

EXPLAINING PROPENSITY TOWARD OFFSHORING IN INFORMATION TECHNOLOGY INDUSTRY: A FIRM AND COUNTRY LEVEL ANALYSIS

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This paper examines the dynamics of the offshore outsourcing (offshoring) of information technology (IT) service work. It considers this important emerging phenomenon from multiple lenses based on international business and strategic management theories. Research propositions are developed based on accepted grounded theories from the viewpoints of the firm, the nation, and the interaction between them. Additional issues not addressed by received theories are surfaced suggesting questions for future research.

Key Words:

Offshoring, Information Technology, Firm and Country level analysis.

1. INTRODUCTION

The offshoring of services is a phenomenon that has grown dramatically in size, scope, and economic impact in recent years. This is particularly true for IT- enabled services and firms in the information technology industry. Business Week (2006) quotes an estimation by Gartner Inc. that “the value of offshore information technology and business-process outsourcing totaled USD 34 billion in 2005 and could double by 2007”. Matloff (2004) references another study by Gartner Group projecting that “25% of all U.S. IT jobs will move overseas by 2010, up from 5% today”. As early as 2001, more than 40% of Fortune 500 companies were reportedly engaged in offshore outsourcing (Carmel and Agarwal, 2002).

This magnitude of change in the location of where work is performed brings with it significant economic consequences in terms of (1) wages received by workers and multiplier effects within countries where these funds are spent and where national taxes are collected, (2) impact on firms’ profitability, efficiency, and service quality, and (3) national GDP and world standing. This is noticeable in cases of Ireland and India, major recipients of offshored service work in the IT industry. Thus, offshoring of work affects firms and the nations in which these firms operate. Given that offshoring represents a significant shift in distribution of global resources, it is important for international business

scholars to develop a thorough understanding of its dynamics.

Offshoring, in the broadest sense, can be defined as the assignment of work to laborers outside one's own country. Frequently this will involve movement of work crossing organizational as well as national boundaries. Unlike, most services where consumption of services is simultaneous with production and producer-customer co-location is required, Lovelock and Yip (1996) suggest that one type of services namely, the information-based services, are amenable to internationalization because these services require less direct contact of the customer with service personnel. This view is consistent with the observation that offshoring in the IT-enabled services domain has been growing very rapidly.

We note that offshoring can occur through varied mechanisms including (a) creating a subsidiary in another country and moving work between organizational units, (b) contracting directly with individual workers in another country, (c) contracting with a service firm in another country, (d) contracting with a multinational organization having offices in the offshoring firm's home country with sources of labors across nations, and (e) acquiring a subsidiary in another country. In this paper, we are primarily concerned with market-driven offshoring and less so with the movement of work between hierarchical units. Where this latter form of offshoring is discussed in the paper it will be specifically noted. We observe that firms differ in propensities to offshore their activities in spite of the potential impact of offshoring on firm profitability. Thus, it becomes important for international business scholars to understand why firms differ in their propensities to offshore work.

Besides firms, some nations are seen competing to serve as hosts for offshoring ventures and have already demonstrated superior ability in the IT offshoring domain and it has an impact on nations' GDP and international ranking. Thus, international business scholars need to understand why host nations differ in their propensities to attract offshore work. We note that factors responsible for nations' ability to attract offshore work will affect an individual firm's decision on whether and where to offshore. At the same time decisions of firms will influence a nation's ability to build infrastructure and that, in turn, will affect its level of attractiveness. Thus, it is crucial to examine the linkages and understand the interaction effect of these two levels on propensity to offshore.

In this paper, we investigate the propensity of (a) the home country firm to offshore; (b) the host country to attract offshoring work; and (c) the interaction between firm and country actions. At firm level, we make use of resource-based view; transaction-cost analysis; network theory, and evolutionary framework. At country level, we draw from Institutional theory. We do not consider this necessarily an exhaustive list of theories that pertain to these levels of analysis, but upon examination have found that each makes a contribution to better understanding within this domain.

2. AN APPLICATION OF INTERNATIONAL BUSINESS AND STRATEGIC MANAGEMENT THEORIES TO OFFSHORING

In the following section, an attempt is made to explain the propensity to (a) offshore at the firm level; and (b) attract offshoring at country level respectively.

2.1 Firm Level

The resource based view states that rare, valuable and inimitable resources of a firm generate sustained competitive advantage for a firm (Barney, 1991). The retention of these resources is, therefore critical for sustained successful economic engagement. Business processes which neither require nor are significantly improved by these resources may be diverted to outside entities that may fulfill them with higher levels of quality or at lower cost.

The resource based view can be contrasted to a transaction based view. Espino-Rodriguez and Padron-Robaina (2006) in looking at the unit of interest being particular capabilities based on resources rather than unique transactions. These researchers argue that the transaction per se may be a less helpful unit of analysis than the collection of related transactions that form an organizational capability. The analysis provided by these researchers aims to explain the phenomenon of outsourcing in general but does not particularly distinguish between domestic and international outsourcing decisions nor between the outsourcing of whole business processes versus outsourcing of labor in particular.

The nature of offshore projects suggests that the following, at a minimum, are required for its successful implementation: (a) an ability to transfer knowledge across national boundaries; (b) the ability to co-ordinate work

across national boundaries; and (c) a network in the host country to select the right partner.

Offshoring requires transfer of some knowledge by a firm across national boundary to its partner firm. The offshoring of helpdesk activity of a call-centre involves transfer of technical knowledge of the firm's product line and its maintenance as well as policies; while offshoring of IT development involves transfer of information requirements for supporting particular business processes and details regarding the firm's complementary technologies for integrating new products into the firm's infrastructure. Teece (1981) showed that firms incur more substantial cost in first time transfer of technology abroad than they do in subsequent transfer of technology. Thus, we would hold that organizations with a larger base of capability in regard to transfer of knowledge abroad will have a lower barrier to creating offshore programs. Further, such capability can be expected to be facilitated by firm's learning experience and absorptive capacity (Cohen and Levinthal, 1990) as a larger barrier in intrinsic terms may be overcome by a more effective means of approach.

Assets such as transferring a firm's knowledge abroad have to be accumulated internally over time by the firm (Dierickx & Cool, 1989). Furthermore, the concept of "asset mass efficiencies" suggests that accumulation of learning to transfer knowledge abroad is easier if a firm already possesses a high level of that stock (Dierickx & Cool, 1989). Martin & Salomon (2003) showed that firm's propensity to establish a plant abroad goes up with time-based and transfer-based learning of the technology. With experience based learning, liability of foreignness is reduced considerably (Zaheer & Mosakowski, 1997). Thus, we posit that firm's accumulated experience in transferring knowledge abroad in general facilitates offshoring practices.

Even though information technology has reduced costs associated with distance (Nachum and Zaheer, 2005), it has generated an additional need for coordination of work activities (Carmel and Agarwal 2002, Kaiser and Strite 2004, Lacity and Rottman 2004). As offshoring requires coordinating work across different firms and national boundaries, possession of skills and knowledge for implementing processes to facilitate coordination will impact a firm's propensity to offshore. Capability to coordinate work requires learning through repetition (Grant, 1991). Peteraf (1993) and Prahalad & Hamel (1990) suggest that knowledge-based capabilities are enhanced by applying them. Thus, coordination is a skill that is learnt over a period of time through iterative past experiences.

A multinational corporation possesses experience in transferring knowledge across national boundaries and working in multiple cultures based on activities outside the domain of IT-enabled services. These firms seeking to offshore activities in a host nation would not only possess experience of working in the country (Dierickx & Cool, 1989) but also have preferential access to the host country's network resources (Almeida & Kogut, 1999) relative to the firm that is new to that country. Such network resources would help a multinational choose an appropriate partner in the host country (Gulati, 1999). Uzzi (1997) states that strong ties promote transfer of tacit knowledge. Multinational firms by virtue of their presence in a host country will possess strong ties and be in an advantageous position to transfer tacit knowledge to their offshoring partners in contrast to a firm new to the host country. Also, network ties help select a right partner by gathering superior information (Gualti, 1995) and can arrest partner's potential for opportunism by making it more costly (Gulati, Nohria & Zaheer, 2000). Network resources also impact a firm's proclivity and frequency to enter future alliances (Eisenhardt & Schoonhoven, 1996; Gulati, 1999).

Multinational firms possess a superior accumulated knowledge base (Buckley & Casson, 1976, Caves, 1996), and access to factor endowments in different nations (Dunning, 1993). Barney (1986) states that a multinational firm, which is already present in a host nation, will be in better position to assess the economic value of assets to be acquired in the host country. Thus, a multinational firm can use the factors present in different nations better than a unational firm.

Thus, our contention is that multinationality should endow a firm with some important abilities required to manage offshore projects successfully. Hence, we posit that a multinational firm will possess stronger propensity to offshore its activities than a unational firm.

Proposition 1: A multinational firm will possess stronger propensity to offshore its activities than will a unational firm.

Firms differ in kinds of projects that may be offshored. Some firms have projects that are ongoing and repetitive by nature, for example call-centre helpdesk, while others may have one-time projects with high proprietary content involving complex and tacit knowledge.

Firms having one time projects with high proprietary content will require their offshore partner to invest in high asset-specific assets (Anderson & Gatignon 1986) which are non-marketable firm-specific assets demanding high investment from the offshore partner. Williamson (1985) suggests that projects with high proprietary content should be performed within firm hierarchies to avoid partner's opportunism, free riding and shirking as contracts are only minimally effective at stopping leakage of proprietary content (Shapiro & Varian 1999). Projects with high proprietary contents have tacit or complex knowledge which is difficult to transfer and replicate (Lippman & Rumelt, 1982; Polanyi, 1966; Zander & Kogut, 1995). Kogut & Zander (2003) state that the tacit or non-codifiable knowledge is likely to be transferred within a firms' own international subsidiary. Gupta & Govindarajan (2000) found a low score on transfer of procedural knowledge (which has tacit content in it) even across different subsidiaries of a multinational firm. Offshoring requires intensity of communication between the involved parties for transferring the specification of requirements and interpreting those requirements for construction of coded artifacts. Thus, high asset specificity of a project would deter offshoring.

Thus, for offshoring a task, a firm needs to identify projects with low-asset specificity, and then consider frequency of transactions of such assets. High frequency of work enhances organizational learning to transfer knowledge across boundaries (Martin & Salomon 2003). At the same time, high frequency will reduce cost of knowledge transfer (Teece 1981) and will benefit the firm from economies of scale and scope. High frequency of transaction has the potential to moderate the negative relationship between high asset specificity and market-based transactions (Hill, 1990; Eramilli & Rao, 1993; Murray & Kotabe, 1999). High frequency of transaction may enhance a firm's learning and may help a firm develop governance abilities to mitigate contractual hazards (Williamson, 1999; Dyer & Singh, 1998) by crafting an appropriate contract to arrest opportunism by offshore partner in initial stages (Mayer & Salomon, in-print).

Hence, we argue that those organizations that can identify projects of low-asset specificity and where such projects (1) are easier to disaggregate from other business processes; (2) represent a large enough cost/benefit to the firm; and (3) are performed in high frequency will have more propensity to seek offshoring solutions than a firm not possessing such assets.

Proposition 2: Firms with detachable low-asset specific projects that are high on frequency of transactions and cost-benefit analysis will have higher propensity to offshore than firms not possessing such projects.

2.2 Country Level

Institutions form the incentive structure of a society and economy, and provide opportunities for promoting particular type of firms in an economy (North, 1993). Past collective learning of individuals and their legitimacy concerns shape the current learning of any generation (North, 1993). We argue that countries that have rewarded high skill-sets of their individuals in the past will provide its present and future generations with incentives to acquire more of such skill-sets through relevant education. Hence, such a country will have more of education-seeking individuals.

However, a generation's pursuit of higher skills is not only path-dependent but also the results of national culture and governmental investments (Hofstede, 1980). Thus, to promote an education-seeking culture, a country needs strong educational institutions. The presence of good educational institutions and a culture of acquiring higher education in a nation will promote development of specific firms there (North, 1993). We contend that the presence of these institutions in a nation will give rise to firms focusing on IT-enabled offshore commerce.

Nations develop specific technological trajectories that are shaped by the dynamic interaction of industrial systems with political, economic, cultural and educational institutions across time (Bartholomew, 1997; Cantwell, 1993; Nelson, 1993). The national trajectory grows, when firms' legitimacy concerns make them adopt it (Zucker, 1983). For information-based services, special policies on education are important (Lovelock & Yip, 1996). Thus, we contend that institutional processes will drive the growth of IT-enabled offshore commerce in some nations. Such a growth can reward their education-seeking individuals with suitable jobs and in turn, will motivate further generations to seek higher education.

A constant interaction of 'education-seeking individuals', 'supporting educational institutions', and 'firms offering suitable jobs' will result in a virtuous cycle over time, making the nation an attractive offshoring destination. Thus, we posit nations possessing the above-mentioned three critical inputs will have a lead in attracting offshore work over others that do not possess the same.

Proposition 3: A country possessing abundance of educated individuals, educational institutions and growing firms

will have propensity to attract more offshore activity than others having less of the above.

According to Williamson (2000), institutions are categorized in four levels namely level 1 (informal norms, culture); level 2 (formal rules especially concerned with property orchestrated by polity, legal and judiciary); level 3 (governance); and level 4 (resource allocation and employment). The level 2 institutions dealing with property rights of a nation are important for proper functioning of private firms (Coase, 1959) as they impact transaction costs (North, 1993). As firms work toward lowering both transformation and transaction costs (North, 1993), we argue that level 2 institutions of a host country impact its propensity to attract offshore projects.

The legal and de facto protection of property rights in the host country are important considerations for firms locating work or other resources outside their own nation. This is particularly true for IT firms where new applications and information about their infrastructures can represent important intellectual property. Offshoring, whether contracted directly with host country firms or transacted through a global partner managing cross border issues, may be a costly transaction due to potential risk of losing the intellectual capital. Wallis & North (1986) suggest that the institutions (especially level 2) matter, when transactions are costly.

As level 2 institutions change slowly in 10 to 100 years (Williamson, 2000), we posit that the time lag will provide an advantage to the host nations with stronger level 2 institutions in their propensity to attract 'offshore activities' over those with weaker institutions.

Proposition 4: A host country with strong level 2 institutions will have propensity to attract more offshore activity than a country with weak level 2 institutions.

As international transactions are fraught with uncertainty due to (a) unfamiliarity of a firm with a host country's business environment resulting in liability of foreignness (Zaheer & Mosakowski, 1997); (b) unpredictability of government policies in the host country (Delios & Henisz, 2003); and (c) multiple sources of external authority and denominations of values (Sundaram & Black, 1992), firms continuously strive to reduce uncertainty (Cyert and March, 1963). Imitative behavior helps reduce uncertainty by either legitimization (DiMaggio and Powell, 1983) or providing informational cues that narrow the range of uncertainty (Levitt and March, 1988).

Haunschild and Miner (1997) identified two types of imitative behavior namely frequency-based and trait-based imitation that influence a firm's international plant location decisions. Firms following frequency-based imitation consider the numerical count of firms that adopted a given strategy. Frequency-based imitation has been observed in organizational studies on market entry (Haveman, 1993; Greve, 1996). Delios and Henisz (2003) stated that the probability of locating a plant by a multinational firm in a host country is high if more international firms from the same industry have established their plants in the host country. A more selective process than frequency-based imitation is trait-based imitation, where a firm imitates the actions of 'higher-status' firms in its industry (Fombrun and Shanley, 1990; Haveman, 1993; Strang and Tuma, 1993; Haveman and Rao, 1997).

Since uncertainty is higher in market based transaction as compared to hierarchical transaction (Williamson, 1996), we contend that the imitative behavior will be more pronounced in a market based transaction like IT-enabled offshore commerce. Thus, we posit that host nations that attracted more offshore deals in the past will have more propensity to attract offshoring deals in future.

Proposition 5: The more offshoring activities exist in a host nation, the more will be its propensity to attract future offshoring deals.

2.3 Firm – Country Interaction

As we proposed earlier that the imitative behavior of home-country firms is correlated with more offshore works flowing to the leading host nations. Thus, such host nations will accumulate more knowledge in the IT-enabled offshore commerce (Cantwell, 1993) and will become more specialized and distinctive over time (Patel & Pavitt, 1999; Archibugi & Pianta, 1992; Frost, 2001). Besides abundance of high-skilled labor, such countries will promote firms competing fiercely with each other to get a contract and developing strategies to lower transaction costs by building strong brand names and relationships with customers (Williamson, 1981).

We contend that the continuously increasing specialization of leading host nations in offshore commerce will make them globally competitive (Porter 1990) and increase their propensity to attract offshore IT-enabled work. This will interact positively with the imitative behavior of home country firms, *ceteris paribus*. The positive interaction

between the two will lead to more imitative behavior by home country firms, thereby increasing their propensity to offshore work.

Proposition 6: The positive interaction between the imitative behavior of foreign firms and the increasing specialization of host nation in IT-enabled offshore commerce will increase their respective propensities towards offshoring.

As imitative behavior of home country firms leads to accumulation of IT-enabled offshoring experience, the host nation becomes aware of the shortcomings in its level 2 institutions particularly related to contract fulfillment in related industries. These host nations receive continuous opportunities to remove the shortcomings in their legal systems so that the contractual obligations in IT-enabled offshore commerce can be enforced and transaction costs decrease. Thus, such a host nation will have more suitable legal systems attuned to enforcing contracts in the IT-enabled offshore commerce than the legal systems of other nations lacking cumulative knowledge in offshore commerce.

As proposed earlier, strong legal systems of a host nation will give fillip to foreign firms to further engage in offshore commerce in that nation. The interaction of imitative behavior of international firms and a continuously improving legal system of the host nation will give rise to a virtuous cycle and will positively affect their respective propensities towards offshoring.

Thus, we posit that the imitative behavior of foreign firms and the continuously improving legal system in host nation will interact positively with each other, *ceteris paribus*. The positive interaction will increase the respective propensities of home country firms and host nations towards offshoring.

Proposition 7: *The positive interaction between the imitative behavior of foreign firms and the improving legal system in host nation will increase their respective propensities towards offshoring.*

As imitative behavior of home country firms will result in flow of more work to host country, it may incentivize government in host nation to adopt IT-friendly policies. Lovelock & Yip (1996) suggest governments to create special policies on education, public ownership of communications, and infrastructure quality for information-based services. Such policies are important as it is generally agreed that regulations over service activities are considerably greater than those over goods (Sauvant & Mallampally, 1993). Some governments, especially from China, India, Mexico and Philippines are making deliberate attempts to attract offshore activities in IT industry (Riddle, 1986; 1987). These nations are making investments in reliable and high-speed transmission networks since successful offshoring requires that the firm and its recipient offshore partner are well-connected.

The data transmission involved in offshoring of IT-enabled services is capital intensive activity (Sauvant & Mallampally, 1993), implying the importance of economies of scale and scope. Nations where firms have more contracts will be able to offer lower bids by spreading costs across various projects.

Proposition 8: *The positive interaction between the imitative behavior of foreign firms and IT-friendly government policies in host nation will increase their respective propensities towards offshoring.*

As Nachum and Zaheer (2005) point out, organizations have tended to send work to the US where knowledge advantage is sought and send work from the US for efficiency purposes. They conclude that knowledge-seeking decisions are not affected by lower costs of distance, where efficiency seeking motivations are so affected.

We argue that information technology and its applications continue to mature, changing the availability and costs of knowledge creation and application in many parts of the world. To the degree that an acceptable workforce capable of creating or applying knowledge in the information technology services sector is developed by host nations, the knowledge advantage of home countries becomes diluted. Although there remain many disparities in knowledge capabilities when contrasting individual nations, such a workforce has been cultivated, for example in the mid 2000 decade in countries like India, Israel, Ireland, and Singapore (Carmel, 2003a; Carmel, 2003b). Given a “more even intellectual playing field”, low cost of production for IT services becomes more important in the decision of where to locate work. As a result, we expect that as the workforce, knowledge, and talent levels pertaining to information technology mature in nations, individual firms’ propensity to offshore to capture efficiencies through low cost labor will continue. To the degree that national workforces develop more targeted expertise, be it in particular technologies or the application of technologies in particular domains, individual firms will begin sending IT intensive work offshore for knowledge acquisition purposes as well as efficiency-seeking.

Proposition 9: Increasing maturity of national workforce talent will motivate home country firms to include knowledge seeking motive along with low cost labor efficiency seeking motive.

3. IMPLICATIONS AND FUTURE RESEARCH

Examination of offshoring of IT-enabled services through the lens of existing international business and strategic management theories has provided a useful mechanism for creating a base-line for understanding the offshoring phenomenon. This paper develops propositions towards the offshore propensity of firms and host nations by applying the received theories from fields of international business and strategic management. However, there are a number of issues, many of which are specific to the IT-enabled services field, that are of importance and remain to be addressed. A sample of such topics is discussed below.

What are the appropriate measures for the constructs proposed? The propositions pertaining to propensity to offshore, at its simplest, could be measured by empirically observing and counting the number of firms participating in offshoring from one nation to another. We find, however, that the domain of IT-enabled offshoring is complex with many different types of tasks potentially offshored ranging in their asset specificity as well as their requirements for transfer of tacit knowledge for successful completion.

Tasks such as data entry or data conversion tend to have low asset specificity; call centers have medium asset specificity where – many of the techniques and use of scripts are the same from one center to the next, though content and procedures may vary; and finally tasks like custom development of new applications, and research and development have high asset specificity. It is important, therefore, to differentiate among these activities when studying IT offshoring. A more nuanced measure of propensity to offshore might consider both the amount and nature of the work being offshored within particular firms.

Clearly the complexity of management across both organizational and national boundaries will vary with the level of asset specificity of the task. This raises the descriptive question regarding whether tasks selected for offshoring vary by asset specificity. It also raises the normative question of whether there are specific management techniques best suited for tasks at each level of asset specificity. Thus, future research should segregate the single and all-encompassing propositions for these activities into different testable hypotheses focusing on each of these specific activities.

What are the appropriate measures for evaluating an offshore project? Offshoring is being used as an effective tool by the firms to pursue ‘efficiency-seeking’ in their worldwide operations. Managers can calculate the true value of offshoring only after considering both transformation and transaction costs. The relationship between transaction and transformation costs is a complex empirical question as managers (a) may accept higher levels of risk to lower cash costs; (b) may not explicitly calculate these varied costs; and (c) may commingle transaction costs with transformation costs (e.g. monitoring and producing goods may be the domain of the same worker and not carefully segregated for cost allocation purposes). While calculating total project costs, managers should bear in mind coordination costs including communication, and the labor and time costs involved in redoing work resulting from miscommunication. These costs may grow at a faster rate when dealing with partners in a foreign location. Thus measures regarding the evaluation of particular offshoring projects should be a target for future study.

What influences the choices of entry mode and specific partner for IT enabled service offshoring? The choice of entry mode (market or hierarchy) may impact the offshoring propensity of firms. As discussed previously, the presence of a multinational in a country for other purposes will provide knowledge, networking, and other resources that increase propensity to offshore. However, that multinational organization, just as the newcomer to offshoring, still faces the decision to offshore through initiating a subsidiary or acquisition of a local firm as well as a number of mechanisms for market transactions such as contracting directly with workers, contracting with a host country firm, or contracting with a multinational supplier. The decision of entry mode may be highly linked with the opportunities and talents of specific potential partners. The proper sales pitch from a particular multinational or host country IT providing firm may preempt a thorough investigation of the most appropriate entry mode and the optimal partner. The success of a firm in its offshoring operations may be affected by these decisions which are important enough for future research.

What makes for successful IT enabled service offshoring once the decision to engage has been made? Based on discussions in prior sections, particularly concerning transaction costs, the quality of negotiating the understandings

between organizations through contracts is important. Given the nature of change in information technology capabilities as well as organizational opportunities, the ability to provide informal communications channels is also critical (Dibbern, Goles, and Hirschheim, 2004). Paying attention to the transaction costs will also help managers select the right host country and partner for offshoring. While selecting an offshore-partner, the managers should look at just not the lowest bid, but also the track record of various bidders. The partner's track record is important as uncertainty involved in dealing with a new partner is high. Mimetic behavior, along with firm's other competencies like coordination skills, contract-drafting abilities, networks and technological strength, can effectively lower the uncertainties. Other potentially fruitful theoretical avenues for examining offshoring include extending discussion of psychological contract theory from outsourcing in general to specifically multinational outsourcing arrangements following the work of Koh, Ang, and Straub (2004) and the application of institutional theory at the firm level considering the primarily internal pressures that move organizational decision making (Ang and Cummings, 1997). Although the examination of international business and strategic management theories outlines success factors in broad strokes, the very detailed examination of managing offshoring services and the effects of managerial decisions and behaviors on particular outcomes remains a fertile ground for further investigation.

Once an advantage is achieved by a nation in attracting IT-enabled service work, how is that advantage sustained?

At the country level, we suggest that already established host nations will have an advantage over the new ones in IT-enabled offshore commerce. But this advantage may not last if the established host nations do not support the offshoring industry with institutions like an effective educational system, favorable government policies, and reliable infrastructure. The host nations must support their entrepreneurial firms involved in attracting offshore projects by laying down suitable infrastructure and continuously upgrading it. The new host nations should keep in mind that the labor cost advantage may disappear quickly as a result of their success in attracting new business. The demand for workers may increase faster than their supply in such nations. Thus, countries should think of 'value-added' offshoring. The case in point is Ireland (Trauth, 2000), which kept pace with changing requirements of multinational firms in its country, and encouraged science and engineering programs at university level. Host nations should pay equal attention to their legal systems that should be improved continuously to mitigate the contractual hazards involved in the IT-enabled offshore commerce to lower both transformation and transaction costs. The theory of national competitive advantage proposed by Porter (1990) is a valuable starting point in regard to understanding national ability to attract offshored work, but knowledge of the importance of education, infrastructure, and governmental policies still leaves a great deal of room for better understanding of exactly what kind of education, which specific infrastructure, and the nuance of particular government policies and their effects on IT-enabled offshore work.

How does the ability to attract offshored IT work interact with domestic IT markets and independent suppliers of IT products for the world market? The host nations with big domestic markets should help indigenous firms to become internationally competitive based on economies of scale and scope.

Finally, future research must carefully consider the interaction among each firm and country level unit of analysis proposed in this paper. It seems self-evident that nations creating an environment for successful individual firms will also achieve better nationwide outcomes in terms of gross national product or higher rating in development indices, but there are likely to be contingencies where varied policies will influence the degree to which those nationwide benefits are realized. Too high a taxation in a host country may dissuade firms from locating in there but a low tax structure means much lower realization of benefits by the host country.

2. CONCLUSION

Offshoring of IT-enabled services is a global issue that is impacting firms (Beylerian & Kleiner 2003) and government agencies (Gruber 2004; Harden 2003) around the world. It is a new phenomenon and not much is known about it.

This paper has made some simplifications by not distinguishing the types of offshore activities and choice of entry modes. Clearly, understanding a phenomenon as large as IT-enabled offshoring activity is beyond the scope of a single paper. However, this paper represents one of the important first steps in the process towards understanding this new phenomenon.

Our study provides an explanation on the complex issue of propensity to offshore IT service work from the firm's and the host nation's perspectives by putting forward the received theories in fields of international business and strategic management. It is our contention that each of the above theories provides partial explanations on offshoring

activities at the firm and the host country levels. We observed many important issues including the impact of tax structure of the host country and the cultural similarity between the home and host country that may impact the relative offshore propensities of foreign firms and host nations which we did not find addressed by the existing grounded theories. Future research should focus on developing new theories to address the complex phenomenon of offshoring not explained by the existing set of received theories and also develop a holistic theoretical framework to explain the phenomenon of offshoring.

In this study, we targeted the home nation firm's propensity to offshore IT related projects and host nation's propensity to attract such projects. However, offshoring also impacts individual workers in terms of their compensation, economic opportunities and search for skill-sets in both home and host nations. Thus, the holistic theoretical framework needs to address individual worker related issues as well and develop a 3-way interaction among individual, firm and country level.

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