEPTUAL MODEL

Building on the six distance dimensions identified in prior literature we now turn to the discussion of the advantages of IS nearshoring over farshoring, and their mitigating factors.

Physical distance

The physical, or geographic, proximity of nearshore countries is an indicator of increased site accessibility compared to farshore destinations. Site accessibility allows the fast and cost efficient scheduling of face-to-face meetings between local and nearshore employees which may prove critical to success (Buxmann, 2009; Kvedaravičienė, 2008). It is the direct result of the lower cost of travel, measured in terms of (1) flight ticket prices, (2) productivity losses caused by being out of office, and (3) visa processing paperwork effort. Due to shorter physical distance, nearshoring saves on flight ticket expenses and lost productivity because of considerably shorter duration of flight compared to travel times to farshoring destinations (Abbott and Jones, 2002; Kvedaravičienė, 2008). Visa processing paperwork effort for employees is significantly lower in nearshoring arrangements, e.g. due to the existence of bi- and multinational agreements such as the European Union and the North American Free Trade Agreement (Bell, Ferrer and John, 2005; Buxmann, 2009; Kvedaravičienė, 2008). The higher site accessibility of nearshoring compared to farshoring facilitates inter-site employee mobility (Bell et al., 2005; Buxmann, 2009), reduces the perceived loss of control (Abbott and Jones, 2002; Carmel and Agarwal, 2001) and the management overhead to support the relationship (Davis, 2009).

Such a view directly contradicts Cairncross' (1997) hypothesis of the death of distance. Accordingly, for specific screen-based activities inter-site employee mobility is not a critical issue due to the availability of every form of communication for mobile or remote use, the distance-free cost of communication due to the internet and the dramatic change in telephone tariffs, the omnipresence of the internet and its capacity to carry many other services including telephone and video, the freedom of relocating screen-based activities wherever the best bargain of skills and productivity can be found, and the increasing trend of virtual office. Likewise, the loss of control through distance is downplayed because the internet makes it easier to monitor and control partners, because of the reliability of services and people's increasing likeliness to trust each other over the internet. Finally and advocating in favor of a loose-knit organization type, Cairncross (1997) downplays the management overhead of coordinating over distance as web-based technologies reduce the cost of dealing with distant suppliers or partners, and *service delivery becomes standardized* (e.g. due to third-party process certifications such as ISO 9001 or the Capability Maturity Model). Rather than focusing on physical closeness, firms are advised to increasingly differentiate on the basis of location-based advantages (Carmel and Abbott, 2007) and capitalize on *wage differentials*. This leads to the following:

Proposition 1:   *High task standardization (1a) and high labor cost differences (1b) mitigate advantages resulting from physical proximity in IS nearshore projects.*

Temporal distance

Time-zone distance is an indicator of the possibility of real-time communication and collaboration. Time differences may hinder collaboration or even make it impossible (Holmström Olsson, Ó Conchúir, Ågerfalk and Fitzgerald, 2008) as there is little or no opportunity to work collaboratively with the offshore partner (Bell et al., 2005). According to Carmel and Abbott (2006), farshoring countries are simply too many time zones away to manage remotely. With significant time differences, e.g. between India and Europe or North America, project members struggle to establish viable and collaborative relationships (Davis, 2009). On the contrary, the time differences to nearshore destinations are ignorable (Buxmann, 2009) which makes it easier to make conference calls (Abbott and Jones, 2002), communicate at the same time without lags in execution (Kvedaravičienė, 2008) and receive a fast response to inquiries (Buxmann, 2009). As a result, nearshore arrangements are suggested to have lower communication and collaboration costs compared to farshoring (Carmel and Abbott, 2007; Meyer and Stobbe, 2007; Vogt, Gregory and Beck, 2009).

Despite its apparent drawbacks with regard to direct or same-day interaction, farshoring offers the opportunity of using time-zone differences to speed up the project duration, increase flexibility and *ensure global availability of customer service and support* (Carmel, Dubinsky and Espinosa, 2009; Seshasai, Gupta and Kumar, 2005). The increasing globalization of large firms and the need for global processes strengthens the motivation to tap time differentials (Chen, Tu and Lin, 2002). Hence, client firms and their offshore suppliers concentrate on the so called follow the sun principle and establishing delivery networks also called '*24-hour knowledge factories*' (Seshasai et al., 2005). Nearshore locations obtain the role of bridge between client and farshore supplier and help to reduce the negative effects of temporal distance (e.g. Holmström et al., 2008). It would therefore be misleading to regard time differences as a drawback and try to minimize them on all circumstances. The possibility to capitalize on time differentials as a competitive resource is particularly attractive to multinational firms operating in different time zones. Follow the sun ensures that progress is made at all times of the day

whereby the product is handed off daily to the next production site to continue work many time zones away (Carmel et al., 2009). This principle is facilitated by collaborative (web) technology, ever-greater connectivity and ubiquitous, cheap bandwidth (Carmel and Agarwal, 2001). Therefore,

Proposition 2: The quest for global availability of service and support (2a) and the possibility of establishing 24-hour knowledge factories (2b) mitigate advantages resulting from temporal proximity in IS nearshore projects.

Linguistic distance

Linguistic proximity is a prerequisite for effective communication with the offshore party (Buxmann et al., 2008) and particularly critical in communication-intensive tasks (Malecki and Moriset, 2008). According to Imsland and Sahay (2005), one of the main reasons why European countries have been much slower in engaging with offshoring is the diversity of languages used (other than English) and the unilingual focus on English in farshoring countries like China and India. Indians typically only speak English and their accents are considered by many as difficult to comprehend (Carmel and Abbott, 2006). In nearshoring regions such as Eastern Europe, the number of people who speak other European languages is much higher than in India, and the majority of the population speaks English as well (Economist, 2007). Nearshore teams typically include employees with good command of the client's native language even when it differs from their own (Deutsche Bank Research, 2006). Hence, fewer misunderstandings are expected to occur (Bell et al., 2005; Meyer and Stobbe, 2007; Vogt et al., 2009) and less linguistic adaptation is required on the client's side (Pietsch, 2007), as a result of which the cost of communication is considered lower than in the case of farshoring (Buxmann et al., 2008; Deutsche Bank Research, 2006). The linguistic proximity between client and nearshore supplier is therefore suggested to open up the way for trust-building (Bell et al., 2005).

According to Malecki and Moriset (2008), linguistic skills of offshoring employees are critical in voice-based and/or customer-support activities such as call centers. However, not all IS tasks are voice-based nor require regular interaction with client (e.g. aspects of software programming, data processing, etc.). In addition, client-supplier communication in communication-intensive processes (e.g. requirements analysis, contract-making, or negotiation) would require *proficiency of the language* which may go beyond the competence of linguistically affine employees of nearshore suppliers. Likewise, this linguistic gap could be closed by appointing *onshore support by a (near-) native speaker*. According to Buxmann et al. (2008), farshoring global players are increasingly establishing onshore and nearshore locations and recruiting local staff which would significantly reduce the cost of linguistic adaptation. To date, English has been the main language in international collaboration and there is evidence that its global role will increase (Cairncross, 1997). Therefore, *the necessity of linguistic adaptation on the client side*, e.g. when the client's employees lack English skills, is expected to decrease in the future. Imsland and Sahay (2005) therefore consider linguistic adaptation an issue in smaller-scale projects in client countries generally seen to be more inward looking in their approach to globalization (also see Pietsch, 2007). From the perspective of European clients, firms have many viable options for farshoring to destinations with linguisitic proximity beyond the English language including French-speaking countries such as Canada, Ghana, Mauritius, Senegal, or the regions of Goa and Pondicherry in India; Spanish-speaking countries in South and Central America; and Brazil as a major Portuguese-speaking offshoring destination. This leads to the following:

Proposition 3: The required proficiency of the language of work (3a), the possibility of appointing onshore support by a (near-) native speaker (3b), and the decreasing necessity of linguistic adaptation on the client side (3c) mitigate advantages resulting from linguistic proximity in IS nearshore projects.

Cultural distance

Cultural features pertain to business practices as well as social and historical traditions (Abbott and Jones, 2007). According to Carmel and Agarwal (2001), cultural distance relates to differences in the norms and values of national or organizational cultures. In IS offshoring, the general view is that Oriental cultures are very different from Western ones and that cultural differences cause intra-team tensions, misunderstandings, may hinder communication (Abbott and Jones, 2002; Deutsche Bank Research, 2006), increase management overhead (Davis, 2009) and reduce attractiveness (Kvedaravičienė 2008). Therefore, firms would generally favor offshore locations with smaller cultural distance (Carmel and Agarwal, 2001). Europeans for instance are more familiar with each other's customs and lifestyles and would therefore feel more comfortable working with people from nearshoring locations as they have similar or 'Westernized' business culture (Davis, 2009; Carmel and Abbott, 2007) and their employees understand better the client's cultural background (Deutsche Bank Research, 2006). Eastern Europe is closer culturally than Asia or Africa and therefore easier to do business in (Economist, 2005).

There is however conflicting evidence that globalization and international migration, empowered by the historically declining cost of international travel and communication, have increased the *cultural awareness* of individuals and organizations, and this in turn has enhanced firms' present ability to coordinate cross-border activities (Autio, 2005). Likewise, von Stetten,

Beimborn, Kuznetsova and Moos (2010) posit that IT cultures in different offshore countries exhibit striking *similarities* between countries which in general are culturally very different, thus suggesting a decreasing role of cultural proximity as an advantage of nearshoring in the future. A common practice of many leading farshoring firms is to situate up to 25 percent of employees onshore, typically at the client site, to serve as a bridgehead in an attempt to reduce cultural distance (Carmel and Agarwal, 2001). Finally, *many of the leading farshoring destinations offer strong historical linkages* with Anglo-Saxon, Spanish, French, Dutch, and Portuguese clients, mainly due to colonial interference. Hence,

Proposition 4: *Increasing international awareness (4a), similarity of IT cultures and IT people across countries (4b), and the historical proximity of many farshoring countries (4c) mitigate advantages resulting from cultural proximity in IS nearshore projects.*

Resource-based distance

Resource-based distance refers to differences in infrastructure and people skills (Abbott and Jones, 2007). The most popular offshore destinations are typically developing countries which, according to Rao (2004), often suffer from underinvestment in business infrastructures. Nearshore countries offer better infrastructure and a very good educational system (Deutsche Bank Research, 2006). Following Heeks et al. (2004) and Abbott and Jones (2007), nearshore countries may offer particular workforce advantages which differentiate them from the popular farshore destinations. Kvedaravičienė (2008) even concludes that productivity levels in cases of carefully chosen nearshore locations are equivalent to the country of origin.

Developing countries try to overcome the disadvantages from underdeveloped infrastructure by creating technology parks which provide highly developed telecommunication networks and 24-hour energy supply to offshoring firms (Rao, 2004). Furthermore, according to A.T. Kearney's (2009) biennial Global Services Location Index, typical nearshore destinations rank significantly lower on the level and availability of people skills than top-ranked India and China. The *size and availability of labor force* of many Eastern European and Baltic countries, e.g. Bulgaria, Romania, Latvia, and Ukraine, are among the smallest across all popular offshoring destinations and way behind India, China, Russia, Indonesia, or Singapore. This comparative lack of labor skills is also lamented by Abbott and Jones (2007). With regard to *supplier experience*, A.T. Kearney's (2009) study evidences a similar distribution with the popular farshore destinations ranking particularly high (also see Rao, 2004) and Eastern European countries strikingly low. While several nearshore locations scored high on experience including Canada, Ireland, Israel, and Mexico, overall the data supports the assertion that farshore suppliers have wider experience. As a result, farshore suppliers may exhibit higher levels of service professionalization, which has been found to be one of the most important factors facilitating trust, knowledge transfer, and relationship quality (Westner and Strahringer, 2010). Therefore,

Proposition 5: *Small size and availability of labor force (5a) and limited supplier experience (5b) mitigate advantages resulting from resource-based proximity in IS nearshore projects.*

Political/economic distance

Nearshore countries are generally believed to draw advantages from more stable political atmosphere and macroeconomic conditions compared to farshore countries (Carmel and Abbott, 2007; Deutsche Bank Research, 2006; Kvedaravičienė, 2008). The inexistence of comparable legal regulations in some developing countries may increase the client's reluctance to engage in farshoring (Rao, 2004; Kvedaravičienė, 2008). This is because such regulations may relate to critical issues like data privacy and security of intellectual property, for which liability cannot be transmitted to the offshore supplier.

In economic terms, nearshore countries offer cost saving potentials as a result of the lower wages in those countries. However, the associated cost advantage is typically less than in developing countries like India. While the cost advantage of any offshore country may be affected by *currency volatility*, nearshore countries are particularly much more prone to the negative effects of that volatility because of the smaller wage differentials. As A.T. Kearney's (2009) study shows, many medium-income countries (e.g. Eastern Europe) experienced a drop in their relative competitiveness in the global IS offshoring market due to the appreciation of the US dollar in the past two years. Hence,

Proposition 6: *Currency appreciation mitigates advantages resulting from political/economic proximity in IS nearshore projects.*

DISCUSSION AND CONCLUSION

This paper discussed the concept of distance in IS offshoring, thereby challenging the common belief that the lower distance in nearshoring results in advantages over farshoring. Figure 1 presents an overview of the identified factors possibly mitigating frequently cited distance advantages in IS nearshoring. Depending on the nature of IS tasks to be offshored and the priorities and risk perception of the firm, the importance of mitigating factors may vary. The framework could therefore be

particularly suitable as a basis for argumentation when firms evaluate near- and farshore alternatives for their IS tasks. Acknowledging the non-empirical design of our study, the suggested propositions are expected to hold some important insights for extant IS offshoring research which opens up the way for a follow-up empirical study. We suggest that the assumed benefits of short distance have been overplayed in prior literature and, further, that a direct comparison would show that nearshore arrangements are not necessarily easier to manage than farshore ones.
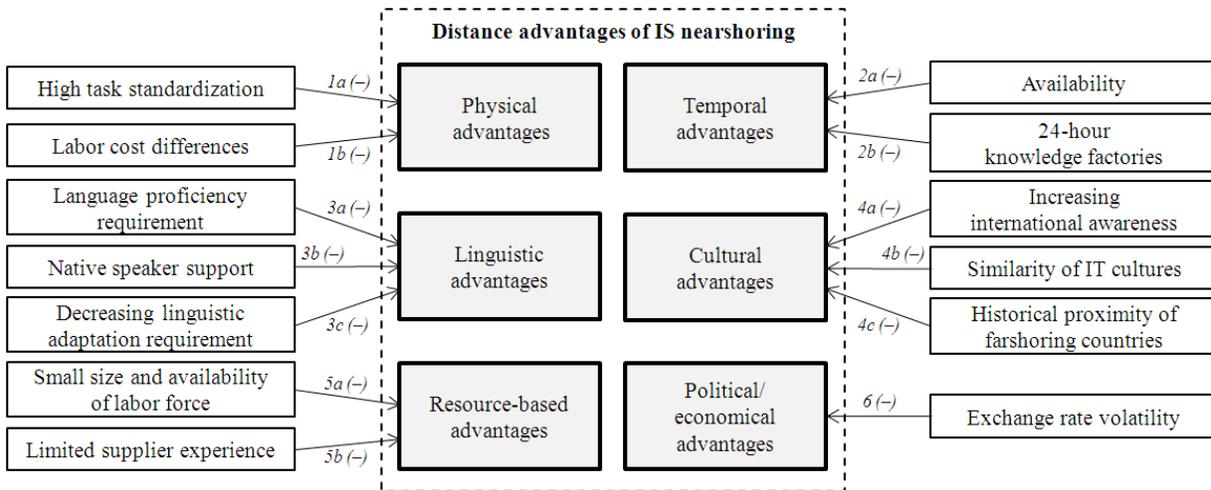
Figure 1. Theoretical framework: factors mitigating distance advantages of IS nearshoring projects

Overall, we presume that the common distinction between near- and farshoring is rather artificial, if not even misleading (in terms of ease of management), especially from client point of view. Our presumption finds support in prior research questioning the influence of distance, i.e., the distinction between near- and farshoring: on the one side, globalization proponents such as Cairncross (1997) argue in favor of the 'death of distance' enabled by ICTs; on the other side, researchers argue that nearshoring relationships face similar challenges as farshoring ones and hence may prove equally (un)successful. Future research should address this ambiguity.

In closing, the issues raised in this paper provide an attractive theoretical platform for developing future theoretical linkages between conceptualizations of near- and farshoring. It remains open how the theoretical perspectives brought together in this paper may compete against or complete each other, and how these combined insights may shed new light into the theoretical foundations of IS offshoring. By decomposing the notion of distance and its theoretical dimensions in the case of nearshoring, this paper provided an alternative to the prevailing simplistic view within the IS offshoring domain on what Abbott and Jones (2002) once called "the importance of being nearest" (p. 375).

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